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# Values, Attitudes and Beliefs Toward National Forest System Lands: The Lincoln National Forest

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# Acknowledgements

Several participants in discussion groups described a long and sometimes frustrating history of involvement in forest management issues. More than one noted they have invested hours attending public meetings and offering their comments about proposed management actions. Some also noted they often have not been satisfied with the results of their contributions to the process and ponder their continued involvement in public participation efforts and research projects such as this one. However, these individuals do continue to participate and through those acts remind us of a cornerstone of our democracy: *The death of democracy is not likely to be an assassination from ambush. It will be a slow extinction from apathy, indifference, and undernourishment*. Those who attended discussion groups and participated in interviews for this project are not the apathetic or indifferent. Their participation reminds us of the value of engagement in democratic processes, regardless of the frustrations.

The authors of this work also acknowledge the contribution of Ron Hannan and Peg Crim of the Lincoln National Forest. Their assistance in organizing and implementing discussion group meetings was thoughtful and invaluable. Richard Periman and Rueben Weisz in the Regional Office also have provided a steady hand in their ongoing support and comment about the study process and products.

# Executive Summary

This document reports on the results of a project to identify values, attitudes, and beliefs (VAB) about forest resources and their management for all national forests and grasslands in the Southwest Region, including the Lincoln National Forest. Results of this work are intended to assist forest managers and planners to identify strategic issues for revision of the existing forest plan and to assess other social or cultural factors that may influence forest planning and management.

The VAB information presented in this document was collected and synthesized to identify local perspectives about key issues and concerns about forest resources and management. Identification of values, attitudes, and beliefs was achieved by the use of a discussion group or focus group approach (Morgan 1997). Additionally, some individual interviews were conducted with persons who were unable to attend the discussion group sessions. Participants were selected for these groups by consultation with district rangers, forest planning staff, and other individuals within the Lincoln National Forest. Three discussion groups were conducted for this study: the Ruidoso meeting was attended by seven persons; the Cloudcroft meeting was also attended by 7 persons, and a third meeting in Alamogordo was attended by 13 persons. Additionally, four individual interviews were conducted.

The results of this work focus on three topic areas: the planning environment likely to influence revision of the existing forest plan; beliefs and values about multiple-use; and beliefs and values about forest resources and conditions.

The planning environment is affected by changing social conditions; assessments of forest conditions and characteristics; beliefs and values about Forest Service management; and, sidebar issues such as the National Environmental Policy Act (NEPA) process and Endangered Species Act. Changes in the social environment are resulting in a diversification of values and increase in overall demand for use of forest resources. Although demand for use of forest resources is increasing, participants suggest forest resources and conditions are in poor health because of drought, tree density, insect damage, and limited active management. Participants also suggest that although Lincoln National Forest managers are making an effort to actively manage forest resources, Agency-wide policy and culture has resulted in a limited effectiveness in overall resource management.

The multiple-use concept organizes much of the dialogue about current uses of Lincoln NF managed lands and resources. Themes about use of forest resources include: the relationship of types of users to the stewardship values they have; an increase in recreational use and a decrease in commercial uses; the contributions to ecosystem health of commercial uses such as timber harvesting and grazing; the effects of problem behavior such as vandalism and off-trail riding; the need for education and enforcement associated with problem behavior rather than closures and restricting access; and, desire for improving the quality of user experiences in managing forest uses.

Two themes about forest resources were identified in the data: one theme describes the benefits and values of particular resources such as timber, water, scenery, grass, wildlife, and other forest resources. The second theme identifies concerns about resource conditions and the linkage between restoring “balance” in forest management practices, including thinning, timber harvesting and grazing, and overall ecosystem health.

# Background

This document reports on the results of a project to identify values, attitudes, and beliefs (VAB) about forest resources and their management for all national forests and grasslands in the Southwestern Region, including the Lincoln National Forest (NF). Results of this work are intended to assist forest managers and planners to identify strategic issues for revision of the existing forest plan and to assess other social or cultural factors that may influence forest planning and management. This VAB information is part of a suite of socioeconomic and cultural information being assembled for planning purposes. The University of New Mexico Bureau of Business and Economic research is preparing a comprehensive socioeconomic assessment for the Lincoln and other New Mexico national forests. Additionally, the Rocky Mountain Research Station is preparing to administer a survey of Arizona and New Mexico residents that will provide forest-specific and region-wide population based information about forest resource and management issues. This collection of information provides forest managers with forest-specific to compare with similar state and regional information.

The VAB information presented in this document provides a different set of information than either survey or socioeconomic assessment data. This information was collected and synthesized to identify local perspectives about key issues and concerns about forest resources and management. These perceptions and assessments of participants may be factually correct or in error, but most importantly it portrays local perspectives from selected individuals that frame issues and imply solutions relevant for forest management and planning. The VAB information may also be used in conjunction with socioeconomic data to understand issue amplification, assessments of Agency effectiveness, or other relevant factors affecting public evaluation of forest planning and management. Similarly, the VAB results were used by researchers at the Rocky Mountain Research Station as one source of information to formulate the content of the population-based survey to be administered in 2006. The information from this work thus offers a local perspective about key issues from concerned publics that can be placed within a broader context of information about the social environment for the Lincoln National Forest.

## Methods and Data Collection

Identification of values, attitudes, and beliefs was achieved by the use of a discussion group or focus group approach (Morgan 1997). Additionally, some individual interviews were conducted with persons who were unable to attend the discussion group sessions. Participants were selected for these groups by consultation with district rangers, forest planning staff, and other individuals within the Lincoln National Forest. The goal was to select participants to identify a range of perspectives about forest management issues by identifying individuals with knowledge about their community or forest management issues. This targeted sampling approach (Bernard 1995; Morse 1998) is not intended to result in groups “representative” of their communities. Instead, the intent is to include individuals knowledgeable about forest and community issues as a means to identify key issues .of concern to persons who use or are otherwise knowledgeable about forest issues.

The interviews and discussion sessions were focused by a discussion guide (see appendix) that includes topics about the social environment, forest characteristics, the use of forest resources, values and benefits associated with forest resources, desired futures, and assessments of issues for forest plan revision. The social environment and forest characteristics topics provide some context for other topics. The social environment discussions were oriented to how the social environment has changed since the last forest plan. The forest characteristics discussions were

intended to establish broad scale strategic assessments of existing forest conditions. Use and resource discussions were intended to develop participant assessments of patterns of use and resource conditions. Desired futures and issues for plan revision directly address topics participants wish to see addressed by decision making or planning. For each of these topic areas, the strategy was to avoided direct questions in favor of open-ended questions that allow participants to structure responses from their perspective.

The open-ended interview approach is consistent with qualitative interview techniques that begin with the most general types of issues and then focus the discussion to develop the specifics from the participant's perspective (Spradley 1979; Agar and Hobbs 1985). This approach also benefits from having a base of information to draw on about existing issues, beliefs, values, and attitudes collected for other national forests. This existing information can be used to structure follow-up questions and probes. The discussion groups conducted for this work had such a base of information based on similar work conducted for other national forests in the Southwestern Region, including the Coronado, Kaibab, Gila, Carson, and Cibola National Forest as well as three national grasslands (e.g., Russell and Adams-Russell 2005; Russell and Adams-Russell 2006).

