

## ABSTRACT

### Resident Perceptions of Management Issues in the Red River Gorge: A Qualitative Assessment

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Management of protected areas is oftentimes a difficult process, particularly when stakeholder groups with different agendas are impacted by decisions regarding use of the resource. The Red River Gorge area in eastern Kentucky has struggled over the past few decades as residents, visitors and managers of the region work to define how the area should most effectively be managed under the guidance of the Multiple Use Sustained Yield Act. Specific objectives of the study include the following:

- to explore the nature of relationships between hosts and guests in the Red River Gorge
- to identify any impacts of the National Wild and Scenic River designation
- to determine resident preferences for future development of Red River Gorge
- to determine residents feelings about current management of Red River Gorge, and
- to offer a set of recommendations for managing agencies addressing the current needs of residents.

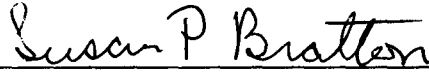
Resident Perceptions of Management Issues in the Red River Gorge:  
A Qualitative Assessment

by

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A Thesis

Approved by the Department of Environmental Studies



Susan P. Bratton, Ph.D., Chairperson

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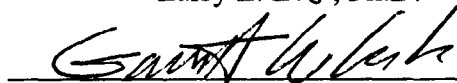
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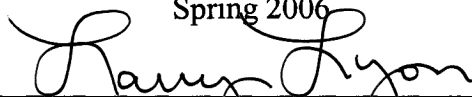


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## DEDICATION

To my Grandfather,  
Miles Thomas Bennett



## CHAPTER ONE

### Laying the Ground Work: A Recent History of the Red River Gorge Management Issues

Conflict between local residents and wilderness recreationists may be partially derived from feelings of entitlement from both groups. In the case of a protected area (PA), visitors have the right to use the land by virtue of the fact that their tax dollars contribute to the upkeep of that area, and residents oftentimes have historical as well as utilitarian ties to the land.

Mutual understanding of the viewpoints of stakeholder groups contributes to better relations among them. Knowledge of their perceptions helps managers understand conflicts. The information gathered in this study identifies the topics that need to be addressed when revising management options for Red River Gorge, Kentucky. The Forest Service is currently going through the Limits of Acceptable Change (LAC) process for this particular area of the Daniel Boone National Forest. By incorporating the preferences of the stakeholder groups, the Forest Service and other government agencies can provide more effective management for both the privately owned land and the federally protected wilderness area. It is the intent of this research to explore perceptions residents have about management of the area and to share this knowledge with the United States Forest Service (U.S.F.S.) as they progress through the LAC process.

### *The Red River Gorge*

The Red River Gorge is a 26,000 acre area located in the Daniel Boone National Forest (DBNF) in eastern Kentucky (See Figure 1.1). The Gorge is a popular destination for wilderness and family recreationists because of the unique geological and archeological resources located in the area.

The forest land that comprises the Gorge became part of the national forest system in 1937 (USDA, nod.). There are many opportunities for recreation in the area such as hiking, camping, rock climbing, and nature viewing. This area is home to the one of the highest concentrations of natural limestone arches in the United States. “The DBNF is exceedingly rich in non-renewable resources that represent thirteen thousand years of people interacting with the environment” (USFS 2004). There are over 3,800 archeological sites in the DBNF, which include prehistoric camps and petroglyphs, pioneer trails, and battlefields (Ibid).

Geologically speaking, the Red River Gorge is home to over 100 natural limestone arches and over 3,400 miles of cliff lines (DBNF.gov). The Gorge also serves as habitat for two endangered species, the Virginia big-eared bat (*Plecotus townsendii virginianus*) and the white-haired goldenrod (*Salbopilosa albopilosa*). The white-haired goldenrod is endemic to the three county area that comprises Red River Gorge. There are also many archeological sites found throughout the area, ranging from prehistoric cave dwellings to sites where Daniel Boone reportedly lived (Martin 2003). Culturally speaking, it is important to preserve the traditions of Appalachia that have been present in Red River Gorge for hundreds of years. The protection of this cultural record is an important link between the past and present controversy (Kane 2001).

### *The Dam Fight*

The Red River Gorge has been the site of much controversy over the past three decades. The Gorge first received national attention in the late 1960s as a result of plans by the Army Corps of Engineers to dam part of the area to provide flood control, a recreation area, and a reservoir for the metropolitan areas of Lexington, Louisville and Cincinnati. The protest against this project, spearheaded by national groups such as the Sierra Club and the Audubon Society, in addition to the Kentucky Rivers Coalition and a local organization known as Save Our Red River, objected to plans for the dam for several reasons.

One predicament that involved the local populations was the displacement of these residents from their ancestral lands. They were not only losing their homes but their livelihoods as well. While the residents would have received compensation for their condemned land, they would have had to move to a new area and start over with a new life. If these residents were not able to find new farm land they would have to find new means of providing for their families.

Another associated issue is the distrust that the residents feel for the primary management agency, the Forest Service. The people of Appalachia have always had a certain sense of distrust for the government, and these feelings are not completely unfounded. The resident suspicions about the government runs rampant, as evidenced by some residents' unwillingness to talk to outsiders. In the Red River Gorge, the Forest Service has "come to function as a 'corporate power' in the area, exploiting ... local landowners in their implementation of land acquisition practices" (Alexander 1987). Most of the residents are concerned about the capacity of the government to manage their

land. As one resident stated in a landowner study, conducted in the early 1980s, it was not a particular management program that worried him, but that the Forest Service is “management crazy” (Beebe 1985).

The protests from both the residents and environmentalist groups put the area in the media spotlight and gave the region national attention. In 1968, then Chief Justice of the Supreme Court, William O. Douglas, hiked through the area as part of one of the Save Our Red River protest marches (Berry 1973). The Judge’s hike brought media attention to the area, and the resulting increases in visitation found residents sharing their backyard with more people than they were accustomed. The Forest Service estimated that the visitation to the Gorge doubled between 1969 and 1974 (Alexander 2005).

The initial reprieve for the Gorge came when the upper portion of the Red River was designated as a State Wild River in 1973. Another measure that provided flood protection for the Gorge occurred in 1976 when Governor Julian Carroll, after having been shown the biological and archeological uniqueness of this site, pulled monetary support from the plans to dam the Red River (Martin 2003), technically putting the dam project on “inactive status.” Through the cooperative efforts of both the residents and the environmental groups, the Gorge was preserved which in effect provided benefits to both stakeholder groups.

During the early 1980s, the Forest Service conducted a study to explore possible designation of roughly twenty miles of Red River as a National Wild and Scenic River. Public meetings were held to elicit responses to the proposed alternative projects, which piqued public interest and caused visitation to further increase. The ultimate saving grace

for the Gorge, however, was that in 1994 the Red River was finally designated a National Wild and Scenic River (Ambrose 2000).

### *Protecting the Resources of Red River Gorge*

The Red River Gorge is protected for a number of reasons, the first, as discussed previously, being the unique geological, ecological, and cultural features of the area. Since 1968, there have been several designations given certain resources in Red River Gorge: Kentucky Wild River (1973), United States Geological Area (1974), National Natural Landmark (1976), Clifty Wilderness (1985), National Wild and Scenic River (1993), Kentucky Scenic Byway (2001), National Scenic Byway (2002), and Red River Gorge Archeological District (2003). (See Appendix A for a brief summary of each of these designations).

While these designations are valuable in preserving the resource that is the Red River Gorge, they also require acceptance from the various stakeholder groups that use the Gorge on a regular basis. The relationship among the various groups involved in the use, management and preservation of the Gorge should be enhanced by the implementation of the Limits of Acceptable Change process currently underway in the Gorge, led by the Forest Service.

### *The Limits of Acceptable Change Process*

The LAC process was developed from an experiment that took place at the Intermountain Forest and Range Experiment Station, January 1985. The main objectives of the LAC process is to address impacts of public use, to preserve the environmental setting and resources for future recreational use, and to explore strategies for establishing acceptable and appropriate resource and social conditions in recreation settings (Stankey

et al 1985). The nine-step process provides a framework for planning at each individual location in which it is used.

The Forest Service began the LAC process in the Red River Gorge in the spring of 2004. The process involves community meetings, identifying recreational patterns of visitors, and also conducting an inventory of the natural, cultural, and archeological resources located in the Gorge area proper. The focus of the LAC is to determine human-induced impacts on the environment. The process relies on a strong relationship between the Forest Service and interested citizens. In the case of the Red River Gorge, relationships between government agencies and the stakeholder groups, especially the local residents of the Red River Gorge, will need extra attention.

The first step of the LAC, as it is taking place in the Red River Gorge, is to identify public issues and managerial concerns that relate to distinctive features and characteristics of the Gorge. The results from these meetings are then compiled to identify the problems that need special attention (Eling 2005). Step Two involves defining and describing opportunity zones: “an opportunity zone provides a qualitative description of the kinds of resource and social conditions acceptable for that class and the type of management activity considered appropriate. They are hypothetical descriptions of the range of conditions that managers consider likely to be maintained or restored in the area.” (Ibid). The end product of this process is a description of resource, social, and managerial conditions defined as appropriate and acceptable for each opportunity zone.

Step Three involves selecting indicators of resource and social conditions. “the purpose of this step is to identify indicators – specific variables – that, singly or in combination, are taken as indicative of the condition of the overall opportunity class.

These indicators must be measurable, such as numbers of damaged trees per campsite or number of trail encounters per day. These indicators will suggest where and when management action may be needed. The product of this step is a list of measurable resource and social indicators” (Eling 2005).

Step Four provides an inventory of existing resource and social conditions. This objective is accomplished by inventorying resource conditions through field research. From this account, maps and lists can be compiled that defines the existing conditions of each resource (Eling 2005). At this point, measurable standards for the resource and social indicators can be selected for each resource, Step Five, the purpose of which is to “assign quantitative or highly specific measures to the indicators” (Ibid). Following this process, in Step Six, involves allocating alternative opportunity zones. This step decides “what resource and social conditions are to be maintained or achieved in specific areas of the Gorge” (Ibid). This step then involves an investigation of the data collected in step four and area concerns and problems identified in step one.

Step Seven provides management actions for each alternative posed in the earlier steps. Step Eight then evaluates these actions and selects the most appropriate one for each management issue. Step Nine implements the management actions and monitors the success of the programs over time, making revisions as needed.

### *Research Significance*

Public lands are under many designations that sometimes limit their use to recreationists and private landowners. These restrictions serve to protect and preserve these lands so they will be available for use by future generations. Relevant legislations

include the Multiple Use Sustained Yield Act (1960), the Wilderness Act (1964), and the National Wild and Scenic Rivers Act (1968).

These legislations call for effective and appealing recreation opportunities for the public, but at the same time, managers must do so without usurping the residents' rights to their own back yard. Since the Red River Gorge lies in the midst of public lands that are under the protection of several designations that limit their use, it has to serve the needs of not only the general public but the residents of the Gorge as well. These Protected Areas serve a number of functions, one of which centers on providing recreational opportunities. As leisure time becomes scarcer, these opportunities for recreation become more valuable.

### *Research Goals and Objectives*

To better understand how residents of the Red River Gorge feel about visitors and management options, this study focuses on a three-county area contained within the Gorge proper: Wolfe, Menifee, and Powell Counties.

The overall goal of this research is to study quantitatively study the residents' perceptions of management in the Red River Gorge. The history of this area demonstrates resident unrest and conflict with the Forest Service. This research provides valuable information about impacts visitors are having on local populations as well as how the needs of both groups can be addressed most effectively. Specific objectives of the study include the following: to explore the nature of relationships between hosts (residents) and guests (visitors) in the Red River Gorge, to identify any impacts the National Wild and Scenic River designation have had on residents living within or in the near vicinity of the Gorge area, to determine resident preferences for future development



of Red River Gorge, to determine residents feelings about current management of Red River Gorge, and, and to offer a set of recommendations for managing agencies addressing the current needs of residents.

This research involved a Resident Interview and using information gathered from a Visitor Survey, both of which collected information on the following topics: perceptions about federal and state designations for the area, attitudes about management of the area, and how the residents in particular have been directly impacted by the huge influx of visitors that has persisted since the early 1980s due to the media coverage from the dam fight.

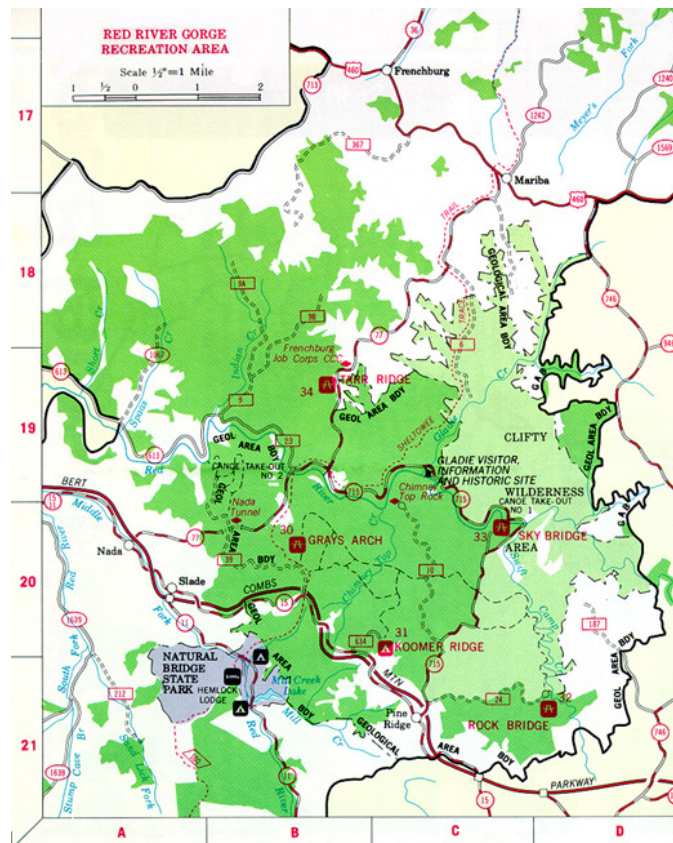


Figure 1.1  
The Boundaries of the Red River Gorge

### *Chapter Synopses*

Chapter Two provides a literature review beginning with a broad definition of tourism and a brief history of the practice of tourism. This examination of tourism relates the importance of the practice to the current situation in the Red River Gorge. The subsections of this chapter outline the impacts of tourism on local populations, the influence that recreational activities has on both international and local economies, recent tourism trends for the southeastern United States, conflict in Protected Areas and the importance of healthy stakeholder relationships in wilderness management. The information gathered for the literature review served a vital role in developing the research questions investigated throughout this project.

Chapter Three describes the research design and methods used for this study. This research is primarily based on resident interviews which were conducted during the summer 2004 in the Red River Gorge. The respondents were chosen through snowball sampling. These residents interviewed were either landowners or renters in the Gorge proper and surrounding areas. The information from these residents provided the bulk of quantitative data for this study. Key informant interviews were also conducted with members of the tourism board and Forest Service employees to supplement this data. The other instrument used in this research is the Visitor Survey. The visitors were surveyed using opportunistic sampling at roughly fifteen sites throughout the Gorge.

Chapter Four presents the quantitative data from both the Resident Interview and the Visitor Survey. This descriptive information details their experiences in the Gorge, feelings about other user groups, perceptions about current management, and preferences for development of the area.

Chapter Five offers an analysis of these quantitative data in reference to the research questions posed in Chapter Two. Using quantitative data from the interviews as well as information from conversations with key informants, this chapter explores the nature of relationships between stakeholder groups as well as their personal reactions to proposed management strategies. The last chapter, Chapter Six, summarizes the major findings of this study and offers a set of management recommendations for the Forest Service as they progress through the LAC process.

## CHAPTER TWO

### A Region in Transition: Protected Areas, Residents and Tourism

A Protected Area (PA) is defined as “an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means” (IUCN 1997). The most important reason that these areas are protected is the preservation of biological diversity. Oftentimes, these settings are popular places for visitors, not only because of their pristine condition, but also the unique recreation, sightseeing, and cultural opportunities available in these extraordinary locales. As of the year 2000, the earth contained 30,000 PAs, covering an area of 13, 250, 000 km<sup>2</sup> (roughly the size of China and India) (Ibid).

PAs serve many critical functions. These regions are vital for conserving biodiversity and delivering various ecosystem services. Protected landscapes embody important cultural values and historical ties to the land. They are invaluable as sites for people to get a sense of peace in a busy world, stimulate human spirit, challenge the senses, and as locations for research and education. Studying the impacts of PAs and tourism on resident populations is important for the management of PAs.

Since these areas serve so many purposes and stakeholders, effective management is essential. A reasonable expectation is that the PA would contribute significantly to local and regional economies. Many PAs are important to local communities, especially

indigenous peoples who depend on the resources for their livelihoods; however, residents in a PA are often marginalized in the management process.