Three discussion groups were conducted for this study:

- The Ruidoso Chamber of Commerce provided a meeting room for a discussion group attended by seven individuals from the Village of Ruidoso and surrounding areas. Ranching, local, state, and Federal Government, as well as community interests attended this meeting.
- The Cloudcroft City Chambers was the site for a second discussion group attended by seven persons including individuals with interests in local government, ranching, recreation, and community development.
- The Supervisor's Office of the Lincoln National Forest was the site for a third meeting held in Alamogordo. Approximately 13 persons attended this meeting, including stakeholders with interests in timber, ranching, recreation, local government, community development, and conservation interests.

Additionally, four individual interviews were conducted with ranching, local government, community, and environmental interests.

## Data Processing and Analysis

All of the discussion sessions and some of the individual interviews were recorded. Sketch notes were taken for the recorded sessions and interview field notes for non-recorded sessions (cf.,Sanjek 1990; Emerson, Fretz, and Shaw 1995). Sketch notes were annotated with the time mark in the recordings by topic area. This material was coded by topic area using a combination of predefined and emergent codes (Strauss 1987; Strauss and Corbin 1998). The predefined codes correspond with the discussion guide categories and the emergent codes were developed from participant statements that did not correspond with the predefined categories. Major categories for presentation were then constructed and specific issues were grouped within these categories. Representative comments were then identified to illustrate specific points where the issue could benefit from a statement by participants in their own words.

Presenting this material presents several challenges. Time, budget, and page limitations require a strategy to present consumable and useable information that also expresses the participant's perspectives on the issues discussed. The strategy used here identifies key issues by topic category to illustrate the range of issues of concern to project participants. The authors recognize this strategy abbreviates and under-develops complex issues. However, future collaborative efforts should offer the opportunity to develop these topics in the detail that is useful for stakeholders, the Forest Service, and others participating in the planning process.

# The Forest and Socioeconomic Setting

With about 1.2 million acres, the Lincoln National Forest is the only national forest in southern New Mexico. The Lincoln NF is also within an easy 2-hour drive from west Texas communities such as El Paso and Lubbock. The higher elevations of Lincoln NF managed lands are a valued attraction for west Texans, especially during the summer months. As one project participant noted:

*In the summer our campgrounds are usually very busy and if it is a hot summer, then just about every license plate is from Texas. You would think that Texas moves to our mountains in the summer!*

Like some other southwestern forests, mountain ranges comprise an important part of the Lincoln NF landscape. Guadalupe, the southern most ranger district contains the Guadalupe Mountains and to the north the Sacramento District contains the Sacramento Mountains in the vicinity of Alamogordo and Cloudcroft. The northern most ranger district, the Smoky Bear District, contains the Capitan Range that is separated from the Sacramento Range to the south by the Rio Bonito Valley. The highest peaks in these mountains are nearly 12,000 feet, creating a steep rise from the nearby valleys and plains that are between 3000 and 4500 feet.

**Table 1: Southwestern Region National Forests Ranked by Total Acreage**

| Southwestern Region | Rank by Size | Gross Acreage | NFS Acreage | Other Acreage |
|---|---|---|---|---|
| Tonto NF | 1 | 2,969,543 | 2,872,935 | 96,608 |
| Gila NF | 2 | 2,797,628 | 2,708,836 | 88,792 |
| Cibola NF | 3 | 2,103,528 | 1,631,266 | 472,262 |
| Coconino NF | 4 | 2,013,960 | 1,855,679 | 158,281 |
| Apache NF * | 5 | 1,876,891 | 1,812,576 | 64,315 |
| Coronado NF * | 6 | 1,859,807 | 1,786,587 | 73,220 |
| Santa Fe NF | 7 | 1,734,800 | 1,572,301 | 162,499 |
| Kaibab NF | 8 | 1,600,061 | 1,559,200 | 40,861 |
| Carson NF | 9 | 1,490,468 | 1,391,674 | 98,794 |
| Prescott NF | 10 | 1,407,611 | 1,239,246 | 168,365 |
| **Lincoln NF** | **11** | **1,271,064** | **1,103,748** | **167,316** |
| Sitgreaves NF | 12 | 884,495 | 819,442 | 65,053 |
| National Forests (12) | | 22,009,856 | 20,353,490 | 1,656,366 |

Source: USDA Forest Service http://www.fs.fed.us/land/staff/lar/LAR04/table3_r3.htm

The three ranger districts are not contiguous. The Smoky Bear District is separated from the Sacramento District by the Mescalero Apache Reservation; and, the Guadalupe Districts is to the south and east of the other two districts.

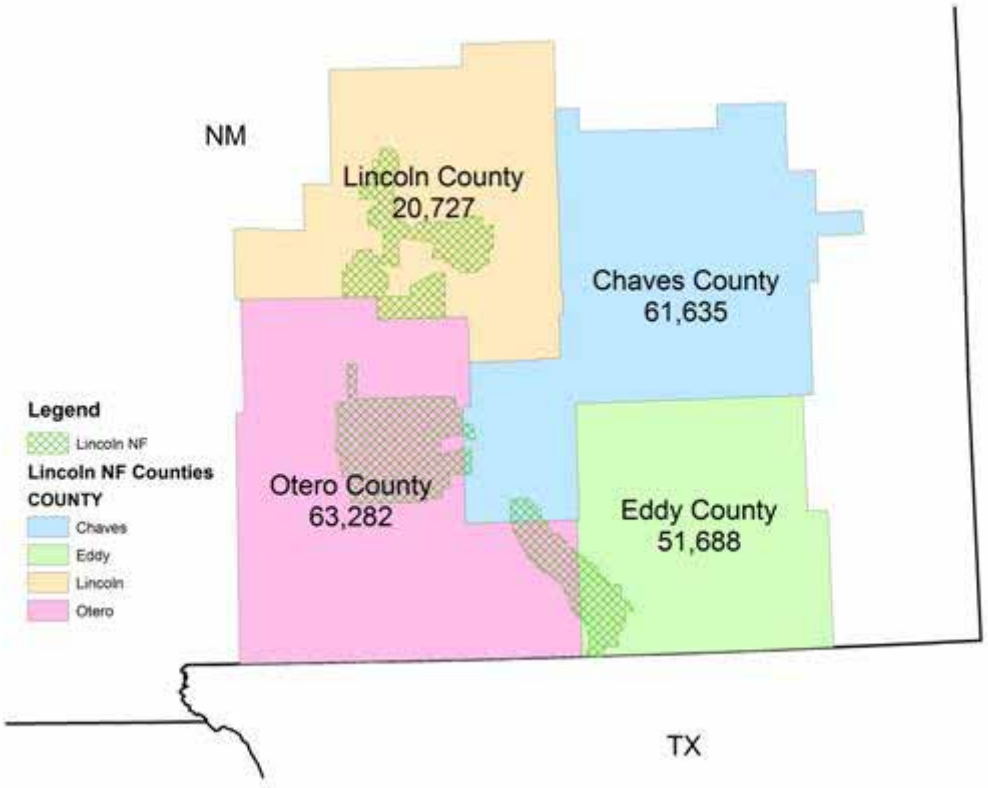


**Figure 1. Lincoln National Forest Counties**

The University of New Mexico Bureau of Business and Economic Research is preparing a comprehensive socioeconomic assessment of the environs of the Lincoln NF. This socioeconomic context can be thought of as concentric circles of interaction among social, cultural, and economic environments affecting forest management and use. This context identifies potential connections between use and management issues and the forest social environment. For example, a loss of jobs in nearby communities can create demand for increased commercial use of forest resources or changes in population composition may signal a shift in values about forest management priorities.