Protection of natural resources is critical to preserving ecological integrity of areas. An accompanying issue is that the needs of the local residents are lost in the fight for preservation. In the process of protecting these ecologically sensitive areas, the human cultural aspects are sometimes forgotten. Studying the impacts of PAs and tourism on stakeholder groups is important for management of the area. In the past, management strategies for PAs have excluded the consideration and needs of local residents and oftentimes this neglect has led to the failure of the protection of the area (Alexander 2000 and Busch 1989).

The International Union for the Conservation and Natural Resources (IUCN 1994) has defined six categories that describe different types of PAs. These categories take into account the varied types of protection, from strict nature preserves that are managed for the protection of wilderness to protected landscapes which are administered in a manner that preserves the natural area and also allows recreational use that these valuable areas deserve.

The effective management of the various PAs throughout the world involves many factors - management capacity, the involvement and education of visitors and residents in the area, and legislation to set guidelines for the supervision of the area. In the United States a significant body of legislation has been directed towards the management of these areas, several of which are applicable to the Red River Gorge.

### *Legislative Protection of Red River Gorge Resources*

The Red River Gorge is under the protection of a number of both state and federal designations (Appendix A). Several pieces of legislation: the Multiple Use Sustained Yield Act of 1960 (MUSY), the Wilderness Act of 1964, and the National Wild and Scenic Rivers Act of 1968, are fundamentally important in setting precedent about the scope and intent of recreational areas.

The Multiple Use Sustained Yield Act of 1960 was designed so that public lands can serve “the greatest good for the greatest number of people over the longest period of time.” This act defines multiple use as: “the management of all the various renewable surface resources so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources,” and sustainable use as the “achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources without impairment of the productivity of the land” (MUSY 1960).

The MUSY Act governs 85 million acres contained in the national forest system; it is crucial to the management of the Gorge since it is located in the Stanton District of the Daniel Boone National Forest. MUSY defines the use of the national forests to “include outdoor recreation, range, timber, watershed and fish and wildlife,” the MUSY Act requires the harmonious and coordinated management of the various resources contained within the national forest system.

The Wilderness Act was signed into law on September 3, 1964 by President Lyndon B. Johnson. The purpose of this Act is to “secure for the American people of present and future generations the benefits of an enduring resource of wilderness. There

are four agencies responsible for the management of designated wilderness areas: the Bureau of Land Management, the U.S. Fish and Wildlife Service, the U.S. Forest Service and the National Park Service.

This Act protects these wilderness areas so that they will remain in a pristine condition: “these shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use as wilderness, and so as to provide for the protection of these areas.” The definition of a wilderness area is

an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions (Ibid).

There are four main characteristics of a wilderness area specified by the Wilderness Act: (1) the area generally appears with the mark of man's work “substantially barely discernible,” (2) the region has to have outstanding opportunities for solitude or primitive and unconfined types of recreation, (3) the designated area has to consist of at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition, and (4) the area may also contain ecological, geological, or features of scientific, educational, scenic, or historical value (Wilderness Act 1964). Half of the Red River Gorge, the Clifty Wilderness which is 13,000 acres, is part of the national wilderness system.

The Wild and Scenic Rivers Act of 1968 is very crucial to the present appearance of the Gorge because this legislation provides the criteria for which the river was designated as being wild and scenic.

The Wild and Scenic Rivers Act states:

certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations.

In the Gorge, there are 19.4 miles of the Red River protected under this legislation, 9.1 miles of the river are designated as “wild” and 10.3 miles are specified as “scenic.” The standards for a Wild River are as follows: they exist in a free-flowing state with excellent water quality, have adjacent lands that are essentially primitive, and they should not be paralleled by conspicuous and well-traveled roads or railroads. Scenic rivers are those rivers that exist in a free-flowing state with adjacent lands that are largely undeveloped but in places they may have adjacent lands that function as developed areas for residential, agricultural, or other land uses. The scenic portion of the river must retain an overall natural character provided by standards for the construction of structures such as docks, houses, and businesses (NWSR Act 1968).

These legislative acts are also important in terms of this thesis research because they address several of the core issues related to the Red River Gorge including equal access for the residents and the visitors as well as the protection of various pristine resources. Historically, there have been conflicts between user groups because of a sense of entitlement to the Gorge. The residents have these feelings because all of these developments are happening in their backyard, and the visitors are entitled to the use of the PA because their tax dollars go to pay for the upkeep of the area.

The MUSY addresses this issue directly in that it provides equal access for all user groups on national forest land. The Wilderness Act is important to this area because



wilderness areas are becoming scarcer, largely due to poor environmental practices and the growth of the human population. This legislation provides for the continued defense of this invaluable resource. It provides for the maintained protection of a wilderness area, such as the Clifty Wilderness, so that it will remain as close to its natural state for years to come.

### *Impacts of Designations on Residents*

Protection of natural resources is an important aspect of preserving ecological integrity of areas; however, the needs of local residents are often lost in the campaign for preservation. In the process of protecting these ecologically sensitive areas, the human cultural aspects are sometimes forgotten.

PAs have commonly been managed by outside administrators. In extreme examples, local populations are “uprooted from their traditional lands and excluded from realizing any benefits from the PA” (Busch 1989). This displacement causes local residents to be ignored or neglected in the protection process even though they can serve a vital function for protecting an area. Issues defining the impacts relating to the exclusion of residents include: restriction of resource uses to which a population previously had access, degradation of resources surrounding a PA as demands intensify due to a shrinking resource base, a change in residents’ perceptions about benefits of protection, and lack of capable management to effectively enforce regulations and policy (Alexander 2000).

Oftentimes, other stakeholder groups have separate agendas that frequently do not involve the needs of residents. The main problem for the local population is usually loss of access to vital resources such as their right to utilize resources that they have routinely

used for provisions, housing and business. Access is denied as a result of the nature of the protective status (Alexander 2000).

Disagreements between the stakeholder groups only compound the issues that are involved with the protection of an area. Often, residents have negative attitudes toward the protection of an area stemming from poor rapport with the local managing agency and the fact that they do not feel that they are receiving full benefits from the PA.

Residents living within or adjacent to a PA are not always involved in decision making or management affecting what is essentially their back yard (Fiallo and Jacobson 1995). Improving these relationships can be achieved through the participation of the residents. If managing agencies and residents can together realize the benefits the protection of a PA can provide, both stakeholder groups can reap the benefits (Parry and Campbell 1992). Involving residents in the protection of an area is imperative because they are so affected by the process. The residents could have their use of the land restricted or even have their land condemned.

When the management agency of a PA takes the needs of the local population into consideration, it can only profit all parties concerned. Taking into account the necessities of the residents is best explained as a system of reciprocity. By working with the local residents in a respectful manner, the managers can gain the cooperation of the residents. And by the same token, the residents are rewarded by receiving the various benefits from having a PA in their back yard. These benefits can include: education programs, business opportunities, and government assistance.

### *Local Community Involvement and Participation*

Involving residents in the process of protecting an area is vital to the success of the proposed actions. The behaviors of local populations may be impacting the PA on a daily basis, and the restrictions placed on the PA will probably affect the residents the most (Alexander 2000). While they are not the only party contributing to the degradation of an area, they can still be responsible for damage to the area.

Awareness alone does not automatically translate into behavioral changes; the expectation is if education and the involvement of local residents are utilized, the management initiatives can potentially be more successful. The residents need to be conscious of the activities of other user groups, such as recreational use or harvesting of certain resources. Essentially, all user groups and stakeholders need to be sensitive to use patterns so that they can exist together peacefully.

Globally, there have been well documented cases of problems surrounding the management of PAs. A study conducted in communities surrounding five PAs in Tanzania found that, for the most part, the residents supported protection of the area. One of the grounds for this support was the profits generated by the PAs. The residents felt favorable about the protection of the area for the intrinsic and economic value of these PAs; however, they still had negative feelings toward the employees of the agencies managing the area stemming from the relocation of residents from the land and restricted use of resources (Newmark et al 1993).

The complexity of issues surrounding the management of a PA can further be observed in the Community Baboon Sanctuary (CBS), located in central Belize. This PA was created in 1985, with the support of private landowners, to protect habitat for the

black howler monkey (*Alouatta caraya*). Alexander (2000) defined the crucial concerns encircling the protection of the CBS to be: (1) the level of understanding and support local residents have about conservation and protection, (2) how local residents feel about protecting the howlers and their habitat, (3) the extent and nature of membership benefits to the residents, and (4) how resident populations feel about the management of the sanctuary.

In this study, the overwhelming majority of residents supported the CBS. Additionally, most of the respondents were in favor of backing the continued protection of the howler monkeys. This area is not without its problems though; one that was noted was that the benefits of tourism are not experienced uniformly for all the residents of the sanctuary. The majority of the benefits were experienced more fully in the central communities of the CBS due to the fact that their location in the sanctuary put them in closer proximity to the visiting public and made it easier for them to profit from tourism activities associated with the CBS (Alexander 2000).

There are strategies that can alleviate the problems associated with the protection of certain areas. One possibility is conservation education for residents of the area about the unique, fragile place where they reside. Educational programs profit both the residents and the PA. Benefits of education have been observed in the La Mapimi and La Michilla Biosphere Reserves. In these areas, residents have received education to improve their agricultural practices (Busch 1989). Education for local residents not only benefits the PA, but other factors that influence the area as well.

In this case, the benefits of this agricultural instruction have improved the lives of the farmers, the health of the ecosystem, and relationships between stakeholders. The

farmers became more self-sufficient with better farming habits, and by helping the farmers, the managers improved their rapport with residents by improving the lifeways of the residents. The health of the ecosystem also benefits because integrity of the preserve is enhanced when local land uses are improved (Busch 1989). Relations between the management and local populations are improved as the residents realize the benefits from the education provided by the managing agencies (Ibid).

### *A Historical Perspective of Tourism*

In order to better understand the impact visitors have on an area it is essential to study the historical, financial, and cultural implications of the practice of tourism. The World Tourism Organization (WTO) defines tourism as the activities of people who “travel outside their usual environment for no more than a year for leisure, business, and other purposes” (Mastny 2002). Tourism has also been defined as “voluntary travel to see and experience new sites” (Tenenbaum 2000). Tourism is not a new phenomenon; there is evidence for this practice in the ancient civilizations of Rome and Greece as well as in prehistoric societies (Nash 2001).

The anthropological study of tourism has become increasingly more important in recent years. Graburn (1983) has claimed that tourism is so widespread among human history and culture that it can be considered a cultural universal. Travel has grown rapidly over the last half century; the projection for travel in the near future is that the number of international travelers will reach 1.6 billion by the year 2020 (Mastny 2002). There are many reasons for the rapid increase in travel and tourism over the past 50 years - increasing disposable incomes, better transportation, low airfares, and increases in technology (Tenenbaum 2000).

The changes in the practice of tourism over the past century, evidenced by the estimated 600 million tourists and business people that travel every year, creates significant impact on many sectors. One of the principal impacts is on the world's economy. Worldwide, two hundred million jobs are supported directly and indirectly by tourism, which equals one in twelve jobs (Mastny 2002). Tourism is considered the world's largest industry; the World Travel and Tourism Council estimated that tourism and travel accounted for 11% of the gross world product in the year 2000.

The economic impacts of tourism are being embraced wholeheartedly in most of the developing world. From 1975-2000, the receipts from the tourism industry showed that the industry grew 35% faster than the world's economy as a whole. In 2000, tourism was a \$469 billion industry (WTO 2001). Countries that are receiving more travel are also experiencing indirect effects of these increases in tourism. Examples of this phenomenon are jobs for construction workers and extra income for farmers. The interest in travel that has been generated by people having the means to travel is causing a growing need for new infrastructure in the developing country's economy (UNEP 1999).

As much as 90% of the global tourism industry is under the control of small, family-owned businesses but this trend is changing rapidly due to the encroachment of large - scale multinational operations (Mastny 2002); these corporations funnel money away from local economies and back to the developed world (WTO 2001). The leakage of funds away from local economies can be as much as 50% of the total profits (Mastny 2002).

### *Cultural Implications of Tourism*

When discussing the impacts of tourism, along with the economic and environmental effects to an area, it is important to note cultural implications of the tourism industry. The relationship that may exist between visitors and local populations is called the “host-guest” relationship. This has been so named because essentially the local populations are hosting the visitors in their “home.”

While the needs and wants of tourists or “guests” have been given much attention by the tourism industry, little concern has been paid the needs and wants of the local hosts. It has not been until the last decade that the needs and desires of the local residents or “hosts” have been examined. This relationship is oftentimes not equitable; the tourists usually take more than they give back to the area (Smith and Brent 2001). An example of this is that the local residents are often denied access to areas as a consequence of protection or conservation measures. Another effect of inequality is that the tourists will use more resources than they necessarily need (Ibid).

### *Tourism Trends in Appalachia*

When tourists travel to an area, they oftentimes do not respect the culture of the local residents. Appalachia is a region that has a rich cultural heritage but that is oftentimes not understood by outsiders. The people of Appalachia have been described as a group that is set apart not only geographically but culturally as well. The stereotype of Appalachia is that it is an impoverished place inhabited with backwards, lazy people. While Appalachia is impoverished, the stereotype of the people who live there is not accurate. They are a group unto themselves and have developed a unique culture that is often misunderstood by outsiders (Billings and Blee 2000).

One problem associated with tourists in the Appalachian region is that they have a tendency to treat the local populations as tourist attractions. There is a quaintness and charm associated with the poverty of the area. People who travel to the area have a pre-conceived notion of the inhabitants, and these false perceptions have led to some tension between tourists and local populations.

These notions come from movies, news stories and documentaries that often stray from the truth to be more interesting, a trend which acts only to reinforce the stereotypes. The locals are called “hillbillies,” and as can be expected, they do not appreciate this terminology. To the people of Appalachia this moniker is on par with calling a member of a minority group one of the many racial slurs present in today’s vernacular (Fritsch and Johansen 2004).

Tourism has also eroded the culture of the Appalachian people. The unique dialects of the regions are suffering the same fate as indigenous languages around the world. With the constant influx of mainstream America through tourism, cable TV, and the Internet, the dialect is being watered down (Kane 2001). Traditional cooking is altered by the loss of the household garden and the influx of fast food and other chain restaurants.

There have also been impacts as women from the region have begun to pursue careers outside the home. This trend has changed the family dynamic that has been traditional in the area. Tourism has also dictated changes in art in the area. The traditional forms have been updated so that they are more appealing to tourists. This development has caused changes in the use of materials that are not traditional or even indigenous to the area (Fritsch and Johansen 2004). There are many stimuli that



accelerate the need for upward economic mobility. Some of these effects are out-migration for jobs and education, commercial homogenization, and popular culture influences from movies, television, and radio (Ibid). All of these outside pressures are accelerating this erosion of culture. Appalachia is a region steeped in tradition; preserving this culture is a critical link between the present and the past. There are many important lessons to be learned from the inhabitants of the region, both those from the historical residents to those that live there in the present time.

### *Forms of Ecotourism*

Tourism in any form can have significant impacts on the environment. When tourists travel they typically want the same amenities that are available to them at home. Tourists want to be clean, well-fed and pampered. In developing areas especially, their needs put strain on all parts of the environment, mostly because of increased amounts of waste as well as an increase in demand for water to support hotels and guesthouses (Mastny 2002). Along with the strain that tourism puts on the physical environment, there are oftentimes stressful relations between the resident populations and the recreational visitors.

In order to lessen the effects of tourism-created problems, ecologically friendly travel or ecotourism was developed. This term can be defined as “responsible tourism focused on the natural world” (Lindsay 2003), however, even ecotourism can generate additional environmental problems for the very regions it is intended to protect. The damage caused by the visitors is ironic because it is usually the unique environmental and cultural factors that draw people to these destinations, but tourists sometimes end up “loving nature to death.” As these fragile ecosystems break down, it is increasingly more

difficult to revive them. They are degrading largely due to there being no controls or limited enforcement of existing controls in place for the care and conservation of these resources. To address these issues, a compromise between preservation and development has to be achieved (Ibid). This cooperation is especially important to note when discussing tourism in a PA because when travel is environmentally friendly it can benefit both people and nature.

There are two categories of travel that involve the environment at different levels of exposure and protection - nature tourism and ecotourism. Sometimes, activities and destinations are erroneously advertised as ecotourism when, in reality, they are places that use the outdoors as their setting. It is important to note that not all tourism that involves being outside is ecotourism.

The most common category of use is nature tourism, which involves any activities that make use of the outdoors (Fritsch and Johansen 2004). Examples of these activities are mountain biking, whale watching, scuba diving, fishing, camping, use of All-Terrain Vehicles (ATVs) and hiking. Some of these activities are considered “low impact” on the environment such as bird watching, and other activities such as boating and the use of ATVs are designated “high impact” (Ibid). Nature tourism, in general, has the potential to expose an ecosystem to a large amount of impact. There are typically no restrictions or designations placed on the practice of nature tourism.