Values and beliefs within a socioeconomic context also can predict public assessments of problems and solutions in forest management. These assessments can identify differences in how publics and the Forest Service evaluate issues. For the purposes of this report it is useful to describe some highlights of this socioeconomic context that will be developed more thoroughly in the University of New Mexico report.

- The ranger districts are associated with four counties in southern New Mexico with a total population of about 197,332. The Smoky Bear District is contained mostly within rural Lincoln County. The Sacramento District is mostly within Otero County, which has the largest population (63,282) of the four counties associated with the Lincoln NF. The Guadalupe District is located in three counties, including Eddy County with a population of 51,688.

- Metropolitan areas of this region include Alamogordo (36,211), Carlsbad (25,417), Roswell (45,074) Las Cruces (79,524) and west Texas communities such as El Paso (592,099) and Lubbock (207,852).
- Rural mountain communities range from unincorporated villages to larger incorporated communities such as Ruidoso (8,691) and Capitan (1,846).
- The White Sands Missile Range is located just to the west of Alamogordo and provides employment for person throughout this region.
- In the last census period, Lincoln County had the highest growth rate among the four counties (58.9 percent) followed by Otero County (20.0 percent). The other two counties have modest increases of about 6 percent each.
- Lincoln County has the highest median age of all the counties (43.8), the highest median income, the lowest poverty rate, and the least ethic diversity.
- The Mescalero Apache Reservation occupies about 460,000 acres to the south of Ruidoso in the foothills of the Sacramento and Sierra Blanca mountain ranges. The Reservation had a 2000 U.S. Census population of about 3,156 persons. Timber, ranching, and gaming are primary economic activities for Reservation residents.

The summary table below compares selected socioeconomic measures for the four counties and the state of New Mexico. Such data can be used to address questions such as:

- How does the distribution of population growth affect the amount and type of demand for the use of forest resources?
- What are the implications of change in population composition (e.g. ethnicity, median age, etc…) for values that can affect management decisions about forest resources and uses?
- How much are the economic benefits of Lincoln NF managed lands and resources (e.g., timber, grazing, government employment, recreational industries) contributing to the well-being of adjacent communities? And, how do changes in those benefits affect local infrastructure such as schools and roads?

Such questions represent a portion of the types of socioeconomic interactions between forest resources and adjacent communities. These local interactions are supplemented with regional and national socioeconomic considerations. Socioeconomic interactions affect the environment in which planning and management takes place and the types of issues that are likely to be of concern to stakeholders and other interested parties at different social scales (local, regional, and national).

**Table 2: Lincoln National Forest**

| | Lincoln NF | | | | |
|---|---|---|---|---|---|
| **People QuickFacts** | **Chaves County, NM** | **Eddy County, NM** | **Lincoln County, NM** | **Otero County, NM** | **New Mexico** |
| Population, 2004 estimate | 61,635 | 51,688 | 20,727 | 63,282 | 1903289 |
| Population, percent change, April 1, 2000 to July 1, 2004 | 0.4% | 0.1% | 6.80% | 1.6% | 4.60% |
| Population, 2000 | 61,382 | 51,658 | 19,411 | 62,298 | 1,819,046 |
| Population, percent change, 1990 to 2000 | 6.1% | 6.3% | 58.9% | 20.0% | 20.1% |
| Persons under 18 years old, percent, 2000 | 29.1% | 28.9% | 22.7% | 29.5% | 28.0% |
| Persons 65 years old and over, percent, 2000 | 14.7% | 14.7% | 17.9% | 11.7% | 11.7% |
| Median Age | 35.2 | 36.4 | 43.8 | 33.8 | 34.6 |
| White persons, percent, 2000 | 72.0% | 76.3% | 83.6% | 73.7% | 66.8% |
| Black or African American persons, percent, 2000 | 2.0% | 1.6% | 0.4% | 3.9% | 1.9% |
| American Indian and Alaska Native persons, percent, 2000 | 1.1% | 1.3% | 2.0% | 5.8% | 9.5% |
| White persons, not of Hispanic/Latino origin, percent, 2000 | 52.1% | 57.7% | 70.9% | 55.7% | 44.7% |
| Persons of Hispanic or Latino origin, percent, 2000 | 43.8% | 38.8% | 25.6% | 32.2% | 42.1% |
| Language other than English spoken at home, pct age 5+, 2000 | 33.4% | 30.4% | 20.7% | 29.7% | 36.5% |
| Median household income, 1999 | $28,513 | $31,998 | $33,886 | $30,861 | $34,133 |
| Per capita money income, 1999 | $14,990 | $15,823 | $19,338 | $14,345 | $17,261 |
| Persons below poverty, percent, 1999 | 21.3% | 17.2% | 14.9% | 19.3% | 18.4% |
| Persons per square mile, 2000 | 10.1 | 12.4 | 4 | 9.4 | 15 |
| Agriculture | | | | | |
| Number of Farms 1997 to 2002 % Change | -12.3% | -15.4% | -23.4% | 3.3% | -15.1% |
| Land in farms (acres, 1997 to 2002) % Change | -15.1% | -9.2% | -19.2% | 8.2% | -3.0% |
| Average size of farm (acres, 1997 to 2002) % Change | -3.2% | 7.4% | 5.5% | 4.6% | 14.4% |

Source: U.S. Census Bureau 2002 People Quickfacts and U.S.D.A. 2002 Census of Agriculture

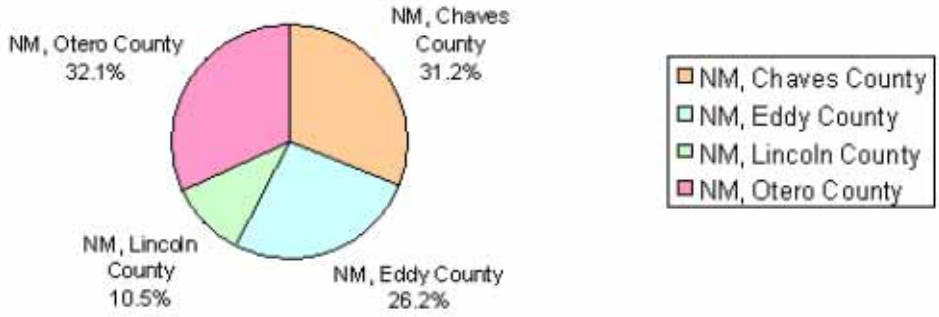


**Figure 2. Lincoln NF Study Area Percentage of Total Population by County**

# Results

Participants in discussion groups and interviews expressed values, beliefs, and attitudes about diverse issues associated with the interaction of their communities and lifestyles with the natural resources of the Lincoln National Forest. This is rich and detailed information. The results discussed in this report are not intended to be a full record of these discussions. Although that task may be useful for a broader understanding of the social and cultural environment affecting forest management, it is beyond the scope of this work. The results presented here focus on the implications of project findings for collaboration and revision of the existing Forest plan. Results are grouped into several major categories that correspond with the coding and analysis of the focus group and interview data: the planning environment; multiple-use issues; resource concerns; and a summary of issues of concern for revision of the existing forest plan. Each of these topics is summarized in separate sections in the remainder of this report.

## The Planning Environment

Forest plan revision is occurring in what can be termed a “planning environment” that is affected by socioeconomic, cultural, political, organization, and ecological factors. The configuration of these factors can influence who participates, what issues are raised as important, and how publics choose to participate or not in planning and collaboration activities. For example, ecological conditions such as the ongoing drought may influence approaches to specific issues such as watershed management. Similarly, an increase in population diversity may affect the characteristics of forest users and the types of recreation demand; and, assessments of Agency management may affect who chooses to participate in public participation and collaboration efforts. Identifying the configuration of socioeconomic and cultural issues particular to the Lincoln NF will assist planning and management staff to assess likely areas of concern in future collaboration and public involvement efforts.

For the purposes of this work, the following categories of information express values, attitudes, and beliefs relevant for the planning environment: the social setting; forest conditions and characteristics; management approaches of the Lincoln NF; Agency-wide policies and procedures; and, sidebar issues. Assessments of the social setting identify noteworthy interactions between communities and forest resources. Information about forest conditions and characteristics describes public assessments of existing forest conditions and trends that influence the identification of issues for plan revision. The management approaches of the Lincoln NF address the perceived mission of the Agency and the capacity to implement effective management to achieve desired future conditions. Agency-wide policies and procedures describe assessments of the Forest-Service and how the Agency interacts with interested publics. Sidebar issues are ones not usually address in Forest Service land management and resource planning (e.g., Clean Water Act or the Endangered Species Act). However, these issues are expressed by participants as concerns affecting forest conditions, uses, and management. Such issues affect the planning environment because they also contribute to participant assessments of forest management problems and solutions.

### Social Setting

Participants expressed some noteworthy ideas about the relationship of adjacent communities to forest resources and the types of social changes that may affect forest resources and uses. Themes about the social setting have the following content:

- The custom and culture of adjacent communities has a heritage of multi-generation families associated with natural resources lifestyles such as ranching and timber harvesting. Economic and social changes mean these lifestyles must be supplemented with other types of jobs and income. However, the interconnections of custom and culture with the lands and resources of the Lincoln NF remains a value for rural residents.
- Some communities have remained relatively stable, but the trend is toward an increase in population size, diversity in community composition, and corresponding changes in community character.
    - Mountain communities such as Ruidoso and Cloudcroft have transitioned from seasonal residences to more year round residences.
    - Subdivisions in close proximity to Lincoln NF managed lands have increased the interface and intermixture of forest and private lands and residences. Agricultural land adjacent to Lincoln NF managed lands is perceived to be the primary source of subdivision development.
    - New residents are perceived to be individuals attracted by the setting, recreational opportunities, and scenic resources of the Lincoln National Forest and surrounding lands. These newer residents are perceived to increase the types and amount of demands on forest resources, including the use of Lincoln NF managed lands for off-road vehicle riding.
    - New residents include a growing population of retirees as well as others who are "bringing their work with them."
    - Rural communities such as Timberon exemplify the intermixture of forest and community lands that require consideration of how forest conditions affect the potential for wildlife damage to private property. These communities also indicate issues associated with increased access and the interaction of forest users with private landowners adjacent to Lincoln NF managed lands.
- Urban communities such as Carlsbad, Alamogordo, and Las Cruces are believed to be growing at a faster rate than the rural areas of the four counties. These urban areas are attracting residents who are perceived to have diverse values about natural resources and the use of forestlands.
    - Urban communities are becoming a major source of users for Lincoln NF managed lands and resources.
    - Urban residents, especially those moving from other metropolitan areas or from other states are perceived to be more "protectionist" in the values about natural resources whereas longer term rural residents are perceived to be more multiple-use oriented.
    - Urban residents are believed to be more likely to ride all-terrain vehicles (ATV) than other users. And, urban ATV riders are perceived to have less knowledge than rural residents about the land ethics that should guide recreation and other uses of forest resources.
    - Urban and rural growth is creating a demand for water resources to address the needs of these growth populations.
- There is a "regional" social context that includes communities in Texas as well as Mexico that are sources of visitors to Lincoln NF managed lands.
    - With few other public lands in western Texas, the Lincoln NF with its mountains and cooler climate is a population destination for visitors from Texas as well as Mexico.

  - Multi-cultural and urban residents have different knowledge and understandings about lands ethics and the practices for use of public resources. This implies a need for outreach to these users to promote values consistent with the management goals of the Lincoln NF.
- The Mescalero Apache and other tribal entities have historical ties to the lands and resources of the Lincoln NF. The presence of the Mescalero Apache Reservation adds to the cultural diversity of the Lincoln NF social environment.

Traditional custom and culture in adjacent communities is transitioning from lifestyles based on timber, grazing, and mining to a more diverse mix of lifestyles and economic activities. Knowledge as well as values and ethics about forest resources are also diversifying. This mixture of values and knowledge is expressed in the following comment by a discussion group participant:

*People who are not brought up in the area are more protectionists, don't kill the elk, don't cut any trees, don't have any cows on the forest. They don't know like people who live here.*

As population increases and diversifies, values and beliefs are influencing the types of uses of forestlands, assessments of appropriate management strategies, and visions for the desired future of forest resources. Collaboration efforts will benefit by developing strategies to identify the multi-cultural perspectives of forest users as well as differences in knowledge and values about land ethics and use.

## Forest Conditions and Characteristics

Themes about the identity and characteristics of the Lincoln National Forest were expressed by participants in discussions about a range of topics. The major themes are consistent with characterizations of other forests in the southwestern region:

- The natural forest setting enhances the quality of life and the outdoor lifestyles of surrounding communities. Participants value the ecological variety offered by the transition from desert lowlands to pine covered mountains as well as the cooler climate at the higher elevations.
- Drought has stressed vegetation and other resources and it is perceived to be an essential consideration affecting planning and management for the future of the Lincoln NF.
- Tree density combined with drought conditions has resulted in a forest prone to damage from bark beetle and other insect infestations; and, these conditions have resulted in a "sick forest" that needs restoration.
- Some participants suggest limitations on tree harvesting and what is described as "single species management approaches" have resulted in a less diverse forest. These participants also suggest these management approaches have resulted in "near catastrophic" ecological conditions that increase fire danger and threaten neighbors of the Lincoln NF.
- Increased tree density has resulted in changes in water supply that adversely affect overall environmental conditions and the potential water supply to adjacent communities.
- Participants compare the appearance and perceived health of nearby forests on the Mescalero Indian Reservation with the Lincoln NF and judge Indian managed forests as preferable. Forests on Indian lands are also perceived to indicate the potential for

effective management of Lincoln NF lands and resources if similar management approaches are followed.

- The Lincoln NF is at risk for long term ecological damage because of the combination of drought, tree density, and overall forest health. Forest conditions brought about by management practices of the past 20 years are assessed as capable of producing "unnaturally" hot fires that can cause long-term ecological disruptions.