Ecotourism is defined by the International Ecosystem Society as “responsible travel to natural areas that conserves the environment and improves the well-being of local people” (Fritsch and Johansen 2004). In theory, ecotourism is small-scale and low impact on not only the environment but the local populations as well. Ecotourism is

intended to be sustainable, focused on the natural world, beneficial to local communities, and provide education to the visitors (Lindsay 2003). In 2000, the UNEP recognized a proposal for ecotourism guidelines from a group comprised of several NGOs and indigenous groups. These guidelines are laid out as follows: (1) ecotourism will ensure prior informed participation of all stakeholders, (2) it will ensure equal, effective and active participation of all stakeholders, (3) it acknowledges Indigenous Peoples communities' rights to say "no" to tourism development and to be fully informed, effective and active participants in the development of tourism activities within the communities, lands, and territories, and (4) it promotes processes for Indigenous Peoples and local communities to control and maintain their resources (UNEP.org).

#### *Tourism in the Southeastern United States*

The growth of tourism within the United States is mirroring that of the rest of the world. Tourism is a \$545 billion industry within the United States. It is directly responsible for 7.8 million jobs, and in twenty-nine of the fifty states the industry is the first, second or third largest employer (Travel Industry of America 2003). There has been much renewed interest in tourism within the United States in the past few years, due largely to struggling economies, rising airfare, and the September 11<sup>th</sup> terrorist attacks (Fritsch and Johansen 2004).

Travel to the Appalachian region of the United States has also grown. This area covers 410 counties in the states from Mississippi to New York (See Figure 2.3). This region contributes much too nationwide tourist revenues. Tourism is dominant in this region largely due to the mountainous geography of the region. There are many recreational activities available in the mountains such as: hiking, fishing, camping,

canoeing, and a myriad of scenic opportunities. North Carolina generates \$11 billion a year, Tennessee \$9 billion, and Kentucky generates over \$8 billion a year in tourist revenue.

Tourism is the third largest industry for the state of Kentucky and produces a pay roll of over \$2 billion dollars annually (Fritsch and Johansen 2004). Although this industry provides much economic benefit for the state, there is still room for improvement. Kentucky ranks twenty-seven out of fifty in amount of tourist dollars generated annually, and only twenty-ninth on the amount of money spent advertising (Ibid).



Figure 2.3  
Map of Appalachia

As with developing countries, an economic problem for locales with high rates of tourism is the leakage of money away from the area in which it is spent. This leakage

typically remains with outside investors in the region. This economic loss can be as much as 90% for the affected area (Fritsch and Johansen 2004).

Other financial disadvantages exist for local populations as well. Employment opportunities in the tourism industry are frequently outsourced to individuals from outside the area. This situation is problematic because the residents are losing out on the benefits that these jobs provide. Another difficulty concerning employment is that the jobs offered to local residents are temporary or unskilled labor opportunities.

When tourists come to visit an area the prices for consumer goods increases which discriminates against local populations. The tourists are able to pay inflated rates for the goods and services, but oftentimes the residents are not. This disparity in economics can cause an overall decrease in the quality of life for these residents (Fritsch and Johansen 2004). Another related quality of life issue in Appalachia is that the exceeded carrying capacity due to high visitation leaves no room for local populations to pursue their traditional livelihoods (Ibid).

### *Life in Appalachia*

The history of Appalachia has not been without its trials and tribulations. While tourism is an attractive solution for the issues associated with the problems experienced in the region, it is by no means a quick fix. Understanding the associated obstructions to progress is the first step to improving the lives of the residents of the region.

The Appalachian region of the United States is known as much for its' extreme beauty as it is for its rampant poverty. While it is contained within one of the wealthiest nations in the world, its poverty rates rival those of less developed countries (Hansen 1970). The mean income for most of the residents of Appalachia is far lower than other

parts of the country. The average income for families who live in the heart of the region is \$30,354 per year, while the national average income is over \$39,000 (Cushing and Rogers 2000). The region encompasses the 410 counties contained within the Appalachian Mountain Range which are located in states from Mississippi to New York.

The reasons for the region's development woes are varied, but there are two major factors that have influenced the path of development for Appalachia: the first is the boom and bust cycle associated with the reliance on natural resources, such as coal, to fuel the economy, and the second is the actual physical barrier that the mountains present (Santopietro 2002). These factors are exacerbated by the clannish tendencies of the people of the region which makes them a tough culture for an outsider to infiltrate, and for this reason, as well as the remoteness of the area, it has been difficult to aid the people of the region (Ibid).

### *The War on Poverty*

The initiatives to improve life in Appalachia began in the 1960s when President Kennedy first visited the area. He used this visit to declare his "War on Poverty." After Kennedy's death this crusade was carried on by his successor, Lyndon B. Johnson. In 1964, President Johnson visited Hazard, Kentucky, and promised to attack poverty "in all its forms and drive it underground" (Gugliotta 1993). Out of this visit came the inception of the Appalachian Regional Commission, which was formed in 1965 to promote "faster sustainable economic growth in these counties and allow them to catch up" (Santopietro 2002).

The most popular reason for Appalachia's economic problems can be attributed to the structure of the mining industry that has historically been present in the area. While

one would assume that the rich base of natural resources present in the region would suggest a high quality of life for the residents what has developed historically is actually the opposite. This boom and bust cycle of resource harvest and then the impending lack of jobs when the resources are gone has transformed Appalachia from a region of “uniform economic distress to one characterized by peaks and valleys” (newswire 1999).

Appalachia is an area that is rich in resources. However, the residents of the area have not always benefited from these reserves, such as coal. Companies with no vested interest in the well-being of the region or its residents extract the natural resources and the residents of Appalachia see little of the benefits (McGraw 1996). The method of extraction of resources from Appalachia can be compared to colonialism. Not unlike the economic loss associated with tourism, there is no economic benefit for the people of Appalachia because the revenue generated is not staying in the area. The other problem is that when the resource is gone so are the jobs.

Unemployment and underemployment are persistent conditions. Job losses have occurred because machines are now doing work that people used to do; more work is done by fewer people. For example, in 1981, 48,000 miners dug 117 million tons of coal, while in 1990, 32,000 miners dug 131 million tons (Gugliotta 1993).

Once jobs are no longer available, the residents have two options. The first is that they can wait for additional jobs to open up in the area or they can out - migrate and look for jobs elsewhere. In the Red River Gorge today, many local residents out-migrate for work mostly to the cities of Winchester and Lexington. If and when jobs do become available they are almost always minimum wage, part-time, temporary, or seasonal (McGraw 1996). One saving grace for the unemployed of Appalachia is governmental

welfare programs, which provide necessary services for the people of the region as a supplemental income (Ibid).

For the residents of Appalachia who are caught in this cycle of poverty there are several solutions emerging. The most promising is that of education. It is a proven fact that quality of life improves as education increases (Kinzey 2000). The roadblocks to education in Appalachia are common. While many outsiders think that the people of the region are uneducated because they are 'backward hillbillies,' it is probably more accurate to say that the resistance to education in the early 20<sup>th</sup> century came from the residents' fear that the education coming in from the rest of the country would slowly destroy their culture (Ibid).

Education in Appalachia has not been without its hindrances. Some of these impediments include: long bus rides from remote locations, schools with underpaid teachers and low per pupil expenditures, and the fact that education is not a priority. However, the situation is improving as evidenced by recent increases in college enrolment. Recently, college level education has become a higher priority for the people of Appalachia. In the past, due to family hardships and responsibilities, it was highly unlikely that a person could pursue a degree past high school (Kennedy 1994). There was a 3% rise in college educated people in the Appalachian region between the 1990 and 2000 census (Haaga 2004). In 1990, only 14% of the residents of the region had a college degree where as in 2000, 17% of the residents of the entire region were college educated (Ibid).

While not as appealing an alternative as education, the other solution that has presented itself is out migration, called "Greyhound Therapy" in this region. In central



Appalachia people leave their homes everyday to work in larger industrial centers (Santopietro 2002). If they decide not to commute on a daily basis they are forced to move permanently to pursue employment in areas where jobs are available.

One major setback for the residents of Appalachia is poor health. The health care crisis in Appalachia is cyclical in nature. These problems stem from the impoverished state of the area and environmental factors that are present. The impoverished state of the area makes it difficult for people to meet the expense of health care; if they do not have insurance or Medicare then it is nearly impossible for them to afford this necessity. Without decent healthcare it is difficult to stay well enough to continue to be gainfully employed, and without employment it is even more difficult to afford healthcare.

The health problems that are observed in Appalachia today are identical to those observed in the rest of the United States, but in this area their effects are magnified due to economic and access factors. This is a region of the country that has had a difficult time attracting medical personnel as well as obtaining money to build sufficient health care facilities. The difficulty in obtaining quality medical care is reflected in the general poor health of its residents.

This region has a high prevalence of risk factors that lead to cancer and disease such as elevated use of tobacco compared to the rest of the country and sedentary lifestyles. The Appalachian region has higher levels of cancer than the rest of the country. Between the years 1994 and 1998, Appalachia had 173.1 cancer deaths per every 100,000 people; compared with the rest of the country, which had 166.7 cancer deaths per 100,000 people in the rest of the nation (Journal of the National Cancer Institute 2002).

The Appalachian region has high rates of lung cancer; nine of the thirteen states in Appalachia had cancer death rates that were significantly elevated the rest of the country (Ibid). Other health problems observed include heart disease, cervical cancer, high rates of early multiple pregnancies and infant mortality, the highest number of sedentary people in the nation, and high obesity rates (Hurley 2000).

In summary, understanding the complex issues that have influenced the development and current state of Appalachia are vital to solving the problems associated with the region. The protective environmental measures in place in the region and fostering tourism can have great potential to economically benefit the area. The legislation protecting parts of Appalachia, such as the Red River Gorge, is vital to the continuation of the region as a pristine outdoor paradise. In order to make these legislations more than just words on paper, all stakeholder groups involved need to understand not only their own personal impact on a PA, but also what they can do to minimize these impacts. Involvement in the PA will increase the participation of all groups involved in the Red River Gorge to ensure that people are educated and aware of the effect they can potentially have on the area.

Tourism can and will play an important role in the future of the area, especially as wild, pristine areas become scarcer. Helping to define tourism opportunities that can benefit Appalachia will require an orchestrated effort between residents, recreationists, business people and managing agencies. In order for the residents to realize benefits, they should be engaged in the planning process. The most important issue associated with the development of tourism is that the benefits from the visitation stay in the area and do not leak away from Appalachia back into some corporate office.

## CHAPTER THREE

### Research Design and Methodology

#### *Research Design*

This research is an extension of a longitudinal study that was conducted by the University of Kentucky in the early 1980s. As a result, some parts of the design and method for this project were predetermined by the UK study. This research focuses primarily on primarily one of the previous research populations – the local residents with secondary focus on the recreationists. Forty residents were interviewed and 1,019 recreationists were surveyed during the summer (June) and fall (October) of 2004. The research instruments for both populations are found in Appendices B and C.

#### *Research Setting*

This research was conducted in the Red River Gorge, which is located in eastern Kentucky (See Figure 3.1) in the foothills of the Appalachian Mountains at the juncture of three counties, Wolfe, Menifee, and Powell. As described earlier, this area is known for its natural beauty, tobacco farming, its abundant recreational opportunities, and not unlike the rest of Appalachia, poverty. The landscape of the Gorge is as unique as its residents; it is in many ways a setting caught in transition.

Juxtaposed against this poverty is the scenic beauty that defines the Red River Gorge. The Red River carves a path through acres of pristine wilderness, hardwood forest, and cliff faces. The geology of the region is one of its most popular attractions,

and the most notable of the features are the natural limestone arches that are found in abundance throughout the Gorge.

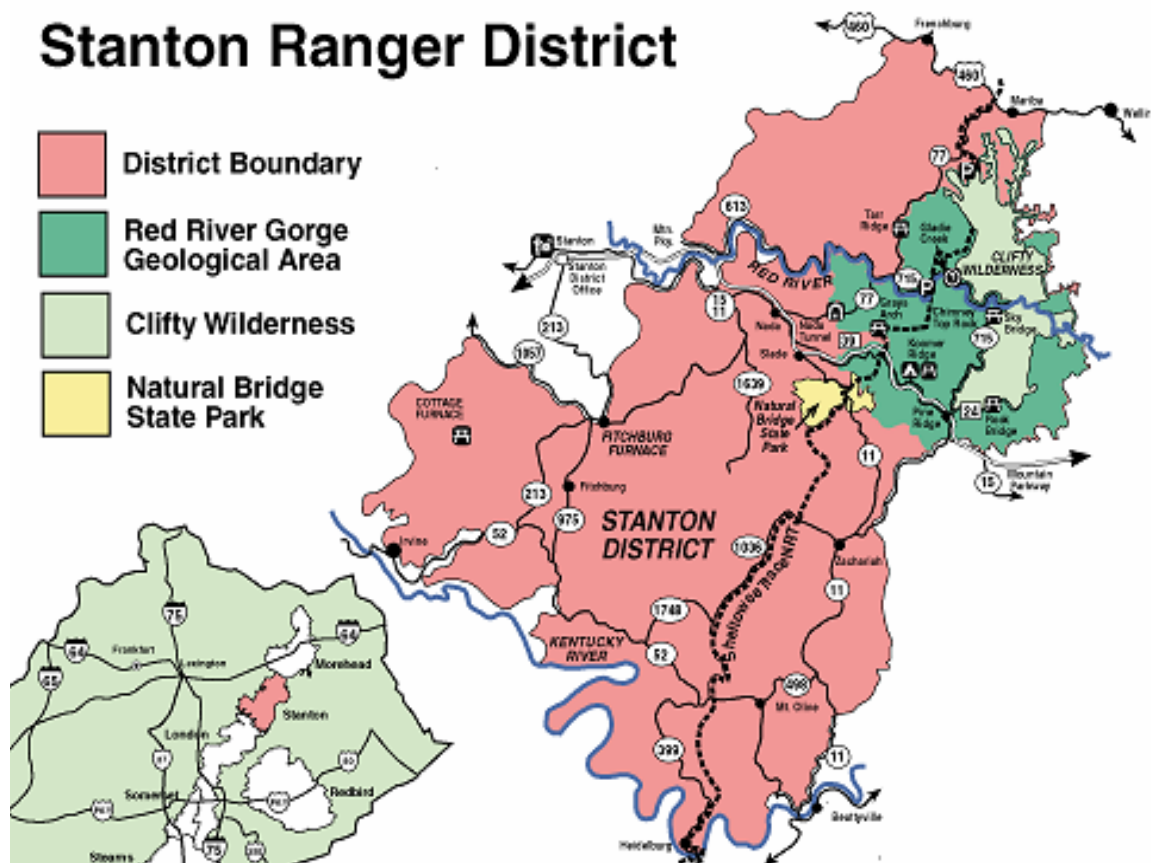


Figure 3.1  
Red River Gorge in Stanton Ranger District

For the purpose of this study, as patterned after the 1980s study, the Gorge was divided into three areas the - Upper, Middle and Lower Gorge. There were nine residents interviewed from the Upper Gorge, fifteen from the Middle, and sixteen from the Lower Gorge.

The Upper Gorge is entirely contained in Wolfe County. The Red River moves swiftly through steep sandstone cliff faces. The ridge tops in this area have historically been

used for agriculture, and at the current time, most of this region is still comprised of small farms and ranches. Being that the Upper Gorge lies on the edge of the Proclamation Boundary of the DBNF, the residents of this area have been less impacted by the disputes over land use relative to the residents of the Middle and Lower Gorge (Beebe 1985).

The Middle Gorge, which is located at the juncture of Powell, Menifee, and Wolfe Counties, has historically been the most popular section of the Gorge for recreationists to visit. The popularity stems from the fact that this part of the area offers unique geology and biology, but it is also easily accessible to many different user groups such as hikers, fisher-people, canoeists, sightseers, and campers (Beebe 1985). At present, this area of the Gorge is mostly owned by the United States Forest Service. This was not the case twenty years ago when a majority of the land was still in private possession resembling a “crazy quilt of public and private ownership” (Ibid). Currently, only about 7% of the total land in the Gorge is still in private ownership.

The Lower Gorge, located exclusively in Powell County, is a mix of agriculture and residential property. It is more densely populated than the other portions of the Gorge due largely to the geography of the area: the spacious, productive creek bottoms and soft, undulating hills provided ample area for living and farming. The residents of the Lower Gorge have deep historical ties to the area; several people still inhabit houses that have been occupied by their relatives for several generations.

### *Local Residents*

As discussed in Chapter Two, the people of Appalachia often get stereotyped as “backwards hillbillies,” but those who live in the Red River Gorge do not use such a stereotype in identifying themselves or others who live in the area. These residents can

be described as hardworking, intelligent, well-spoken people with many concerns about the well-being of the Gorge. Many of the residents have historical ties to the area with their family trees firmly rooted there; there is also a large community of residents who have moved to the Gorge more recently to enjoy the beautiful natural setting.

### *Recreationists*

Recreationists visit the Red River Gorge for the myriad of recreational activities available. The region offers opportunities for people of diverse outdoor interests and skill levels: water sports, hiking, nature viewing and rock climbing. One group that has received much attention from residents and managers are the partiers. Parts of the Gorge are known as “party” spots. The Gorge is attractive to bacchanalians because it contains a large wilderness area with an inadequate number of personnel to patrol it. Due to its proximity to large metropolitan areas and institutions of higher learning, it serves as a quick “getaway” for students. One of the major problems associated with the partying is safety. The Gorge contains many cliffs and treacherous areas that present a plethora of safety hazards that are exacerbated when people use mind-altering substances or unknowingly camp near a cliff edge. Since statistics were first compiled in 1960, the Gorge has been the site of 1,575 search and rescue missions and 55 deaths, many associated with such falls (Radel 2004).

Over the past twenty years, rock climbing has grown in popularity, and the Red River Gorge is considered one of the top ten places to climb in the world (Katz 2003). At the same time, some residents and other recreational groups express concerns given their perceptions that rock climbing activities cause damage to plant and animal species and rock structures.

### *Field Methods*

As stated above, interviews were conducted with forty residents who live adjacent to the Red River Gorge Geological Area or in close proximity to it. Respondents for the resident portion of the research were chosen using a form of opportunistic sampling known as snowball sampling. Snowball sampling “is a special nonprobability method used when the desired sample characteristic is rare. Snowball sampling relies on referrals from initial subjects to generate additional subjects” (Vogt 1999). Names of some lifelong residents were initially obtained from key informant interviews; and from that point, word of mouth was used to identify more respondents. Respondents were then chosen based on several criteria including their time lived in the Gorge, amount of land holdings, and their residence location relative to the Gorge.

Interviews were held with the head of the household. For purposes of this study, head of household is defined as either a male or female of legal age who assumes at least fifty percent of household financial responsibility. While the majority of interviewees were male, there were several instances where female members of the household were interviewed. Either there was no male head of household (divorcees, unmarried people, or widows) or the male head of household was unavailable or unwilling to be interviewed. During the interviews it became clear how influential the female members of these households were by interjecting their opinions into the survey and also through their role in decision-making and providing additional income for the family. The interviews were conducted in the respondents’ homes or principle place of business and ranged from thirty minutes to two hours in length, most averaged approximately forty-five minutes in length.

### *Research Materials*

Appendices B and C contain the interview used for this research. Information gathered in this interview included biographical information, land use, and attitudes about the Red River Gorge use and management. In addition to quantitative questions, respondents were asked their opinions regarding the future of the Gorge. Likert scales were used to collect opinion data addressing management perceptions and possible future actions. For questions in the interview not easily posed by quantitative measures, open-ended questions were used. Space was allowed in the interview for the respondents to reply with their feelings on the query. As would be expected, some respondents attached more substance to their responses for these questions than did others.

### *Research Methods: Recreationists*

Surveys with 1,019 recreational visitors were administered and completed. The Visitor Survey was conducted in the Gorge in June 2004 and a two week period in October 2004. As part of a Research Field School course in Environmental Studies, Baylor University students conducted the survey at different locations within the Red River Gorge area (access points for various trails, canoe take-out points, etc.). These locations included Sky Bridge, Grays Arch, Rock Bridge, the visitors' center, Clifty Wilderness, Bison's Way, and Military Wall (See Figure 3.1). Since the visitor population is transient in nature, this study employed opportunistic sampling to administer the Visitors Survey. As visitors left a particular site they were approached and asked to complete a survey.



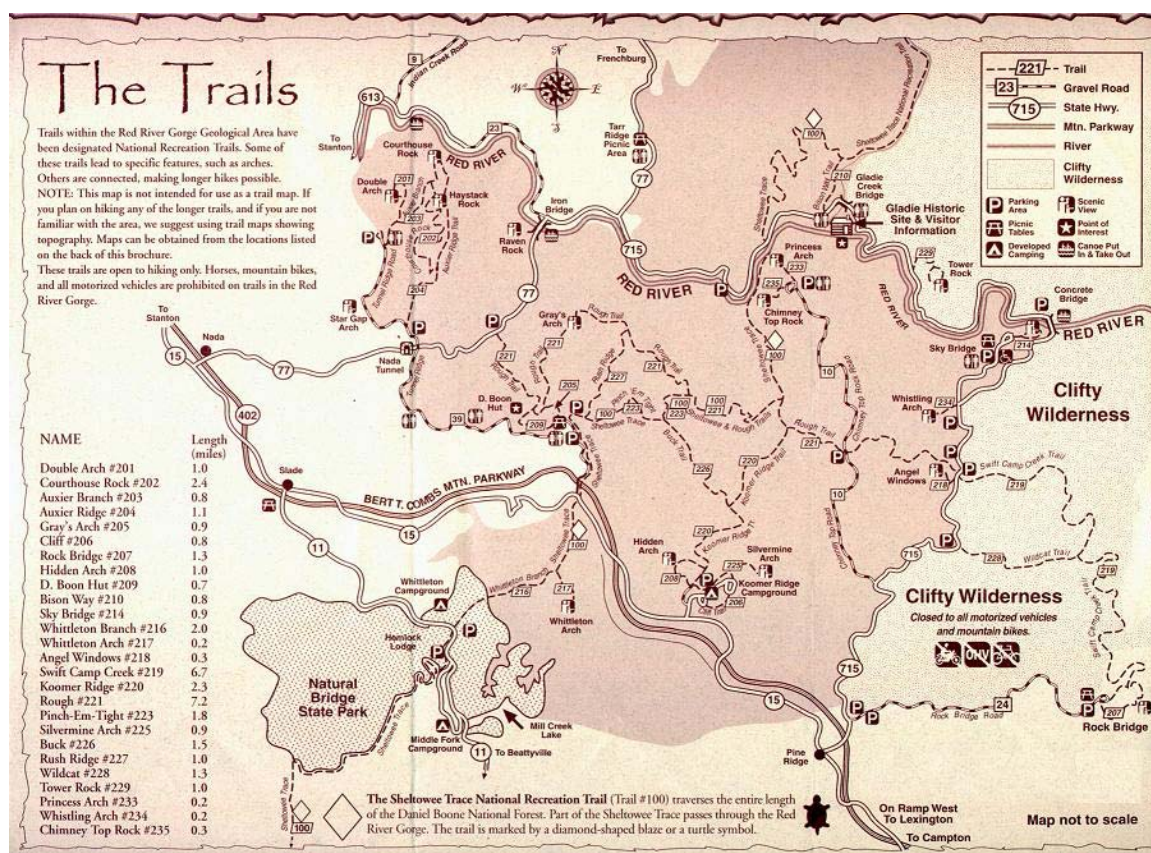


Figure 3.1  
Red River Gorge Trail Map

The Visitor Survey (Appendix C) collected basic demographic data, information about recreational use of RRG, social carrying capacity levels (i.e., how they felt about encountering certain numbers of other visitors), feelings about interactions with local residents, perceptions about management of the area, and preferences for future development of the region.

Likert scales were used for questions concerning density tolerance and feelings on the management and upkeep of the Gorge. For other sections, close ended questions were used. The few open-ended questions on the survey dealt with the visitors unique

experiences, such as whether or not that visitor had had problems with local residents. The survey took approximately ten to fifteen minutes for most visitors to complete.

The Resident Interview and the Visitor Survey include identical sections. These matching sections can be found in Section C of the Visitor Survey and Section Five of the Resident Interview. These questions will allow comparative analysis between the two groups.

Data from both the Visitor Surveys and Resident Interviews were stored throughout the research process. The data from both research tools were coded and entered into SAS, and the qualitative data was organized and stored in Microsoft Word files. These data were first analyzed using basic descriptive statistics, and then using additional cross-tab tests including Chi-Square and Fisher's Exact Tests.

### *Constraints*

Because of the nature of this project, there are unavoidable limitations. Time was one such constraint. In order to finish this project in a timely manner that was consistent with the requirements for the degree plan chosen, the data collection, processing and writing of this thesis had to be completed in a sensible amount of time. Financial restrictions also proved to be problematic. Given that the economy of the Gorge is driven by tourism and that this research was conducted in the summer during the high season, the cost of living in the Gorge was high.

The chosen method of sampling also was a constraint. People interviewed were chosen because of both their willingness to be interviewed and the fact that their name had been provided by another interviewee. This caused bias in who was interviewed since people who were recommended to me were either friends or acquaintances with

someone who had been interviewed. Therefore, people with similar interests and backgrounds were interviewed. This bias could have been overcome by using a more random method of sampling, but the records for the three counties were not structured in a way that made random sampling feasible.

## CHAPTER FOUR

### Quantitative Analysis of Resident Opinions about Management Issues

To properly evaluate the research questions and objectives posed by this study, the data collected in the Resident Interview are divided into four categories: demographic, resident experiences in the Gorge, management of the Gorge, and opinions about the future of the Gorge. The Visitor Survey is divided into four sections as well: visitation patterns, recreational activities, feelings about management, and demographic characteristics. The following analysis explores the resident population with particular attention given demographic characteristics, relationships between themselves and visitors, potential problems in the Gorge, and future management alternatives.

#### *Demographic Characteristics of the Residents*

Demographic variables collected throughout the research illustrate the underlying characteristics of the resident sample population. Fifty-two percent of respondents are married, and the mean age is 57. The average household size is two people. Data were not collected on the residents' income because of the sensitivity of that topic, and the depressed economic state of the area only made this subject more delicate. However, an occupational history was obtained. The two responses that comprised the majority of occupations were self-employed (27%) or employed by the government (29%). Roughly fifty percent of the resident sample had some additional schooling past high school or a college degree.

*Residents Experiences in the Gorge*

Many of the residents interviewed had strong historical and familial ties to the Gorge. Several of those interviewed had lived in the Gorge all their lives, and the most popular response for why people moved into the Gorge was that their family was there (50%). Seventy-five percent of the interviewees had family living in the Gorge, and 33% of the survey population stated all their family lived in the area. One-hundred percent of the residents interviewed claimed to have close friends in the area. These data suggest evidence of the strong social networks present among the residents of the Red River Gorge.

Table 4.1  
Land Holdings

Response	Mean	Median	Standard Deviation
Years Lived in Gorge	19.3	17.5	14.2
Acreage owned	18.2	12.0	11.9

Of the residents interviewed, 80% of the sample said they currently recreated in the Gorge and 13% said they had recreated in the Gorge in the past. The recreational frequencies are collapsed into six categories with 26% of the sample recreating in the Gorge more than once a week (See Table 4.2).

There were seventeen activities listed on the interview (See Appendix B Section 2, Question 1) from which the residents chose the activities they participated in when they were in the Gorge. These included canoeing, hiking, biking, camping, fishing, rock climbing, sport rock climbing, bouldering, picnicking, and bird watching. The additional activities listed for the “other” category included reunions, driving through the Gorge,

nature viewing, kayaking, caving, archeology, botany, photography, visit historical site, backpacking, meditation, exploring, and tubing.

Table 4.2  
Recreation Frequency

Response	Percent
More than once a week	26.0
Once a week	10.0
Once every 2 weeks	8.0
Once a month	35.0
Less than once a month	15.0
Not anymore	6.0
Total N=	39

The interviewees were also asked to name the main activity they participated in when they visited the Gorge (See Appendix D for a full list of activities). Hiking was named most often as the residents' main activity, and the second most popular response was nature-viewing (21%). To note here for further discussion later the most common response for the visitors was hiking (45%) followed by camping (25%).

In an effort to identify possible strong feelings about certain relevant causes, residents' were asked if they belonged to any conservation, recreation, or community groups. Of the resident sample, 55% of the residents did not have membership in any such group. 45% of the residents interviewed claimed membership in an organized group. There were forty-two individual groups listed by the residents in the Gorge; the Sierra Club was the most common with 17.4% of those interviewed stating that they had membership in that group.

Residents were asked whether or not they came into contact with visitors to the area. Fifty-five percent said that they had contact with recreationists all the time, 30%

estimated they had contact once a month. Eleven percent had contact less than once a month, and 4% said that they never had any contact with visitors.

The main source of communication between residents and visitors was “giving out information.” Other types of contact included: casual meeting in the Gorge, residents that provide education, eating at local restaurants, and through their job/ business. Fifty-eight percent of residents asserted that they had had problems with visitors. The data presented in Table 4.3 indicates the nature of problems residents feel they have with visitors. The most common problem noted by the residents was the use of ATVs in the Gorge area (32%). The issues that the residents have with the use of ATVs include damage to personal property and the landscape of the Gorge. An associated problem with the ATVs is trespassing. For example visitors will inadvertently use ATVs on private property without asking for permission.

Table 4.3  
Problems with Visitors

Response	Percent
Trespassing	11.0
Drugs	11.0
ATVs	32.0
Climbers	10.0
Guns	10.0
Professional problems	5.0
People camping on trail	5.0
Lending Personal Property	5.0
Archeology ruined	11.0
Total N=	40

*Involvement in Tourism*

First, residents were asked whether or not they were directly involved in the local tourism industry, and if so, the nature of their involvement. Forty percent of residents reported they were involved in the tourism industry. Table 4.4 shows the types of businesses, most of which were small in nature having one or two employees. In addition, most of the businesses are fairly new and their average length to have been in business was eight years. The most common business owned by residents was cabin rentals (25%). Forty-five percent of the business owners said that business was “going well.” However, 75% noted that they were having problems with their businesses.

Table 4.4  
Types of Tourism Businesses

Response	Percent
Campground	8.0
Resort	8.0
Reptile zoo	8.0
Cabin rentals	25.0
Museum	8.0
Restaurant	8.0
Store	17.0
Bed and breakfast	8.0
Adventure company	8.0
Total N=	12

Some issues that the business owners said were problems caused by the floods of May 2004 (18%), issues associated with the roadblocks that have been used by local law enforcement to cut down on the amount of drugs and alcohol going into the Gorge (9%), competition from other businesses (20%), the necessity for more funding (4%), and the



need for upgrades (4%). Other positive developments included were that the internet was helping business and that overall numbers of visitors was increasing.

### *Property Ownership*

The average number of acres owned by respondents in this study was thirty-seven. The smallest landholding represented was 1.5 acres and the largest was five hundred acres. The main use of land that was noted by the residents was that they lived there (38%). Twenty-five percent of the residents used their land for farming, and the remaining residents used their land for other purposes such as business (16%), personal use (14%), or they had thus far left it undeveloped (1%).

Of the forty respondents interviewed, only two owned riverfront property along the designated National Wild and Scenic portion of the river. Of those two residents, one said that the use of their land had been restricted by the National Wild and Scenic Rivers Designation. The main problem noted by this resident was that there could be no improvements made on the shore or in the river. This stipulation includes prohibiting the removal of brush and rubbish. The floods that occurred in May 2004 left a lot of debris in the river. The resident could not remove the debris and this “hampered the upkeep of this persons’ riverfront property.”

### *Management of the Gorge*

All of the residents interviewed were aware that the Red River Gorge is located in the Daniel Boone National Forest and that a portion of the Red River is designated a National Wild and Scenic River. When asked who was responsible for management of the Gorge, thirty-seven of the residents knew that the U.S. Forest Service was the agency

responsible for management. Seventy percent felt that there are management problems in the Gorge, and thirty percent responded that there were not any problems.

Table 4.5 lists the problems the residents mentioned in reference to management of the Gorge. The most common response was problems with the bureaucracy of the Forest Service (57%). Residents also noted problems with the damage to nature in the Gorge (32%).

Table 4.5  
Residents' Perceptions of Management Problems

Response	Percent
Damage to nature/Gorge	32.0
Bureaucracy of the U.S.F.S.	58.0
Problems with visitors	5.0
Local involvement	5.0
Total N=	37

When asked how they felt about the current management of the Gorge, the most frequent responses dealt with what the residents felt was lacking, such as education for visitors, not enough management for the resources in the area, and not enough restrictions (See Table 4.6). The perception of many of the residents seemed that it was not that there was not enough management; it was the need for proper management of the natural resources. However, all of the responses given to this question were not negative; 27% of the respondents said that the "management is good." The most common responses in reference to their opinions about management were that there were problems with the management of natural resources, such as the river, cliffs, and recreational areas (49%). The residents were also asked if they had noted any negative impacts on the land and water of the Gorge. Sixty-three percent of the residents said that they thought there had

been harmful impacts to the land of the area. Examples given of problems with the land include: logging, mudslides, trash, impacts to cliff line, ATVs, horses, “vegetation disappeared,” strip mining, and “carving on rocks.” Forty percent of the residents noted that water quality had become problematic, in terms of: litter, human waste, erosion, oil company damage, no more mussels, (which are an important indicator species, found in the river, pollution, and rock quarry runoff).