Although participants generally describe forest conditions as "unhealthy" there also appears to be an underlying hope for restoration:

*With proper care it could be a beautiful forest. We need to take some of the trees out and get some of the dead wood off the ground. It is in danger of going up in a large fire. You compare this to the Reservation and we see what it could be, we see how beautiful we want it to be. They just need to dome some management and we can have what we all want: a healthy, beautiful forest.*

## Forest Service Policies and Procedures

When offered a relatively open forum to express thoughts about forest management, participants focused on issues and concerns about forest management practices and procedures. Themes expressed in these discussion groups are consistent with information collected in discussion groups for other Southwestern Region forests and also for other forests in the west (e.g., Parker, Wulfhorst, and Kamm 2002; Rasker and Alexander 2003; Russell and Adams-Russell 2003, 2004). The concerns expressed in these themes describe Forest Service-wide management policies and procedures. Others, described in the following sub-section, express themes specific to Lincoln NF management practices

Participants focused their criticisms about forest management on Forest Service-wide management policies and procedures. Participants usually exempted district rangers and the forest supervisor from most of their criticisms about Agency policies and procedures. Nonetheless, an implication of these criticisms is that overall Agency ineffectiveness undermines the credibility and capabilities of local managers: Agency policies and procedures become one of the ropes "tying the hands" of local managers. For example,

*The Forest Service, the Agency has become mired in process. They have lost sight of their mission and they are not getting anything done. Someone in Washington or someone in Albuquerque is telling them what they can and can't do and they don't know our environment. The Rangers is trying to do the right thing, but they tie his hands and nothing gets done. They have gone from an Agency that used to have a 'can do' attitude to one with an attitude of 'ain't no way.' They are aware of many of the problem, but they have gradually lost the desire to do much about it.*

Participant' describe *ain't no way* as the business as usual approach of the Agency. On the other hand, those assessed as effective managers are also evaluated as "rebels" These "rebels" are described as operating at the edges of preferred policy and procedure rather than within the "norms" of how the Agency manages resources and interfaces with publics:

*The "norm" has been not getting very much done. It is the rebel Rangers and managers that are the ones getting things done. A lot of times it has been the rebel front-line people that are doing the best good. They are going against the grain and getting things done. There is a lot of risk in doing that and getting things done. They put their careers on the line for trying to accomplish something. The norm seems to be managers that are so concerned about litigation that they do*

*nothing rather than do what is right for the resource. They don't want to hurt their career. It is not just a Ranger or Forest Supervisor here and there. Doing nothing has become the norm rather than doing the right thing.*

Other sentiments related to Agency-wide policies and procedures affecting local managers include:

- The Agency is perceived to be under-funded and without experienced personnel to effectively manage national forest lands and resources.
- Management decisions are perceived to be based on "avoiding litigation" rather that "proven science." The perceived focus on litigation contributes to an assessment of insufficient capacity to effectively manage resources:

  *Implementation has become second to litigation protection…. they are not very good at implementation because their skills are focused on litigation protection. They have the tools to move ahead with the Healthy Forest Act, Restoration, etc…. They are just too slow and too tied up in analysis and they have lost the ability to know how to implement. They plan, they litigate, they hold open houses, and they are getting better at asking us what we want. They just don't do anything on the ground anymore.*

- Risk adverse managers are making decisions that have the potential to adversely affect resources and adjacent communities. Participants suggest a return to science-based decision making is essential for future management of forest resources.
- There is a perceived absence of accountability for the effects of decisions on forest resources and adjacent communities. The rotation of managers is perceived to contribute to the decline in accountability and has adverse effects on the working relationships with communities. Rotation is also believed to contribute to inconsistent resource management practices.
- Management of forest resources has the potential to improve if more decision-making authority is invested with local managers rather than with the Supervisor's Office or the Regional Office.
- Planning and management has not effectively engaged communities as "partners." For example,

  *They come to us with a completed document or a finished Plan and then ask us what we think, and by the way you have 30 days to respond. That is not a partnership. There are families that have been here as long as there has been a forest and we have a stake in the future of this forest. We want a seat at the table, sitting down with the managers and' ologists' to work on the Plan. The days when they can just give us a document and ask for a response are gone, I am going to see to that. The stakes are too high.*

These sentiments are a sub-set of a wider range of public assessments about the effects of Agency-wide policies and procedures on forest management and community relations. These other assessments are discussed in other forest-specific reports for this project (e.g., Russell and Adams-Russell 2006).

## Lincoln NF Management

Although some comments about Forest Service-wide issues were difficult to distinguish from issues and concerns about Lincoln NF-specific management, other comments more directly address themes about Lincoln NF management.

- The existing forest plan is perceived to an under-used document. However, participants also suggest the existing Plan does not address contemporary conditions of the Lincoln NF and its socioeconomic interactions with adjacent communities. Participants expressed a desire for an updated Plan that will meet stakeholder needs and concerns about forest health and community stability.
- The Lincoln NF has a foundation for plan revision and collaboration with stakeholders and other interested publics in documents such as the capability assessment. This document and others are a basis for action and implementation of plans developed with other interested parties. Participants suggest using these existing documents to focus on how to implement management actions rather than only to engage in additional planning.
- Participants suggest the Lincoln NF has had some success in collaborative efforts that are a foundation to build on. Other stakeholders emphasize the need for meaningful collaboration that includes stakeholders and interested publics in identifying issues and developing management solutions. Meaningful collaboration is perceived to be an item to include in revision of the existing forest plan.
- Some participants suggest the Lincoln NF has the capability to argue for a forest specific approach to management of spotted owl recovery efforts. The more general parameters of the recovery program are perceived by some to be not applicable to local conditions; and, these stakeholders argue the Lincoln NF should advocate for a plan that meets local conditions.
- A theme in each of the discussion groups is a desire for more cooperation across forest boundaries. The substance of the theme is a concern that the Lincoln NF manages “up to its boundary” and “not across it.” Participants suggest that within this multi-agency environment that is intermixed with private lands, managing across boundaries is essential for the Lincoln NF to be a “good neighbor.”
- Participants believe local knowledge and the observations of individuals who are informed because they are “on the ground every day” are disregarded in favor of what is evaluated as flawed or biased science. There is a perceived inconsistency between the observations and understandings of locally knowledgeable persons and the “flawed” science used in decisionmaking.
- There is a need to consider conducting scientific studies that are “adaptive” and involves stakeholders affected by the outcome of management decisions. Participants define adaptive science as implementation of studies that test different management approaches to identify the local effects of different treatment and management approaches.

Themes about Lincoln NF management emphasize a trend toward improved community relationships and a desire for ongoing attention to using collaboration as a means to address stakeholder concerns about forest health and multiple-use issues. These generally positive evaluations interact with more critical perspectives about Agency-wide management issues. These interactions may undermine the positive themes about the Lincoln NF-specific

management approaches. These interactions suggest clearly defining the decision space, authority, and accountability of local managers in future collaboration and public involvement efforts.

## Sidebars

Participants volunteered a range of issues that are not traditionally ones addressed by forest management. These are termed “sidebar” issues because they affect forest management and planning and contribute to participant assessments of what and what cannot be accomplished by local managers. Themes about sidebar issues include the following:

- The National Environmental Policy Act (NEPA) process was identified as an example of a process that could be simplified without disregarding the intent and need for the law. A streamlined or more efficient NEPA process is perceived as a means for the Lincoln NF to move from a focus on process to implementation of management actions.
- The Endangered Species Act (ESA) and specifically issues about spotted owl recovery are perceived to be adversely affecting forest management. Although some participants perceive the need for protective measures, there is concern that this focuses the Agency on “single species management” to the detriment of a more ecosystem approach to managing forest lands and resources.
- Lawsuits are perceived to take the authority for forest management outside the Agency. Some stakeholder perceive this has resulted in the Agency managing to minimize litigation while others perceive the intent of the NEPA process is to have government accountable for its actions.