Table 4.6  
Feelings about Management

Response	Percent
Education	5.0
Management of resources	49.0
Restrictions	3.0
Management is good	27.0
Access issues	5.0
Visitor caused problems	5.0
NWSR is good	3.0
Things have changed	3.0
Total N=	37

There were three sets of Likert scale questions on the Resident Interview (See Appendix B Section V questions 3-5). The first set asked the residents about feelings regarding the use of the Gorge, and improvements that could be made in the Gorge. The next set asked about potential problems in the Gorge, and the final set asked about the residents’ perceptions of proposed Forest Service management actions.

Thirty-eight percent of the residents thought that the Gorge was overused while 18% thought that the Gorge was underused. Thirty-nine percent said that the Gorge was in its natural state, and 32% thought that the Gorge was environmentally damaged.

Thirty-nine percent of the residents said that the Gorge was poorly managed, while 26% said that it was well-managed.

The next set of Likert scale questions asked about the residents' feelings on proposed improvements for the Red River Gorge Area (See Table 4.7). Fifty-four percent of the residents supported having more services available in the Gorge area while seventy-two percent supported having more information available. Forty-nine percent supported having more public and privately-owned campgrounds.

Table 4.7  
Resident Perceptions on Proposed Improvements

	Strongly Approve	Approve	Neutral	Disapprove	Strongly Disapprove
Having more services available	33%	21%	8%	13%	26%
More Information	44%	28%	26%	0%	3%
More campgrounds	24%	24%	19%	19%	14%
Visitor Center	34%	26%	13%	21%	5%

Residents were then asked how they felt about a number of potential problems in the Red River Gorge (See Figure 4.8). The list was provided by the U.S. Forest Service and was compiled by them as part of their data collection process for the LAC. For the most part, the residents did not feel that there were many potential problems in the Red River Gorge. Sixty-five percent of the residents felt that having too many trails was not a problem. Forty percent of the residents said that too many rock climbing areas would not be a problem. Seventy-five percent said that too many rules would not be a problem.

However, 52% said that damage to plant and animal species would be a problem, and 78% percent said that damage to archeological sites was a potential problem.

The final set of Likert scale questions asked residents about a number of proposed management actions. Seventy percent were opposed to a daily usage fee for the Gorge. Seventy-four percent supported limiting climbing to designated areas, and 63% supported limiting camping to designated areas.

Table 4.8  
Resident Feelings on the Future of the Gorge

Response	Percent
alright as it is	9.0
beauty of area	20.0
Anti government	8.0
Anti ATVs	4.0
More Supervision	9.0
More Facilities/Improvement	31.0
More employment opportunities	2.0
Gorge is a valuable resource	2.0
LAC is good	2.0
Don't let people love gorge to death	2.0
Keep development natural	4.0
Make it a national park	4.0
Anti Gatlinburg	11.0
Total n=	40

The last two questions asked the residents their feelings on the future of the Gorge and if they had any final comments. Table 4.10 shows the residents feelings about the future. The most common response for this question was that there needed to be more facilities and improvements in the Gorge area.

Examples of the responses that were given in this category were: “development is good,” “need more campsites,” and “more parking areas necessary.” The residents also

spoke about the natural beauty of the area, and that the scenic quality and ecological integrity were things that they want to see remain intact. They noted that the Gorge is a special place and that they wanted to see it stay wild and primitive.

### *Demographic Characteristics of the Recreationists*

In an effort to better understand how the residents perceive the visitors and any relationship they feel they have with them, this section presents some basic information about the visitor population to serve as background information for further discussion. The demographic information for the recreationists is contained in sections A and D of the recreationist survey (See Appendix C, Section A Questions 1-6 and Section D Questions 1-7). The questions in Section D ask for basic demographic information such gender, education, occupation. This section also asks about the visitors' satisfaction level with their visit to the Red River Gorge. The majority of people sampled (54%) were from the cities of Lexington, Louisville, and Cincinnati. Fifty-eight percent of the recreationist sample was male. Thirty-seven percent of the visitors had "some college or additional schooling;" 21% had a Bachelors degree, and 20% had a high school diploma. The occupations noted by the visitors most often were professional (37%) or student (20%). The visitors overwhelmingly said that they were pleased with their visit to the Gorge, with 69% saying that they were "extremely satisfied."

The questions in Section A targeted visitors recreational habits while in the Gorge. The questions specifically ask about the persons experiences in the Gorge such as: number of people in their group, length of visit, seasonal preferences for visitation, and how many times that person has visited the Gorge. The participants were asked to note whether they were in the Gorge with friends or family. People visited in groups from

one person to groups as large as forty. The most popular source for information about the Gorge that the visitors noted was friends or family (75%). The reasons the recreationists gave for visiting the area are presented in Table 4.9. The most common response was the natural beauty of the area (36.5%).

The visitors were asked to identify their recreational activities from the same list that was presented to the residents in the interview. Forty-seven percent of the visitors listed hiking as their main activity. The second most popular activity is camping, with (25%) (Refer to Appendix D for a full list of activities.)

Table 4.9  
Reasons for Visiting Gorge

Response	Percent
Natural beauty	36.5
Communion with God	4.3
Peacefulness	5.4
To be with friends & family	15.3
Party	2.3
Get away from everyday life	10.4
Outdoor exercise	12.5
Take it easy	3.4
Experience the rugged life	9.7
Total N=	988

The recreationists were asked about their contact with the residents of the Gorge, 402 of the visitors had had no contact with local residents, 184 had positive contact, and 16 had negative experiences. These experiences ranged from the residents being “nice” and “helpful,” to them being “stingy,” “scary,” or “drunk.”

#### *Feelings about Management of the Gorge*

The section on management options and potential problems in the Gorge is identical in both the Resident Interview and recreationist survey. Likert scales were used

on both research instruments. Visitors were then asked how they felt about a number of potential problems in the Red River Gorge (See Appendix E). For the most part, the visitors did not feel that there were many potential problems in the Gorge. Seventy - four percent of the visitors said that having an excess of trails would not be a problem.

Table 4.10  
Feelings about Management Actions

Management Options	Strongly Support	Support	Neutral	Oppose	Strongly Oppose
Limit overall use	11.3%	14.4%	37.5%	14.5%	22.2%
Night fee	40.8%	22.1%	29.2%	3.3%	4.5%
Day use fee	14.2%	16.9%	29.8%	16.1%	23.0%
Limit max group size	11.9%	13.6%	33.5%	17.8%	23.3%
Designate campsites	15.0%	15.2%	30.5%	16.6%	22.7%
Designate trails	9.8%	12.5%	28.9%	19.9%	28.8%
Designate climbing	17.5%	16.4%	30.1%	13.4%	21.8%
Prohibit campfires	6.7%	7.2%	29.9%	17.3%	39.0%

Seventy percent of the visitors said that an excess of rock climbing areas would not be a problem. Sixty-six percent said that an excess of rules were not a problem. Forty-four percent said that damage to plant and animal species would be a problem, and 44% percent also noted that damage to archeological sites was a potential problem.

Table 4.10 presents the recreationists' opinions about management options for the Gorge. It is interesting to note that the sample is divided roughly by 30% in support, 30% feeling neutral, and 30% opposed on most all of the proposed management actions.



Thirty-four percent were opposed to a day use fee for the Gorge. Thirty-three percent supported limiting climbing to designated areas and 30% supported limiting camping to designated areas.

## CHAPTER FIVE

### Qualitative Analysis of Resident Opinions about Management Issues

The discussion provided in this chapter presents a more in depth examination of both the qualitative and quantitative data documented from this research. This chapter assimilates both resident and visitor responses to answer the research questions that were stated in Chapter One. The questions are:

1. To determine the nature of relationships between hosts (residents) and guests (visitors) in the Red River Gorge.
2. To identify the impacts the National Wild and Scenic River designation has had on residents in the Gorge area.
3. To determine the preferences of residents for future development in Red River Gorge.
4. To determine residents feelings about current management of the Red River Gorge
5. To offer a set of recommendations for managing agencies addressing the current needs of residents and visitors.

#### *Transition in the Red River Gorge*

As society has modernized, many cultural changes have manifested themselves in the Gorge, as well as the rest of Appalachia. As mentioned in Chapter Two, the residents of Appalachia have been categorized as a group of clannish people closed off to outside influence. Two reasons for their social patterns are the influence of the residents' Scottish heritage and the mountainous geography in the surrounding area. Technology has bridged some of these gaps, connecting Appalachia with the rest of the world.

These technological innovations are a blessing as well as a curse for the people of Appalachia. The introduction of the Internet and extensive television channels introduces culture that is not indigenous to the area. Tourists also bring new pieces of culture into Appalachia. One resident said she did not understand the need for all of the new gadgets, and that when she was growing up in the Gorge “everyone was so poor that no one noticed.” She also said that there was less competition between neighbors to “keep up with the Joneses,” so to speak. While the people of Appalachia are more connected to the outside world, some habits die hard. One resident, who has lived in the Gorge for over a decade, said “it didn’t matter how long you had lived in the Gorge, if you wasn’t born there you were still a stranger.”

#### *Agriculture as the Economic Base*

As mentioned previously, the residents of the Gorge, not unlike the rest of the state of Kentucky, have historically relied on agriculture for its economic base, one in four residents of the state make a living from agriculture (Kentucky Agricultural Statistics Service 2003). The loss in value of agriculture is both an economic and cultural issue. And until recently, tobacco has been the staple crop for a large majority of farmers in Kentucky.

Tobacco is the main crop because it is as much as twenty times more profitable than other crops, such as corn and soybeans (Stull 2000). The changes in agriculture have caused cultural losses as well. For instance, in the past, harvesting tobacco was a social occasion where all the people in the community got together to harvest the crop (Stull 2005). Presently, farmers say the only people they can get to help harvest are people that are too old, too young or drugged out (Ibid).

Traditionally, once tobacco was harvested it was taken to a central location and auctioned off. The U.S. Department of Agriculture set up a quota system in the 1930s that has allowed the price of tobacco to remain stable (Stull 2005). In more recent times, the use of tobacco has decreased and, this in turn, has caused the demand for tobacco to lessen. The drop in the necessity for tobacco has resulted in the need for a quota system being eliminated (Stull 2005). In turn, the government has taken away the quota system, and the last tobacco auction in Kentucky was held on February 24, 2005 (Warren 2005). Today, the farmers have two choices: stop growing tobacco or contract with a tobacco corporation, such as Phillip Morris. The contract system has proven to be much less profitable for farmers than the quota system.

Due to the loss of tobacco as a source of income for the residents, the Red River Gorge is an area caught in transition, and changes will have to be made. One option is to exploit other agricultural products. Stull (2005) related that the residents of western Kentucky are transitioning their farming operations to raising broiler chickens. Another option is to move the Gorge towards an economy based more upon tourism. It is, after all a unique, marketable area. However, basing a whole economic system is not without its risks. As discussed previously in Chapter Two, there are both benefits and detriments when dealing with tourism. This discussion provides insight into both the positive and negative situations that were occurring in the Gorge during the summer of 2004.

#### *Relationships between Hosts (residents) and Guests (visitors) in the Red River Gorge*

There are several levels on which the residents and recreationists interact with each other. Most of the time, the relationship observed between the residents and the visitors can be categorized as a kind of love/hate relationship. When the tourists are

benefiting the residents, mainly through economic gain, they love and appreciate them. However, when they are causing problems, such as trespassing or being reckless, they do not like them. Several of the residents who were interviewed had several “horror” stories about interactions with visitors in the Gorge.

One problem that several residents said they had experienced was that they had had guns pulled on them while out in the Gorge. However, these residents said that they did not perceive the guns as threatening; it is just something that happens during hunting season. An account that did make a resident feel threatened was when he found people trespassing on his property practicing what he thought to believe were satanic rituals; devil-worshippers were using the cabin on his land for their rituals. Another resident told a story about a biker gang that abducted a Doberman pincher, bar-b-que'd it, and served it to some other local residents. Hearing accounts such as this would make one think that the residents were completely closed off to outsiders, but there are positive instances reported as well. An example of positive interaction was when residents were able to provide educational opportunities to visitors. Several people who were interviewed enjoyed the fact that they could provide information to the recreationists through various environmental and recreation groups that they were members of.

#### *Contact between Groups*

The most common reason that the residents gave for contact with visitors was “giving out information.” For instance, visitors commonly stop at homes and businesses along the main roads near the Gorge to ask for assistance. Answering questions did not seem to bother the residents; however, the residents did not appreciate the tourists taking advantage of their kindness and generosity.

One older resident, who lives in the Middle Gorge, said that he had had problems with visitors exploiting his willingness to help out. For instance, he commented that if a visitor had car trouble he would call for a tow truck. He added that if the visitor had no means to pay for the tow truck when it arrived, then he would not call. He also said that he did not lend tools or chains out to people anymore because a number of his possessions had not been returned to him.

Another relationship that the residents and visitors have is that they are using the same resources within the Gorge and sometimes “compete for them.” Eighty percent of the residents who were interviewed currently recreate within the Gorge. Their main activity is hiking, so it is probable that residents are meeting visitors on the trails given that hiking is one of the most popular activities.

While the residents do not seem to mind sharing “their Gorge” with visitors, they also stressed the need for the visitors to respect the area. One resident said that he was “not against people recreating, but when there are beer kegs laying around there is a problem.” He also added that when he goes to the Gorge to recreate, he avoids places where he knows that tourists are going to be present.

Another older resident who had lived in the Gorge area all of her life said that she hopes “people can take care of it and let the people who take care of it enjoy it.” Visitors also made comments that echoed what the residents said. One visitor noted that “as long as people pick up the trash in the area and respect the trails and land, I am happy.” Another group of visitors said that they had seen people “hacking up” Sky Bridge with graffiti. They were bothered and told them to stop, but they did not.

### *All Terrain Vehicles (ATVs)*

An example of the residents not being willing to share the Gorge with visitors is the use of ATVs. Private landowners noted their complaints about the use of ATVs. ATVs are not allowed inside the Gorge proper; however, this rule is broken quite often. ATVs cause various environmental problems, including air pollution, noise pollution, disruption of wildlife habitat, and soil erosion. Several residents also noted that they often found people on their private property using ATVs.

This trespassing is problematic not only because the visitors are trespassing, but also because the visitors are not always aware of the private property in the area. One visitor expressed surprise that there was private property in the area. One resident said that the problems with ATVs are due to poor foresight by the Forest Service. When they finally realized that ATVs were disruptive, the problem was too far advanced to fix it.

The same resident also said that people “are loving the Gorge to death,” and that the visitors do not understand the fragility of the area. Residents habitually complained about the presence of rock climbers in the Red River Gorge. One resident said the problem with climbers is they feel that they are already ecologically aware and environmentally friendly. However, even with all of their perceived awareness and education, they still cause problems. Another problem with the climbers is that they are continually expanding their routes into exceedingly delicate areas.

### *Safety Concerns*

Other residents had concerns about safety in the Gorge. One woman said she didn’t think the visitors should be “out in the wilds at night” and that those visitors needed safe places to stay out of the Gorge after sunset. The residents also complained

about the fact that the recklessness of visitors used up local resources, such as the time it took the local rescue crews to save a visitor who fell and the money needed to fund these missions. There are several famous, or in this case, infamous stories about accidents in the Gorge. A favorite of the residents to tell is that of a man who chased his toilet paper over a cliff edge one night and fell to his death.

### *Economics and Tourism*

Forty percent of the residents surveyed were involved in tourism as employees or business owners. These residents are providing services for the visitors, and the economic benefits are realized not only for the residents directly involved in the tourism industry but for all the residents of the three counties that comprise the Red River Gorge.

As noted in Chapter Two, there are a myriad of economic profits and pitfalls associated with tourism. One common woe for local economies associated with tourism is leakage of profits away from the area where the money is sent back to corporate headquarters. This type of leakage is not a problem for the residents of the Red River Gorge because most of the tourism - based businesses in the area are locally owned.

There are a range of businesses present in the Red River Gorge. The majority of people who were interviewed own cabins for rent. The small tourist shops and grocery stores near the Gorge support the local tourist industry. Recreational opportunities such as rock climbing, canoe trips, and other adventure - oriented recreation activities are available.

The residents are aware of the benefits that tourism provides. As noted previously, a majority of the visitors (54%) to the Gorge come from the metropolitan



areas of Lexington, Louisville, and Cincinnati. One resident noted that “without the visitors from Ohio, the Gorge would be a ghost town.”

The tourism industry in the Red River Gorge is not without its problems. Local politics seem to play a large part in which residents get to participate in the industry. Several of the business owners felt that there was not enough cooperation between them and that this dilemma was then counterproductive.

One particular business owner felt that other business owners worked harder to put people who they didn't like out of business than they did worrying about their own businesses. This same business owner who owns a resort in the area spoke of personal experiences with the more vengeful members of the tourism industry. He had a zoning problem the week of his interview concerning the sign for his place of business. He felt that other business owners complained to the authorities because they were jealous that his business is so successful.

While the residents enjoy the revenue from the tourism industry, they are not without their complaints about the visitors. One business owner noted that when people get away from their homes they lose respect for the property of others. Another businessman said that it was not just people from far away that caused problems; he said that local people tear things up on his property, and he also said that he refuses to rent to local residents.

#### *Contact between the Stakeholder Groups*

Of the visitor sample, 66% of the visitors sampled said that they had had no contact with residents, 31% had positive contact with residents, and 3% had negative contact. Some examples of exchanges between the two groups include: getting

information, residents giving visitors rides, visitors purchasing drugs from the residents, “positive contact,” or that their car had been burgled.

Theft has been another historical problem in the Gorge. The residents interviewed said that they did not worry about this problem very much anymore because it was usually fellow residents who were perpetrating the crimes, not recreational visitors. However, this does not mean that they do not think that theft will be a problem; 68% perceived it to be a potential problem. On the other hand, only 29% of visitors said that theft was a potential problem.

As mentioned in Chapter Two, the relationship between visitors and residents has been described as a “host/guest” relationship. This affiliation has sometimes been described as a negative one because it is often inequitable. For instance, if a person has a guest in their home, the assumption is that the guest will treat the host with respect. These assumptions have not always been the case with residents and visitors. It has been found that when people visit an area they demand certain services and resources from the residents (Smith and Brent 2001). While there have historically been problems between these two stakeholder groups, it is today, for the most part an amicable relationship.

#### *Resident and Recreationist Feelings about Current Management of the Red River Gorge*

Negative feelings toward the Forest Service are not a recent development in the Red River Gorge. These attitudes are in large part rooted in the land acquisition practices which have taken place in the area. There is a “folklore about the government land grab” that took place in the area (Beebe 1985). In the early 1980s, when the U.S. Forest Service was condemning land by eminent domain, adjectives such as “arrogant”, “overbearing”, and “mean” were used to describe the Forest Service (Ibid). As evidenced

by the findings of this study, resident attitudes have not changed much. As one man put it, “[the management] has gotten worsen and worsen.”

As noted in Chapter Four, 39% of the residents said that the Gorge was managed poorly and 76% of the resident sample felt that there were management problems in the Gorge. The residents had both positive and negative comments about all aspects of the management of the Gorge. These observations ranged from praise for the Forest Service and the good job they are doing to constructive criticism on how the U/S/ Forest Service could do the job better. There were also comments made by residents that were spiteful in nature.

There were several residents who felt the Forest Service was still trying to figure out how to manage for both people and nature. One resident summed up the conundrum of management in the Gorge very succinctly. He said that the “area is too good to be under the Forest Service and not good enough to be a National Park under the Department of the Interior.” The issue of the Gorge becoming a National Park is discussed with some frequency among the residents of the area, but this is more of a rumor than an option that is being pursued by management of the area.

His reasoning for this statement was that the Gorge is not big enough to be a National Park. Another problem that this resident noted was that the Forest Service manages for timber harvest and not recreation.

To counter this somewhat negative view of the management, another resident, who was a former Forest Service employee, said that the agency has made great strides in the 1990s by “realizing there was more value in a tree than the fact that they could turn it into a stump.” However, this resident also felt that the management in the Gorge had

gone too far towards only managing for the people who come to the area and not sufficiently protecting their natural resources.

According to this same resident, the timber of the Gorge is safe because of lawsuits that were raised by the environmental group, Heartwood, who sued the Forest Service to cease timbering within the U.S. Geological Area in the Gorge. While he felt this was positive in reference to protecting the Gorge, he said that this lawsuit was detrimental to the Forest Service. because they lost some good employees who became burnt out after all the work that went into the court battles.

### *Potential Problems in the Gorge*

In the section on perceptions of potential problems there were several questions dealing with the interaction of stakeholder groups in the Gorge. As noted before, the Gorge has been known as a party location, so there was a question pertaining to rowdy/drunken people in the area. Sixteen percent of the residents said that they did not perceive drunken people as a potential problem in the Red River Gorge, while 42% of visitors said that this was a potential problem.

To combat the problems with drug and alcohol use in the Gorge, the local law enforcement has set up road blocks on HWY 77 going through the Nada Tunnel (See Chapter One). One man called this “an abuse of power.” He feels that the law enforcement has overstepped its boundaries. This resident also said that the road blocks have made visitors stay away. People have told him that they wouldn’t return because of the inconvenience of traffic and the loss of time. In addition to the road blocks, law enforcement has also been taking drug dogs through the camp sites to search for drugs.

The resident did not feel that drug use was right, but that the measures that were being taken were a little extreme.

A positive aspect to the loss of the parties is that some people perceive the Gorge as a safer place to bring their families, but one group of adults traveling with a youth group expressed concern that the Gorge would not be a safe place in the future.

However, not all the visitors who come to the Gorge to party have been deterred by the crack down on drugs and alcohol. One visitor who had been arrested for the possession of marijuana said “[the arrest] rubbed me the wrong way and doesn’t stop me from bringing substances in the Gorge.” He was simply irritated and angry at the Park Service. This man also questioned the priorities of the rangers and whether or not they should focus on other more important issues.

The Visitors Center that was completed in the summer of 2004 was an accomplishment that many residents and Forest Service employees had been working towards for several decades. Previous to the completion of the permanent structure, a portable building served as the only source of official Forest Service information within the Gorge. When asked how they felt about the Visitors Center, 51% of the residents said that they approved. However, the residents did have some valid complaints about the Center. These concerns are symptomatic of the larger feeling that the residents do not have enough of a say in how the Gorge is managed.

Several people were slightly perturbed that local materials had not been used to create the building. An example of this is the fact that limestone from Tennessee has been used to construct the exterior of the building. The residents felt that local materials should have been used to construct the building.

Residents had problems with what was on the interior of the building as well, in particular with the museum exhibits. One local educator said that she felt that the exhibits present in the Center “failed to interpret” the Gorge on a significant level. A local artist who was interviewed was concerned that the exhibits were not of a high enough quality to make an impact, and another complaint was that the exhibits were “too elementary.” He also said that he had offered his artistic talent to the planning of the building, but the people in charge did not accept his offer.

Another management problem which was frequently discussed among the residents was the subject of damage to archeological sites within the Gorge. Eighty-nine percent of residents perceived damage to archeological sites to be a potential problem, while 44% of visitors perceived this problem the same way. In an interview with the archeologist for the Forest Service, he recounted that there is an extensive archeological record present in the Gorge, dating from sometime after the last Ice Age to the present. Another important fact that makes the Red River Gorge an invaluable archeological resource is that it is contained within one of the six zones where agriculture developed in North America. Another piece of local folklore is that there is a cabin in the Gorge that was supposedly lived in by Daniel Boone.

According to the archeologist, there is an abundance of potassium nitrate present in the area. This mineral has aided in preserving the archeology of the area so well. Another reason that potassium nitrate is important is its use in making gun powder, which made it a valuable economic resource during the Civil War. The most significant problem with visitors and archeology is that people camp in the rock shelters that were used as residences for the ancient groups who lived in the Gorge. This destroys historical

priceless information about the past residents of the Gorge. One reason for visitors using the rock shelters to camp in is that they are not aware of the damage that they do to the rock shelters. In fact, the archeologist said the only time that he had any problem with visitors is when he has to kick them out of the rock shelters.

Obviously the protection of this area is an important link to the past. The Forest Service is working to protect the archeology of the Gorge. As part of the LAC process outlined in Chapter One, the Forest Service is surveying as many archeological sites within the Gorge as possible. When sites are found they are cataloged and some of the more delicate sites are being fenced off to further protect them.

#### *Effects of Protective Designation in the Red River Gorge*

One protective designation that has affected the Red River Gorge area is the National Wild and Scenic Rivers Designation. Only two residents who were interviewed owned land that was part of the National Wild and Scenic Rivers corridor. Of these residents, only one said that he had been affected by the designation. He noted that the designation hampered the upkeep of his riverfront property.

While most of the residents interviewed were not directly impacted, as far as their use of land in their possession, in relation to the NWSR designation, it is still a topic of discussion among these respondents. Many of those interviewed credited the designation with saving the area from being flooded. Several residents interviewed said they did not think the NWSR designation has done much to keep the area pristine. They voiced concerns that this piece of legislation is just a front to placate environmental groups. Also, there were a few residents who stated that they would have liked to have seen the

area flooded, and that the benefits of the dam would outweigh the cost of the loss of land and the Gorge's scenic beauty.

In the previous study, residents were not as positive about the designation of the Red River as a National Wild and Scenic River Designation; only twelve residents were in favor of this action. Sixteen had mixed feelings, and twenty-three were opposed because they feared that the Forest Service would use the designation to compensate their land (Beebe 1985).

### *Future Development of the Red River Gorge*

The future development of the Red River Gorge is a complex issue for the residents of the area. At the heart of this matter is weighing the advantages and disadvantages of development in the area. The two issues that concern the residents are increases in recreational use and exploitation of natural resources. On one side of the developmental coin, recreational use and resource extraction both provide revenue and jobs for the area, which, as discussed in Chapter Two, is necessary to fight the poverty that is rampant in the Appalachian Region. However, there are negative consequences as a result of both of these industries. As discussed in Chapter Two, economic leakage is one result of both trades. Land acquisition by outside sources is a fear for two reasons: the government will condemn more land to provide more space for recreational visitors or that extraction companies will buy up land to mine and timber. Mining and timbering are not an issue within the boundaries of the U.S. Geological Area; however, the land outside of this protective boundary is fair game for developers. In an interview with a local resident who is employed by a power company in the area said that "it should



concern the residents that they have mining and clear cutting in their backyard, and that these practices are spreading closer and closer.”

The residents of the Red River Gorge responded favorably when asked about the future tourist based development of the Gorge. One resident who owns some rental cabins in the area said that she would like “to see the Gorge developed more so people can come enjoy.” Another local business owner said that he wished that the Forest Service and the local tourism board would better recognize the potential of the area. He stressed that rock climbing, a universal sport, would increase in importance in the future and that this recreation group needs to have more attention on that recreation group.

#### *Enforcement of Policies*

Another problem noted by residents is that there are not enough personnel to enforce the rules which are currently in place. A resident said that this is compounded by the ignorance of people who visit is also of issue. The lack of knowledge is compounded by the fact that there are not enough opportunities to raise awareness of issues within the Gorge. He said “there are signs and the like, but people are either missing them or not paying attention and either way, damage is being done.”

The residents in the current study were asked if they approved or disapproved of the following: having more services available, more information available about the area, increasing frequency of camp grounds, and their feelings on the new visitor center. A majority of the residents approved of all of these improvements in the Gorge

As discussed in Chapter Four, the residents and recreationists were asked, in identical Likert Scale questions, their feelings about a set of proposed management actions. Forty-nine percent of the residents and 56% of visitors opposed this action.

Residents perceived this as a denial of a basic, God-given right. Several people, both residents and visitors, said that there was no point in going camping if you could not have a campfire. To support this piece of datum, there was a question concerning the number of fire rings in the Gorge. Forty-one percent of residents said that this was not a potential problem and 58% of visitors said the same.

The most significant differences observed between the two groups concerned the issue of limiting rock climbing. Seventy-six percent of the residents were in support of limiting rock climbing, while only 33% of the visitors supported this action. The issue of rock climbing is a polarizing issue within the community around the Red River Gorge. One complaint is that climbers harm the fragile ecosystems that are found on the cliff faces. One resident said that he did not like the way that you could see the chalk trails going up and down all of the climbing routes. Several residents would not patronize businesses that are known for being rock climbing “hangouts.” Residents and recreationists were also asked if they thought that rock climbing would be a potential problem in the Gorge. Thirty-eight percent of the residents said that climbing would be a problem while only 10% of the visitors thought that this would be a problem.

Several of the residents noted concern for the safety of the visitors in the Gorge. When the residents spoke of safety, they were not necessarily concerned about the actual well - being of the people who came to visit; their concern centered on the fact that these visitors don’t realize that its local time, efforts and money that are used up when they fall off of a cliff or get hurt. In a way, the residents perceived this disregard as a lack of respect for their community and the services that they perform for the visitors.

This issue was specifically raised at the LAC meeting in June of 2004. An example of this is the residents' concern that rock climber accidents took time away from the rescue team. However, rock climbing accidents have been very rare in the Gorge. In an interview with a local resident involved in rescue missions in the Gorge, he noted that there had been only one rock climber death ever recorded in the Gorge as opposed to the 55 deaths associated with falling off cliffs.

One resident in particular said that there was no reason for people to be camping in the Gorge at all because of the dangers that were present. When asked if too many campsites would be a problem, there was a Fisher's exact value of .0024. Fifty-nine percent of residents said this was not a potential problem, while 65% of the visitor sample said that this was not a potential problem.

The idea of a daily usage fee bothered many of the residents. Seventy percent of this group opposed this action, whereas the visitor population was split equally over this action. Many of the residents expressed concern that the people of the area should not have to pay for what is essentially their back yard. Several residents also said that this action would not be fair to the visitors because their tax dollars are already used to fund the projects and management of the Gorge. Another complaint that residents had was that they regularly drive through the Gorge to access work and other resources, and they did not want to have to pay just to get to their jobs or homes.

The two groups equally opposed limiting number of people in each group allowed into the Gorge. Thirty-eight percent of the residents opposed this action and 40% of the visitors expressed opposition. Many residents interviewed did not feel that this action would be effective because larger groups could split up and potentially come in

separately. The residents had a similar opinion of this as limiting group size because they just weren't sure how a permit system would be effective.

## CHAPTER SIX

### “What’s the Gorge Good for?”

The title of this chapter is a direct quote from a man who has lived in the Gorge his entire life. The question posed by the resident resounds through both the history and current circumstances of Red River Gorge. Each stakeholder group has their own agenda for the Gorge, and sometimes these plans conflict with each other. For example, the controversy surrounding the dam fight of the 1960s pitted the government’s agenda to flood a portion of the Gorge against the residents’ wishes that their homes and land not be condemned. While the issue of damming the Gorge was resolved in 1994, when the Red River was designated a National Wild and Scenic River, there are still other topics that cause conflict in the Gorge.

This chapter will examine the feelings of the residents on a number of issues, some of which are problems that the Gorge was facing in the previous study and some that have presented them more recently. In addition to identifying these problems, some suggestions of how to solve these problems will be offered. These suggestions fulfill research objective number five, that is a set of recommendations for managing agencies addressing the current needs of residents and visitors to make recommendations for the future management of the Red River Gorge. The purpose of studying the interaction between the stakeholder groups in the Gorge is to gain insight as to how the needs of these groups can best be met. As mentioned previously, the Forest Service is currently working through the LAC process in the area, and it is propitious that this paper will aid in the LAC process.

### *Identified Problems in the Red River Gorge*

Three broad categories of problems were identified by this research. The first of these is resident/ Forest Service relationships. This covers a broad range of topics from why the residents feel negatively toward the Forest Service to how the residents feel that the agency is managing visitation and related safety issues in the area. The two other categories of topics are visitor/resident relationships and making tourism profitable for the area. These two topics are closely related in a cyclical, catch 22 type of way. Businesses located in the Gorge cannot be profitable without visitors spending money in the area, thus the Gorge will not attract visitors to come and spend their money without certain amenities that tourists desire such as: lodging that meets the visitors needs, and tourist attractions that will maintain their interest when they have had their fill of hiking, arch viewing, and canoeing.

In addition to identifying problems and offering solutions, the capacity for these problems to be solved also has to be discussed. It is not the intent of these suggestions to assign blame to only one of the involved stakeholder groups, but to identify how the groups can best work together to benefit the Gorge. Addressing the issues should be a combined effort on the part of all the stakeholder groups. Currently, there is the perception on the part of all the residents that the observed problems in the area are solely the fault of one of the other groups, and never their own responsibility.

### *Resident Forest Service Relationships*

Historically, the residents and the Forest Service have not had the most positive interaction. The residents have a negative perception of the Forest Service through both direct contact with the agency or from disapproving stories they have heard from their

friends and neighbors. For example, some residents felt that they had been cheated out of their land when the government purchased it from them or members of their family. For example, an 81 -year -old, life-long resident of the area told me about how the Forest Service paid his brother-in-law less than \$300.00 an acre for his 400 plus acre homestead in what is now federal land. Another resident related how he came home from work one day to find government surveyors on his land. When the resident asked them what they were doing trespassing on his land, the surveyors' response was that they were doing preparation work for another land buyout.