Assessments of the social environment and forest conditions, evaluations of and Lincoln NF management, and particular sidebar issues represent a configuration of issues with the following implications for revision of the existing forest plan:

- Participants expect a robust and meaningful approach to collaboration with a diverse group of stakeholders in geographically dispersed areas of four counties.
- Regional stakeholders in communities such as El Paso and Las Cruces will have a more narrow range of interests about forest management, primarily recreational, than those who live adjacent to Lincoln NF managed lands. However, these regional stakeholders are an important consideration in the growing recreational uses of Lincoln NF managed lands.
- Stakeholders living adjacent to Lincoln NF managed lands appear to have a strong place attachment and interest in issues affecting their lifestyles and communities. Acknowledging custom and culture as an issue for collaboration is therefore likely to emerge during the work of collaboration.
- Stakeholders are likely to emphasize the use of accessible and publicly accountable science to identify issues and management approaches; and, they are likely to ask for engagement by specialist staff in the work of collaboration.
- Participants in collaboration activities may desire a focus on the mechanisms for implementation as much as a vision for the future and identification of strategic issues. Concern about Agency “non management” of resources is likely to result in a desire for a Plan that emphasizes outcomes and measures to monitor those outcomes.

Future socioeconomic assessment work by the University of New Mexico will identify other issues that will affect the process of revision of the existing forest plan. The suggestions above will likely require revision and augmentation as those findings become available.

## Multiple-Use

In 1960 passage of the Multiple-use and Sustained Yield Act recognized “multiple-use” as a concept about the coexistence of different activities on Forest Service managed lands. Timber harvesting, oil and gas development, grazing, and recreational hiking and hunting are examples of traditional “multiple-us” activities. Some of the dialogue about the uses of Lincoln NF managed lands suggests that multiple-use is a dated concept that does not allocate enough value to the biodiversity and ecosystem services values of forest resources. Other stakeholders remain convinced that multiple-use is the present and future vision for the management of forestlands. These stakeholders also identify multiple-use issues and concerns such as user conflicts, the types and intensity of uses, or the economic values of particular resources. The details of the multiple-use versus bio-diversity/ecosystem services dialogue are not developed here since these are well-known positions. However, the values and beliefs associated with these two positions will continue to influence the dialogue about how Lincoln NF managed lands and resources are used.

Other participant comments about multiple-use issues include the following:

- Participant comments indicate a relationship between stewardship values and types of users.
    - Causal users are identified as those who use Lincoln NF managed lands and resources as a “day park.” Many of these users are identified as from more distant communities but some are also local residents. Casual users are perceived to have limited stewardship values. Some of these users are amenable to education about stewardship values while others are not.
    - Permitted users are perceived to have place-based knowledge and an understanding of local ecological conditions and processes. These users exercise stewardship values based on self-interest as well as values based on “a love of the land.”
    - Lifestyle users are those who have multiple connections with forest resources such as living adjacent to the forest, gathering firewood, recreating, and engaging in other uses. These users have integrated recreation, subsistence, and other types of uses of forest resources into their ways of life. These diverse connections with forest resources promote stewardship values because of the multiple-uses and values about forest resources.
- Some participants perceive a strong connection between the health of forest resources and uses such as grazing and timer harvesting.
    - These types of uses are perceived to result in self-interest stewardship values that promote the “sustainable use” of forest resources.
    - These users are believed to act as the “eyes and ears” of the Forest Service about forest conditions; and, this type of use has wider management benefits because of stakeholder stewardship values and on-the-ground knowledge.
    - Timber and grazing stakeholders are perceived by some participants as providing infrastructure resources such as roads that are not now supplied by the Agency. These stakeholders suggest such resources have value for other stakeholders and users.

- Problem behavior associated with a wide-range of uses has increased with population growth and diversity. Problem behavior adversely affects the experiences of other forest users as well as degrading forest conditions and resources.
  - Participants describe litter, vandalism, dumping, and off-trail riding by mountain bikes and off-road-vehicles as examples of problem behavior.
  - Enforcement resources are perceived to be insufficient to meet the demands of increasing problem behavior.
  - Some problem behavior can be addressed by education about the expectations and rules for the use of public lands. Partnerships with community groups are believed to be an essential approach to meeting these education needs.
  - Other users engaging in problem behavior appear to believe they should have unrestricted use of public lands and have the "right" to use these lands as they wish. These users are perceived to respond to fines and other penalties for problem behavior. Selective enforcement and substantial penalties for violations are believed to be a necessary as part of the response to problem behavior.
- Participants suggest problem behavior and other resource issues are being managed by restricting or prohibiting access rather than addressing the behavior or its consequences.
  - When problem behavior or resource damage by a few results in limiting access, a wide range of users are affected. For example,

    *They have actually done a pretty good job of managing recreational access and use of ATVs on the forest. There are good trails and the signs are not bad. But there isn't enough enforcement for what is going on. It is a free-for-all up there and they can't control what is going on. So, half the people up there don't know where they should or shouldn't be. So, their (Forest Service) answer to it is to close it down and close the trails that we all want to use. Those people who are abusing it are causing the problems for the rest of us.*

  - Participants desire the Lincoln NF to further develop partnerships with user organizations such as off-highway vehicle (OHV) Clubs and other interest groups to respond to problems rather than limit access.
- Participants describe a decrease in "traditional uses" such as timber harvesting and grazing.
  - A limited timber infrastructure exists. Some participants perceive a need for supporting the existing infrastructure as a resource for treatment of forest resources to promote forest health.
  - Some participants perceive it is the intent of existing Agency management policy to reduce grazing and timber uses of Lincoln NF managed lands:

    *The timber industry was eliminated here. It was targeted and eliminated. The grazing was the next deal. In the last Plan, it was intended to bring animal units way down as part of the planning process. There was no justification for it other than it was just the trend of time times. … You have to go back to the custom and culture of grazing. You can't write into the Plan the sustainability of the industry, but it should not be planned out either. It should be planned for to the extent that the industry is viable. The industry should have access to those resources. … There are areas of the forest that are not suitable for grazing, there are areas that are. You should not naturally*

*write it off for any reason. They may have to take a different approach in different areas, but there is value in grazing on public lands.*

- Some participants perceive the economic use of Lincoln NF managed lands is underdeveloped. Promoting economic use is believed capable of reversing a perceived decline in resource conditions. These participants believe that increasing economic use of forest resources also will have broader ecosystem benefits. Other participants support some limited economic uses such as biomass plants and reforestation activities.
- Recreational uses of all types are believed to be increasing.
  - Although recreation demand is increasing, participants believe that resources and lands allocated for recreational activities are not. This is concentrating users in certain areas rather than dispersing people in the landscape.
  - Technological changes in mountain biking, snowmobiles, motorcycles, and ATVs have changed the areas accessible to these vehicles. This is resulting in a wider presence of motorized vehicles on Lincoln NF managed lands. Some participants view this as disruptive of their experiences and as damaging resources when these vehicles do not stay on established trails.
  - Non-system trails are perceived to be proliferating and contributing to the pervasiveness of ATVs and other off-road vehicles on Lincoln NF managed lands.
- Participants desire attention to enhancing the quality of their experiences when using national forest lands and resources. Participant comments suggest the following components of "quality" in their uses of Lincoln NF managed lands:
  - Scenic surroundings that match expectations for open park-like landscapes with limited downed trees and underbrush.
  - The opportunity to engage in a variety activities such as birding, hunting, fishing, hiking, camping, OHV riding, horseback riding, and mountain biking.
  - Access via roads and trails to pursue the various activities that attract persons to Lincoln NF lands.
  - The opportunity to have relatively undisturbed experiences that allow separation from other users.
  - Visiting places where "quiet" or natural sounds predominate rather than man-made sounds.
  - Signage and trail information that allow users access to the types of experiences they are seeking.
  - Roadside picnic areas with water and restrooms.
- The Rails to Trails partnership exemplifies the potential for community-Agency cooperation to improve user experiences and develop stewardship for forest resources.

Participant dialogue about multiple-use issues also expressed concern about other uses of forest resources. These include topics such as logging operations that damage standing trees during thinning operations, closures of particular roads, the maintenance needs for specific campgrounds, and the interaction of hunting and grazing at particular locations on the Lincoln NF. These are not necessarily the types of strategic issues for consideration in forest plan revision, but similar issues are likely to emerge during future collaborative and public involvement efforts.

The authors of this document interpret the more general themes identified in the preceding list as suggesting participants are likely to be concerned about addressing more strategic questions such as:

- Can the multiple-use mandate and resource conditions of the Lincoln NF be maintained without traditional uses such as grazing and timber harvesting?
- What this document terms “problem behavior” is perceived to be increasing and affecting forest resources as well as user evaluations of the quality of their recreation experiences. Given the perceived increase in problem behavior and expectations that Lincoln NF enforcement resources may not increase: How will the Lincoln NF work with stakeholders and other interested parties to ensure that a full range of management options other than restricting access or closure will be considered in developing responses to problem behavior?
- How will the Lincoln NF mangers promote stewardship and land ethics education among all users?
- Is there a means to privatize, contract, charge user fees, or otherwise use economic incentives to manage the increasing demand for recreational uses of Lincoln NF managed lands and resources?
- How will the Lincoln NF meet the expectations of a wide-range of potentially conflicting users to have a high quality recreational experience?

There are other issues are explicit or implicit in participant statements about the use of Lincoln NF managed lands and resources. Collaboration and other public involvement work may benefit by managers and resource specialists considering responses to these types of multiple-use issues and as preparation for the broad categories of issues that may emerge in future Agency-public interactions.

## Lincoln National Forest Resources

Analysis of the discussion group and interview data indicates two broad categories of information about forest resources: (1) the value of particular resources such as timber, water, and vegetation; and (2) the conditions and means to improve the health of forest resources. Although the individual resource topics were a concern for participants, the strongest sentiments were expressed about overall resource conditions, including how these conditions are perceived to have resulted from management practices.

### Resource Values and Benefits

Participant comments about particular resources emphasize the interaction of those resources with lifestyles and adjacent communities. Some values and beliefs emphasize the economic and social benefits to communities while others such as quiet and scenery address how resources enhance individual and family experiences of visiting Lincoln NF managed lands.

#### Economic Benefits

Lincoln NF resources provide economic benefits to surrounding communities. Forest lands attract tourists that contribute to local businesses and provide some economic return to local governments from any permitted or commercial uses. Although timber harvesting is no longer a

major source of jobs and income, participants suggest there continues to be potential for future economic benefits from small-scale logging operations or biomass plants. These participants emphasize that in rural economies, every economic contribution is important. Some participants suggest economic benefit should have a more prominent place in the management of forest resources:

*A lot of people forget that the forest is managed by the Department of Agriculture. The forest is agriculture and we need to get back to that idea*.

### Ecosystem Services

Forest lands are a source of clean air and water and they are also a source of biodiversity. These are identified by some participants as 'ecosystem services." These types of resources are described as benefiting local communities as well as the nation. They are also perceived to be essential for forest and community health:

*There are tangible and intangible benefits from the forest. If you have to pay a contractor to take out wood, that is old school thinking only about the tangible economic benefits. In reality, the intangible benefit of having a healthy forest for recreation, for wildlife, for a whole range of things is maybe more important. It is a finite resource and we need to keep it healthy for us and future generations. It is ok to use timber harvesting through stewardship contracting and other things as a tool for forest health. But, there is that old philosophy of 'we have to have value for the American people because it is public land.' Well, there is value in stewardship, much more value than just the commodity value that comes from forest resources. It is those benefits we get from having a healthy forest that should drive forest management. They should use more stewardship ideas to achieve those intangible benefits that we call get from the forest being healthy.*

### Fire and Trees

A theme about the health of forest resources is the relationship of fire to ecosystem and forest health. Some participants suggest fire was once a part of normal ecosystem functioning that provided some "natural thinning" for forest vegetation. However, participants perceive fire as a significant threat because of the density of trees and bark beetle infestations. These conditions are perceived as creating the potential for unnatural and "catastrophically hot" fires that can cause long term damage to forest resources rather than contributing to forest health. Furthermore, with the homes and communities interfacing and intermixing with Lincoln NF managed lands, there is also potential for damage to personal and community properties. Fire and trees have a strong component of liability rather than asset in this theme. This assessment is a basic assumption about forest health and management as "out of balance."

### Grass

Although grass for cattle and wildlife grazing is valued in all areas of the forest, the more open and less-forested southern regions of the Lincoln NF in the Guadalupe were cited as particularly rich in grass resources. As one participant observed:

*In our part of the country, grass is the biggest resource we have on the forest. We don't have a lot of trees, but we have some of the best grass for grazing you will find anywhere. The blue and black gamma grass we have here is just about some of the best you will find.*

### Open Space and Buffer

Forest lands are valued because they provide open space and the opportunity for individuals to enjoy outdoor activities:

*Places like this are getting fewer and fewer. It used to be you could go and find a place without restrictions easy, but that is changing. You go to a national park and you pay a fee and there is 'no parking' and 'no this or that' signs all over the place. A national forest is one the last places you can come to enjoy the full range of activities, including wilderness, and the full range of uses on the forest. We need to maintain that freedom on the national forest and not manage it as a national park. We have plenty of those and what we need are places to use.*

Participants also describe Lincoln NF managed lands as buffering rural communities from development. Both long-term and newer residents also describe the Lincoln NF as contributing to the setting and quality of life in nearby communities:

*People are moving here because we are surrounded by the forest. It adds to the quality of life. It is a place that people want to come to because of the climate, the views, and just the ability to have recreation out your front door. If you don't like doing outdoor things, then you probably will not enjoy living here. The forest is a big part of what we have here.*

### Quiet and Solitude

Participants note that forests have value as a place offering opportunities for both quiet and solitude. Some participants describe quiet as an under-managed resource that requires more attention, especially with motorized vehicles accessing more areas of Lincoln NF managed lands.

*When I was growing up here you could get out on the forest and never hear a thing but birds and wind in the trees. There is a peacefulness on those sounds that is part of going to the forest. It is getting harder to just find quiet out there now. They need to pay some attention to how all those ATV motors affect the rest of us.*

### Scenery

Participants from all discussion groups emphasized the scenic value of the mountains and forest and their contrast with surrounding desert lands. The contrast is less varied on some portions of the forest than others, but for all participants the scenic beauty of the Lincoln NF is an asset. One participant described the southern portions of the Lincoln NF in the following terms:

*We don't have the trees and such they do up around Cloudcroft and Ruidoso, but we have a rugged beauty that you learn to appreciate. That beauty is a benefit that you can't put a price on, when you are up at dawn and riding a ridge top and looking at a sunrise. Well, what's the price of that?*

Ruidoso, Cloudcroft, and Alamogordo participants also describe the beauty of mountains, meadows, and vistas as contributing to the quality of life in their communities.