### *Distrust of Outside Influences*

Another issue that does not improve relations between the two groups is the fact that the residents of the Gorge do not trust people from outside their area. Being that many of the Forest Service employees have moved to the Gorge because of their job does not instill much confidence on the part of the residents. The residents' distrust of strangers was reflected in the unwillingness of some of them to be interviewed for this research. One man declined to be interviewed because he was worried that if he said anything negative about the Forest Service that they would harass him or even kill him.

Given the residents' distrust of people from outside the Gorge, it is not surprising that the residents of the area do not like the fact that there are not many local people working in the Stanton Ranger District office. Some of those interviewed felt that someone from the area could manage the forest better because a local would know the area like "the back of their hand." One man stated that even though he had lived in the area for over 15 years he was still considered a newcomer. He also told me that to be

completely accepted by most of the people in the Gorge you had to be in the Gorge from birth to death.

### *Involving Local Residents*

Many residents said that a solution to this problem would be to employ more local people at the Stanton Ranger District office. The residents reasoning behind this was that a local person would know the ins and outs of living and working in the Gorge from spending a majority of their life there. The residents also felt that having a local person in a position of importance would ensure that their best interests would be taken into consideration. As mentioned in Chapter Four, these feelings of distrust for outside influences can probably be attributed back to the Appalachian peoples' history as small closed - off communities as well as the harm caused by the coal industry as well as the historical practices of the Forest Service in the area.

Besides the fact that the people of the Red River Gorge trust people from their own community, the residents might be more apt to get involved if they felt that they were asked by someone they know as more than just a Forest Service employee who lives in the area because they were told by the government to move there.

Due to the lack of local involvement in the Forest Service office, one resident said that it was difficult to get local residents to volunteer for different programs such as clean up crews and trail maintenance. This particular person felt that it was not the residents' lack of interest in helping was not because they did not want to benefit the Gorge, but rather that they wanted nothing to do with helping out the Forest Service. Therefore, tensions between residents and the Forest Service have led to ineffective efforts at certain management campaigns.



### *Solving the Involvement Problem*

To address this problem, the Forest Service is going to have to target local residents who are influential in the community to persuade other residents to get involved with programs in the Gorge. The best way to accomplish this is to find residents who can serve as volunteer coordinators or to serve as paid liaisons between the Forest Service and the residents. The residents are going to have to drop the notion that they do not want to aid the Forest Service in any way, and the Forest Service is going to have to make a concerted effort to involve the community in their programs. This strategy will be beneficial in the fact that it will be residents encouraging other residents to get involved. This might dampen the stigma that the volunteers are aiding the Forest Service and encourage them to help out their own community.

### *Tourism in Red River Gorge*

Tourism is a widely discussed topic among the residents of the Red River Gorge. The residents know both the benefits and the pitfalls of having a tourism industry in the Red River Gorge. While tourism and the tourists are, for the most part, spoken of positively by the residents, there are still problems to be addressed. Some of the problems noted by the residents included trespassing on private land, visitors' disregard for the fragile ecology of the area, and the visitors' lack of awareness. One tourism - based business owner said the only problems that he has had with visitors is that when they get away from home they lose respect for other peoples' property or sometimes visitor come to his business drunk. Positive feelings are especially evident when a potential for making money was involved. There were ten tourism-based business owners included in this resident sample population, and these residents have become

quite proficient at exploiting revenue from tourists as either sideline businesses or full - time jobs.

### *Tourism and the Economy*

As noted previously, the Appalachian region is an economically depressed region, and the localized economic problems are observed at the local level in the Red River Gorge. A more successful tourism industry in the Red River Gorge would help alleviate some of the economic distress experienced by the residents of the Gorge, by providing jobs and increased revenue for the area. However, solving these problems is not as easy as opening business and employing people.

One roadblock to prosperity for the area is competition between the local tourism business owners. A local resident/ business owner said he felt that competition was good for business; however, he felt that some of the other business owners were malicious in their practices. In fact, the very day that he was interviewed for this research, he received an injunction against the new sign that he had put up outside his place of business. According to this business owner, his signage was within the zoning parameters, and he felt that the complaint had been made by another competing business owner in the area just to cause him problems.

Another economic downfall for the area is that the Gorge is not a tourist destination, per se. The area is a place where people come for a weekend get away to see leaves in the fall or pack a picnic for a day trip to see the arches. The average length of stay for tourists was just under 2 days. According to several of the business owners the problem with these short visits is that if people are not staying for an extended length of time, the tourists are not be spending much money either. Therefore it is the

responsibility of those involved in the tourism industry to promote and advertise the area. When people visit, they need to know about the opportunities that exist for recreation. Actions should be taken by the local tourism board and business owners to advertise via the internet, developing local, tasteful signage, and promoting advertisements in regional and state travel guides.

### *Trespassing*

Another problem identified by the residents with some frequency was trespassing. One resident said that he had seen the effects of trespassing and vandalism intensify in more recent years. He said that he was seeing increasingly more and more tracks from the use of ATVs in undesignated areas and lots of graffiti on the arches and in the caves. The main problem that the residents have with the trespassing is that visitors would either by intentional or unintentional means, leave government land go onto private property. This problem is probably most easily fixed by posting more prominent signs to alert people when they are leaving Forest Service land. The responsibility of posting land should not fall only to the Forest Service; it is also the duty of the residents to post their private land. Trespassing is not just an example of one of the problems that the residents of the Gorge have with visitors in the area, it is also an occurrence in the Gorge which involves all three groups as part of the problem. This management problem is interconnected in two ways; the first is that it involves all of stakeholder groups (visitor, residents, and the Forest Service), and the other is that it is also related to the identified problems from this thesis project (stakeholder relations and problems with visitation).

In order to solve the problem of trespassing, several determinations need to be made. Firstly, it has to be determined if the visitor is trespassing accidentally or

intentionally. If the people are on private land by mistake it is first and foremost an awareness issue. This becomes the responsibility of the Forest Service to provide programs that raise awareness about private property as well as the residents to post their land in a more visible way. Once these changes are made then the visitors have no excuse when they do not obey the laws.

If these visitors are trespassing on purpose, then it is a law enforcement issue, these trespassers need to be penalized by fines or other types of punishment. The residents also need to have assurance that if they report illegal activity on their land, it will be dealt with in an effective manner. A related issue is that there are not enough personnel to patrol the 26,000 plus acres that make up the Red River Gorge. This is an example of one of the unsolvable problems in the Red River Gorge.

The Forest Service could employ a platoon of rangers, but it would be impossible, short of putting a video camera on every tree in all 26,000 acres, for the forest rangers to be omnipresent and stop all illegal activity in the area. However the intimidating task does not mean that the Forest Service can just give up and let the Gorge fall into anarchy. While it is a known fact that places like the Gorge are under funded and understaffed, it is the responsibility of the government to protect its land and people by applying for grants and lobbying for more funds.

### *Solutions for Education and Awareness*

A solution that the residents stressed would help to solve the ignorance on the part of the visitors is more education and awareness programs. In order to have these programs all the stakeholder groups need to get involved. The Forest Service needs

programs in place, the residents need to help broadcast these ideas, and the visitors need to abide by the policies.

One resident said that if they, the people who live in the Gorge, did not take on a conscientious effort to inform visitors of their impact, “the blood of the Gorge would be on their own hands.” This statement, while quite severe in its nature, is a very apt metaphor for what will happen if the residents allow their Gorge to be ruined. The Gorge is, for all intents and intensive purposes alive, and misuse of the area can be related to bloodshed and death. Several issues would benefit from more informational programs, especially damage to ecology and trespassing. Most of the residents felt that people did not come and damage the Gorge on purpose, but that harm that was caused by the visitors’ ignorance.

An example of an education programs the Forest Service could put into effect are demonstrations that would allow visitors to see what life was like historically in the Gorge as well as exhibits that feature the local ecology of the area. An instance where there is already a successful program in place in the Gorge is the cane syrup demonstration. Each spring, a crop of sorghum is planted near the Gladie cabin. Once this crop is mature, several of the employees of the Forest Service as well as local volunteers demonstrate the process of converting the sorghum cane into syrup. The syrup is then sold in the visitors’ center and the proceeds benefit the area.

One man who helps with the sorghum process said that since this is such a popular attraction with visitors, the Gorge could support more demonstrations of what life was like for the residents of the Gorge in the past. Exhibitions such as the sorghum

exhibition provide two benefits the first is that it attracts people to the area and it also generates revenue.

Another demonstration type solution to raise awareness among the visitors is the planting of a demonstration garden. Planting such a garden would be a way to provide visitors with examples of flora and fauna found in the Gorge. The Gorge is home to several endangered and sensitive species, and by planting these species in one place it would give visitors a first hand example of the plants that they need to be aware of not disturbing. The resident that suggested this idea felt that the Forest Service should plant this garden in order to make people familiar with the indigenous plant species in the area, especially the white-haired golden rod (*Solidago albopilosa*) which is on the endangered species list. Another benefit of this garden would be for its aesthetic value. This garden would provide visitors with a beautiful place to have picnics or sit for some quiet reflection on the importance of preserving the ecology of the Red River Gorge.

### *Conclusions*

Even in the midst of all of the perceived problems in the Red River Gorge, the future is bright for the area. There are many positive activities going on in the Gorge, such as the LAC process and various cultural and scientific research projects. So to answer the question posed in the title of this chapter, it is the responsibility of all the user groups to ensure the fate of Gorge. The next step for these stakeholder groups is to look at the findings on these projects and decide what they are going to take responsibility for. The future of the Gorge lies in the hands of those that live and work there. Sitting around blaming other people for all of the woes experienced in the Gorge will not produce change.

Once research projects have been completed, it is the responsibility of the stakeholder groups to examine the results and weigh out what they think will actually make a difference. Grousing, complaining, and idleness never accomplished anything but pushing a situation further into disrepair. Only by each group taking responsibility for their own actions will anything beneficial for the Gorge and its stakeholder groups happen.

It has been problematic for residents to be involved in the past; however it is the goal of the LAC process to involve all stakeholder groups. The last few steps of the process take into account opinions of all stakeholders collected throughout the inventory phase. These perceptions can then be used to create management objectives that will benefit all the user groups in their ability to use the Gorge.

## APPENDICES



## APPENDIX A

## Red River Gorge Designations

<b>State Wild River</b> State of Kentucky <i>To preserve primitive character of streams and prevent future impoundments</i> <i>*FS State had MOU 12/27/73</i>	1973
<b>Red River Gorge Geological Area</b> USDA Forest Service <i>Manage principally for: recreation use, watershed protection, wildlife management. Substantially in a natural condition.</i>	1974
<b>Clifty Wilderness</b> U.S. Congress <i>Laws based on 1964 Wilderness Act. No mechanical or motorized travel or equipment. Wilderness has outstanding opportunities for solitude or a primitive and unconfined type of recreation.</i>	1985
<b>National Register of Historic Places</b> USDI National Park Service <i>18 individual prehistoric sites throughout the Red River Gorge area. Several are prehistoric rock art sites.</i>	1990
<b>National Wild &amp; Scenic River</b> U.S. Congress <i>Based on 1968 Wild &amp; Scenic Rivers Act. "Rivers shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations."</i> <i>*Upper 9.1 miles Wild River (4.5 miles in wilderness), Lower 10.3 miles Recreation River</i>	1994
<b>Kentucky Scenic Byway</b> Kentucky Transportation Cabinet <i>Defined as road which has roadsides or view sheds of aesthetic, cultural, historical, and/or archaeological value worthy of preservation, restoration, protection, and enhancement.</i>	2001
<b>National Scenic Byway</b> Federal Highway Administration <i>National Scenic Byways based on one or more archeological, cultural, historic, natural, recreational and scenic qualities.</i>	2002
<b>Red River Gorge Archaeological District</b> USDI National Park Service National Register of Historic Places <i>Contains 442 contributing sites and 222 non-contributing sites. Highly likely that more sites will be added as more archaeological surveys are completed.</i>	2003

## APPENDIX B

## Recreationist Survey

**A. Basic Information**

1. Where do you live?

\_\_\_\_\_ city \_\_\_\_\_ county \_\_\_\_\_ state

2. How many people are in your group, counting yourself? \_\_\_\_\_

3. Please indicate by number how many of the people with you are:

family members \_\_\_\_\_

friends \_\_\_\_\_

4. How many days do you plan to stay (or have stayed) on this visit to Red River Gorge? \_\_\_\_\_

5. Including this visit, how many times have you visited the Red River Gorge in the last two years? \_\_\_\_\_

6. Did you stop to vacation elsewhere before coming to Red River Gorge?

\_\_\_\_\_ 1. yes: \_\_\_\_\_

\_\_\_\_\_ 2. no

7. If you continue your vacation after leaving the Red River Gorge, where will you go?

\_\_\_\_\_

8. When have you visited the Red River Gorge? (Please circle all that apply).

\_\_\_\_\_ Spring

\_\_\_\_\_ Summer

\_\_\_\_\_ Fall

\_\_\_\_\_ Winter

9. When do you prefer to visit Red River Gorge?

\_\_\_\_\_ 1. Spring

\_\_\_\_\_ 2. Summer

\_\_\_\_\_ 3. Fall

\_\_\_\_\_ 4. Winter

\_\_\_\_\_ 5. I like the Gorge equally well in all seasons.

10. If you prefer one particular season, please explain why:
11. Do you belong to any conservation or recreation groups?  
       \_\_\_\_\_ 1. no  
       \_\_\_\_\_ 2. yes, please list:
12. Are you here with a conservation or recreation group?  
       \_\_\_\_\_ 1. no  
       \_\_\_\_\_ 2. yes, please list: \_\_\_\_\_
13. How did you find out about Red River Gorge?  
       \_\_\_\_\_ 1. on my own  
       \_\_\_\_\_ 2. family or friends  
       \_\_\_\_\_ 3. internet  
       \_\_\_\_\_ 4. guidebook  
       \_\_\_\_\_ 5. government agencies or other official sources  
       \_\_\_\_\_ 6. live or have lived in the area  
       \_\_\_\_\_ 7. advertisement or news  
       \_\_\_\_\_ 8. conservation or recreation groups  
       \_\_\_\_\_ 9. other source: \_\_\_\_\_
14. What is the MAIN REASON that you came to Red River Gorge? (Please indicate ONLY ONE activity)  
       \_\_\_\_\_ 1. natural beauty  
       \_\_\_\_\_ 2. sense of communion with God  
       \_\_\_\_\_ 3. peacefulness  
       \_\_\_\_\_ 4. to be with friends or family  
       \_\_\_\_\_ 5. partying  
       \_\_\_\_\_ 6. get away from everyday routine  
       \_\_\_\_\_ 7. outdoor exercise  
       \_\_\_\_\_ 8. to take it easy  
       \_\_\_\_\_ 9. to experience the rugged life

## B. Activities while in Red River Gorge

1. While you are in Red River Gorge, what activities will you do? (Please indicate **ALL** that apply):

☐ canoeing  
☐ hiking  
☐ biking  
☐ camping  
☐ fishing  
☐ swimming  
☐ backpacking  
☐ rappelling  
☐ traditional rock climbing  
☐ sport rock climbing  
☐ bouldering  
☐ picnicking  
☐ birdwatching  
☐ "partying"  
☐ "4-wheeling"  
☐ hunting  
☐ other: \_\_\_\_\_

2. Of these activities, which is the MAIN activity for which you came? Please list only one activity: \_\_\_\_\_

3. Do you purposely leave designated system trails to hike to places?
- ☐ 1. No  
☐ 2. Yes

4. Do you prefer to use a \_\_\_\_\_ 1. wood fire  
or a \_\_\_\_\_ 2. camp stove when camping in the RRG?

5. How would you rate the recreational opportunities in the Red River Gorge for your MAIN activity?

Excellent		Neutral		Poor
+2	+1	0	-1	-2

6. While you are here for recreation, we'd like to find out how many people you would prefer to see. While you are doing the MAIN activity for which you came (canoeing, hiking, camping, partying, etc.)...

How would you feel about seeing **NO other people** beside your own group?

Very favorable					Neutral						Very unfavorable
+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	

How would you feel about seeing **ONE other person** beside your own group?

Very favorable					Neutral						Very unfavorable
+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	

How would you feel about seeing **TWO other people** beside your own group?

Very favorable					Neutral						Very unfavorable
+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	

How would you feel about seeing **THREE other people** beside your own group?

Very favorable					Neutral						Very unfavorable
+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	

How would you feel about seeing **FOUR other people** beside your own group?

Very favorable					Neutral						Very unfavorable
+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	

How would you feel about seeing **FIVE other people** beside your own group?

Very favorable					Neutral						Very unfavorable
+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	

How would you feel about seeing **SIX other people** beside your own group?

Very favorable					Neutral						Very unfavorable
+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	

How would you feel about seeing **7-8 other people** beside your own group?

Very favorable					Neutral						Very unfavorable
+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	

How would you feel about seeing **9-10 other people** beside your own group?

Very favorable					Neutral					Very unfavorable
+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5

How would you feel about seeing **11-15 other people** beside your own group?

Very favorable					Neutral					Very unfavorable
+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5

How would you feel about seeing **16-30 other people** beside your own group?

Very favorable					Neutral					Very unfavorable
+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5

How would you feel about seeing **more than 30 other people** beside your own group?

Very favorable					Neutral					Very unfavorable
+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5

7. Please estimate how many people you actually saw while doing your MAIN activity:

- \_\_\_\_\_ 1. zero
- \_\_\_\_\_ 2. one other person
- \_\_\_\_\_ 3. two other people
- \_\_\_\_\_ 4. three other people
- \_\_\_\_\_ 5. four other people
- \_\_\_\_\_ 6. five other people
- \_\_\_\_\_ 7. six other people
- \_\_\_\_\_ 8. 7-8 other people
- \_\_\_\_\_ 9. 9-10 other people
- \_\_\_\_\_ 10. 11-15 other people
- \_\_\_\_\_ 11. 16-30 other people
- \_\_\_\_\_ 12. more than 30 other people

8. How did you feel about seeing this number of people?

Not enough			Just right		Too many
+2		+1	0	-1	-2

9. Please estimate the number of GROUPS you encountered while doing your main activity:

- ☐ 1. two or fewer
- ☐ 2. between 3 and 6
- ☐ 3. between 7 and 9
- ☐ 4. 10 or more groups

10. Do you feel that controls are needed on the # of people using the RRG?

- ☐ 1. Yes, controls are needed to lower the current level of use
- ☐ 2. Yes, controls are needed now to hold use at about the current level.
- ☐ 3. No controls are needed now, but should be imposed in the future if & when overuse occurs.
- ☐ 4. No, there should be no controls now or in the future on the # of people using the RRG.

11. Have you ever had any contact with residents who live in the Gorge?

- ☐ 1. no
- ☐ 2. yes, positive contact
- ☐ 3. yes, negative contact

Please describe briefly:

12. What percentage of the land in Red River Gorge is privately owned?

- |                               |                                 |                                 |                                   |
|-------------------------------|---------------------------------|---------------------------------|-----------------------------------|
| <input type="checkbox"/> 0-9% | <input type="checkbox"/> 10-25% | <input type="checkbox"/> 26-50% | <input type="checkbox"/> over 50% |
|-------------------------------|---------------------------------|---------------------------------|-----------------------------------|

### **C. Red River Gorge Management**

1. Do you know the Red River is part of the National Wild and Scenic Rivers system?

- ☐ 1. yes
- ☐ 2. no

2. Do you know that part of the Red River Gorge area is a federally designated wilderness called Clifty Wilderness?

- ☐ 1. yes
- ☐ 2. no

3. Who do you think is mainly responsible for managing Red River Gorge?

- ☐ 1. local landowners
- ☐ 2. county government
- ☐ 3. state government
- ☐ 4. federal government
- ☐ 5. don't know

\_\_\_\_\_ 6. other: \_\_\_\_\_

4. Are you aware that there is a \$3 overnight fee for visitors in the RRG?

\_\_\_\_\_ 1. Yes

\_\_\_\_\_ 2. No

a. The fees collected are spent to improve facilities in the RRG.

How do you feel about this fee?

5. Do you feel there are any management problems in Red River Gorge?

\_\_\_\_\_ 1. no

\_\_\_\_\_ 2. yes, please explain:

6. Please indicate your feelings about the following potential problems in Red River Gorge:

Don't problem	No problem	A small know	A moderate at all	A big problem	A big problem
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Trails poorly maintained	1	2	3	4	5
Trails poorly marked	1	2	3	4	5
Too many trails	1	2	3	4	5
Trail erosion	1	2	3	4	5
Tree damage from humans	1	2	3	4	5
Litter	1	2	3	4	5
Theft of personal property	1	2	3	4	5
Inadequate disposal of human waste	1	2	3	4	5
Pets off-leash	1	2	3	4	5
Rowdy or drunk people	1	2	3	4	5



Too many rules and regulations	1	2	3	4	5
Too many firerings	1	2	3	4	5
Too many campsites	1	2	3	4	5
Too many climbing areas	1	2	3	4	5
Damage to Archaeological sites	1	2	3	4	5
Damage to plant & animal species	1	2	3	4	5

7. Please indicate how you would feel about the following management actions?

	Support		Neutral		Oppose
Limit overall use by a permit system	1	2	3	4	5
\$3 overnight user fee	1	2	3	4	5
Day use fee for all RRG visitors	1	2	3	4	5
Limit maximum group size	1	2	3	4	5
Restrict overnight use to designated campsites	1	2	3	4	5
Restrict all use to designated trail systems	1	2	3	4	5
Limit climbing to designated areas only	1	2	3	4	5
Prohibit campfires	1	2	3	4	5

8. Do you feel the Red River Gorge is:

Underused				Overused
-2	-1	0	+1	+2

Environmentally Damaged -2	-1	0	+1	In its natural state +2
Poorly managed -2	-1	0	+1	Well managed +2

#### D. Basic Demographic Information

1. Age: \_\_\_\_\_
2. Gender: \_\_\_\_\_ male \_\_\_\_\_ female
3. Occupation: \_\_\_\_\_
4. Please check the highest amount of education you have completed:
  - \_\_\_\_\_ 1. grades 0-8
  - \_\_\_\_\_ 2. grades 9-11
  - \_\_\_\_\_ 3. high school diploma
  - \_\_\_\_\_ 4. some college or additional schooling
  - \_\_\_\_\_ 5. Bachelor's degree
  - \_\_\_\_\_ 6. some graduate work
  - \_\_\_\_\_ 7. graduate degree
5. Where did you grow up (to age 18)? Please check ONLY ONE answer.
  - \_\_\_\_\_ 1. on a farm or ranch
  - \_\_\_\_\_ 2. in a small town (2500 or less)
  - \_\_\_\_\_ 3. in a town or small city (2500-25,000)
  - \_\_\_\_\_ 4. in a city (25,000-100,000)
  - \_\_\_\_\_ 5. in the suburb of a large city
  - \_\_\_\_\_ 6. in l large city (over 100,000)
6. Please indicate your overall feelings about this visit to Red River Gorge:

Extremely Satisfied		Neutral		Extremely Dissatisfied
+2	+1	0	-1	-2

**THANK YOU FOR YOUR TIME AND EFFORT!!**

## APPENDIX C

## Resident Interview

## Basic Demographic Information

HOUSEHOLD COMPOSITION (please fill in beginning with heads of households  
and then oldest to youngest living in the home)

Name	Relation to Self	Gender	Age (years)	Year of Birth	Education Level	Occupations
1.						
2.						
3.						
4.						
5.						

2. What is your marital status?

3. What is your religious affiliation?

4. What is your current primary occupation? \_\_\_\_\_

5. How long have you had this job? \_\_\_\_\_ years \_\_\_\_\_ months

6. **Occupational History** (for the respondent only)

Please list most current work first and work back in time.

Job	Type of work	Length at Job (how long at each job)
1.		
2.		
3.		
4.		
5.		

7. Please estimate your approximate income level for last year (2003):

- ☐ 0-9,999.99  
☐ 10,000.00-19,999.99  
☐ 20,000.00-39,999.99  
☐ 40,000.00-59,999.99  
☐ 60,000.00-89,999.99  
☐ 90,000.00-99,999.99  
☐ 100,000 +

8. Do you own or rent current residence?

How long have you lived at your current residence? \_\_\_\_\_ years \_\_\_\_\_ months

What year did you move to this residence? \_\_\_\_\_

Why did you move here?

9. Do you have family in this area?

- ☐ yes  
☐ no

What family?

10. Do you have close friends in this area?

- \_\_\_\_\_ yes  
\_\_\_\_\_ no

## II. Contact and Relations with Visitor Recreationists

1. Do you or your family ever recreate within the Red River Gorge area?

- \_\_\_\_\_ yes  
\_\_\_\_\_ no

If yes, about how often do you recreate in Red River Gorge?

- \_\_\_\_\_ more than once/week  
\_\_\_\_\_ once/week  
\_\_\_\_\_ once/2 weeks  
\_\_\_\_\_ once/month  
\_\_\_\_\_ less than once/month

When you recreate in the Gorge, what are your primary activities?

(Please indicate ALL that apply):

- \_\_\_\_\_ canoeing  
\_\_\_\_\_ hiking  
\_\_\_\_\_ biking  
\_\_\_\_\_ camping  
\_\_\_\_\_ fishing  
\_\_\_\_\_ traditional rock climbing  
\_\_\_\_\_ sport rock climbing  
\_\_\_\_\_ bouldering  
\_\_\_\_\_ picnicking  
\_\_\_\_\_ birdwatching  
\_\_\_\_\_ "partying"  
\_\_\_\_\_ "4-wheeling"  
\_\_\_\_\_ hunting  
\_\_\_\_\_ swimming  
\_\_\_\_\_ backpacking  
\_\_\_\_\_ rappelling  
\_\_\_\_\_ other: \_\_\_\_\_

Of these activities, which is your MAIN activity typically when you recreate in the Gorge? (Please list only one activity): \_\_\_\_\_

2. Do you belong to any conservation recreation or community groups?

\_\_\_\_\_ No

\_\_\_\_\_ Yes, please list

3. Do you ever have contact with recreationists?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

About how often do you come into contact with RRG visitors?

Can you briefly describe the typical nature of the contact:

Have you ever had any problems with recreationists?

\_\_\_\_\_ No

\_\_\_\_\_ Yes, please explain:

### **Tourism Activities:**

4. Are you directly involved in the tourism industry? If NO, go to Section III)

\_\_\_\_\_ Yes

\_\_\_\_\_ No

If yes, do you own a tourism-based business?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

If yes, what type of business do you own?

How many employees do you have? \_\_\_\_\_

How long have you been in this business? \_\_\_\_\_ years \_\_\_\_\_ months

Is it going well?

Do you have any problems with your tourism business?

\_\_\_\_\_ No

\_\_\_\_\_ Yes, please explain:

### III. The National Wild and Scenic Rivers Designation

1. Do you \_\_\_\_\_ own land in the Red River Gorge?

\_\_\_\_\_ rent

\_\_\_\_\_ share crop

If yes to “own”, approximately where is your land located?

2. Can you provide some information about the history of your land:

Location	Amount of land	Time Owned (years)	Uses over time	Constraints (to uses)
1.				
2.				
3.				
4.				

3. Do you own any river front property in Red River Gorge?

\_\_\_\_\_ yes

\_\_\_\_\_ no

How many acres do you own? \_\_\_\_\_ acres

How many feet of shoreline does this acreage have? \_\_\_\_\_ feet

4. Are you aware that the RRG is included in the Daniel Boone National Forest?

\_\_\_\_\_yes

\_\_\_\_\_ no

Are you aware that the Red River is part of the National Wild and Scenic Rivers System?

\_\_\_\_\_yes

\_\_\_\_\_ no

Did you live on this property when the river became part of this system (1994)?

\_\_\_\_\_ yes

\_\_\_\_\_ no

5. Has this designation affected you (and your life) in any way?

\_\_\_\_\_ yes (go to table below)

\_\_\_\_\_ no

<b>Curtailling certain types of land use?</b>	<b>Economic impacts</b>	<b>Social impacts</b>	<b>Political impacts</b>	<b>Number of recreationists</b>



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#### IV. Current Management of Red River Gorge

1. Who has primary responsibility for managing Red River Gorge today?

- ☐ Local landowners  
☐ County government  
☐ State government  
☐ Federal government  
☐ Don't know  
☐ Other: \_\_\_\_\_

2. How do you feel about current management of the Gorge area?

3. Do you feel there are any management problems in Red River Gorge?

- ☐ No  
☐ Yes, please explain: \_\_\_\_\_

4. Since you have lived here, have you noticed any negative impacts on the LAND in Red River Gorge?

- ☐ No  
☐ Yes, please explain: \_\_\_\_\_

5. Since you have lived here, have you noticed any negative impacts on the WATER in Red River Gorge?

\_\_\_\_\_ No  
 \_\_\_\_\_ Yes, please explain:

6. Do you feel the Red River Gorge is:

Underused

Overused

1                      2                      3                      4                      5

Environmentally  
Damaged

In its  
natural state

1                      2                      3                      4                      5

Poorly  
managed

Well managed

1                      2                      3                      4                      5

## V. Future Development of the Red River Gorge area

1. Do you have future plans for development of your Gorge property?

\_\_\_\_\_ yes, please describe:

\_\_\_\_\_ no

2. In terms of the development of your property, where do you see yourself in  
*5 years?*

Where do you see yourself in *10 years?*

3. Please circle the number below that expresses how you would feel about the following in Red River Gorge:

	Support		Neutral		Oppose
Having more services available (groceries, gas, restaurants)	1	2	3	4	5
Having more information available about the area	1	2	3	4	5
Having more public or private camp-grounds in the area	1	2	3	4	5
Having a Visitor Center in the Gorge proper	1	2	3	4	

4. Please indicate your feelings about the following potential problems in Red River Gorge:

	Don't Know	Small Problem			Large Problem	
Trails poorly Maintained	1	2	3	4	5	
Trails poorly marked	1	2	3	4	5	
Too many trails	1	2	3	4	5	
Trail erosion	1	2	3	4	5	
Tree damage from humans	1	2	3	4	5	
Litter	1	2	3	4	5	

Theft of personal property	1	2	3	4	5
Inadequate disposal of human waste	1	2	3	4	5
Pets off-leash	1	2	3	4	5
Rowdy or drunk people	1	2	3	4	5
Too many rules and regulations	1	2	3	4	5
Too many firerings	1	2	3	4	5
Too many campsites	1	2	3	4	5
Too many climbing Areas	1	2	3	4	5
Damage to archaeological sites	1	2	3	4	5
Damage to plant & animal species	1	2	3	4	5
Visitor presence On private property	1	2	3	4	5

5. Please indicate how you would feel about the following management actions?

	Support		Neutral		Oppose
Limit overall use by a permit system	1	2	3	4	5
Day use fee for all RRG visitors	1	2	3	4	5
Limit maximum group Size	1	2	3	4	5

Restrict overnight use to designated campsites	1	2	3	4	5
Restrict all use to designated trail systems	1	2	3	4	5
Limit climbing to designated areas only	1	2	3	4	5
Prohibit campfires	1	2	3	4	5
Limiting access to Private property	1	2	3	4	

6. What are your feelings about the future development of the Red River Gorge area?
7. Do you have any final comments that you would like to make about any issues we've talked about today?

## APPENDIX D

## Main Recreational Activity

Main Activity	Visitors	Residents
Canoeing	0.9	9.0
Hiking	45.0	36.3
Biking	0.8	N/A
Fishing	1.0	3.0
Picnicking	0.2	3.0
Hunting	N/A	9.0
Drive through	N/A	6.0
Nature viewing	N/A	21.2
Photography	N/A	3.0
Visit historical site	N/A	6.0
Meditation	N/A	3.0
Camping	25.0	N/A
Fishing	0.9	N/A
Swimming	0.8	N/A
Backpacking	4.7	N/A
Rappelling	2.1	N/A
Traditional Climbing	1.5	N/A
Sport Climbing	3.2	N/A
Bouldering	0.2	N/A
Picnicking	1.5	N/A
Bird watching	0.2	N/A
Partying	2.8	N/A
Hunting	0.2	N/A
Other	9.6	N/A
Brotherhood	0.2	N/A
Total N=	988	40

## APPENDIX E

## Feelings about Potential Problems in RRG

	Don't Know	No problem at all	A small problem	A moderate problem	A big problem
Trails poorly maintained	12.6%	54.0%	24.4%	7.2%	1.8%
Trails poorly marked	12.2%	47.2%	26.3%	9.8%	4.4%
Too many trails	15.0%	74.8%	6.4%	2.8%	0.9%
Trail erosion	13.5%	34.5%	36.3%	11.7%	4.0%
Tree damage from humans	16.4%	30.1%	28.4%	16.3%	8.9%
Litter	8.9%	25.3%	30.0%	20.6%	15.3%
Theft of personal property	33.0%	36.6%	14.8%	7.0%	8.6%
Inadequate disposal of human waste	28.6%	38.4%	17.5%	9.2%	6.3%
Pets off-leash	21.3%	52.7%	15.9%	6.3%	3.8%
Rowdy or drunk people	22.6%	42.2%	18.5%	10.2%	6.6%
Too many rules and regulations	18.4%	66.4%	9.3%	4.3%	1.6%
Too many fire rings	23.2%	58.7%	12.2%	4.4%	1.5%
Too many campsites	19.3%	65.6%	10.1%	3.9%	1.0%
Too many climbing areas	20.4%	70.2%	6.9%	1.6%	0.9%
Damage to archeological sites	22.6%	32.5%	20.4%	12.1%	12.3%
Damage to plant and animal species	20.8%	34.5%	22.3%	12.9%	9.5%

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