### Social and Lifestyle Benefits

Lincoln NF managed lands are also described as enabling particular lifestyles. Ranching participants describe access to the Lincoln NF as essential to survival of the custom of culture of this portion of New Mexico.

*There are people that ranch completely on the national forest. Without that land, they wouldn't have enough to graze their cows and they couldn't stay in business. Most of us have to do something else to survive now anyway, but things can change. This county lets you know things can change in a heart-beat. If we don't have access to the forest, then I am not sure we will have ranching because we need that option to deal with the changes.*

Ranching interests describe their lifestyles as linked to the availability of grazing on Lincoln NF managed lands. And, they suggest there is stewardship and accountability associated with their permits that is not necessarily shared by other users of forest resources.

*My family has been on this land a long time. My allotment is not my land, but I care for like it is and I feel strongly about how it is used. You take the guy from El Paso on his ATV who comes up here for the weekend and rides across my pasture. Ddoes he feel the same way about it I do? They (Forest Service) forget we are stewards of our land, we have a permit and they hold us accountable, but do they do hold other people accountable in the same way?*

Non-ranching participants also suggest that the natural resources of the Lincoln NF are integral to the lifestyles and custom and culture of this region:

*The forest, the mountains, the whole range of natural resources of this area are part of the custom of culture of those of who have lived here all our lives. It is part of who we are as individuals; it is part of our community; and, part of our way of life. It is hard to imagine managing this forest without understanding that.*

### Trails and Roads

Off-highway vehicle riders, hikers, and other participants describe the trails of the Lincoln NF as one of its important recreation resources. Trails and roads provide access to destinations within the forest and they are the primary means for individuals to experience public lands.

*We don't have enough signs and enough information about which are the best trails for birding and which are best for mountain biking, but the trails are what make the forest for me. It allows me to get in there and do what I want to do. Without trails and roads, it is just a bunch of trees.*

### Water

A strong theme in discussion groups is the importance of water as a resource of the Lincoln National Forest. Some participants noted a provision of the Organic Act of 1897*: to secure favorable conditions of water flows* as an under-appreciated mission of national forests. Participants suggest that given population growth, drought, and overall growing needs for water in this portion of New Mexico, water should be considered one of the essential resources for management of the Lincoln NF.

*Water has become more and more important and although it is not the most important issue, it needs to be part of the mix of issues in the next Plan. They can reduce vegetation density above*

*6000 fee and we will get a significant increase in ground and surface water. So, water needs to be a priority issue for management and use. Water figures into forest management because of fire, wildlife, and just vegetation growth. People need it too and this forest is our watershed.*

### Wildlife

Forest lands are valued as essential wildlife habitat. Hunters, wildlife viewers, advocates for endangered species, and others assess wildlife as part of the ecosystem that contributes to biodiversity as well as quality of life. As essential habitat, participants suggest wildlife considerations also should be considered as an important part of the desired conditions for the future of the Lincoln NF:

*We used to have more deer here than elk. But, that has changed. Since elk were introduced, we have more of them and fewer deer, and a lot more lions. There are issues with the elk and the lions and the interaction with cattle. The Forest Service needs to take wildlife seriously. There is a lot of economic benefit that comes from hunters. People also just enjoy wildlife as part of the environment.*

Ranching and other participants note the interaction of cattle grazing and elk as an important issue that they believe needs further attention in future management:

*Deer are browsers and elk are grazers like cows. When you see a meadow that is heavily grazed, it could be the elk. The cows and the elk use the same feed. The Forest Service says it is a problem for Game and Fish and they want to have a lot of elk to hunt. We need to get a handle on this. I am not saying get rid of elk, I am just saying we need to manage it better.*

## Resource Conditions

The conditions of Lincoln NF forest resources were among the most consistent topics of concern for participants. Themes about forest conditions have connections that describe an explanation for existing conditions. These interconnected themes concern: a desire for “balance” in resource management; an emphasis on managing for a “healthy ecosystem;” and, the benefits of active management” for forest resources. Each of these interconnected themes has distinct content, but our interpretation of participant comments also suggests these ideas are linked as follows: Existing ecosystem conditions are a result of a change in the balance from active to less active management. The effects of this imbalance are an overall decline in ecosystem health. A healthy ecosystem can be restored with active management. If active management is to be effective, then timber, grazing, and other commercial interests will have to be part of the resources to achieve a healthy forest.

There are some details about these individual themes and their interconnections that need further elaboration

- “Balance” in resource management is an explicit theme in the discussion group dialogue about Lincoln NF resources as well as implicit in other participant assessments about resource issues. The substance of these explicit and implicit sentiments is expressed in the following comment:

  *The issue with logging and any industry or commercial use of forest land in the past has been economically driven. … If the process or incentive is the desired conditions on the*

*ground, if it is timber harvesting, grazing, or anything, then it can be managed if you identify the desired conditions. In the past the pendulum was toward economically driven everything and then it swung back to 'let's don't do anything.' We need to get to the middle. We know we need to do something, but we know we need to be environmentally sensitive too.*

Participant's indicators of "balance" are both ecological and administrative. Ecological indicators include assessments of high tree densities, a decline in water availability and volume (springs, streams, etc…), increased numbers of elk and lions and decreased numbers of deer, and insect-damaged vegetation. The administrative/legal indicators are lawsuits and settlements that favor passive management in favor of active management, the perceived use of the Endangered Species Act to restrict uses of forest resources; and, a perceived bias against commercial uses such as mining, timber, and grazing. Restoring "balanced" management is perceived to have benefits for ecosystem health.

- As noted elsewhere in this report, participants describe the Lincoln NF as an ecosystem in need of care. Some participants suggest the forest ecosystem is "sick" because of the mix of tree density; insect caused disease in trees; and, drought.
  - A theme about of forest resources attributes "sickness" and poor ecosystem health to "non management." Past management practices are perceived to have emphasized harvesting trees and grazing as means to achieve a healthy forest. This theme identifies the solution to assessments of forest health as including these practices in future management approaches.

    An associated theme is the "loss of an ecosystem perspective." Participants suggest that managing with an ecosystem perspective has been replaced by "single species management" with adverse consequences for ecosystem health. The spotted owl is the species participants identify as the focus of single species management. The effects of such management also appear contrary to "common sense" observations:

    *We have known that from where we log there are more owls. The mice are in the brush piles and that attracts the owls. You can log and have owls too. You go to the Endangered Species Act, and it has restricted what you can do on some acres, but if you just manage for the owl, then you can damage the whole forest. You can have logging and have the owl too. When I go to the areas that have been logged, I see owls. So, can you tell me that logging harms owls? There needs to be some common sense and some science that is looking at what is happening on the ground on our forest and not some policy that is blind to what we see here. What is going to happen to the owls if the whole forest burns up because it wasn't managed for the health of the whole ecosystem?*

    Policies that are evaluated as contrary to the observations and experiences of users with local knowledge appear to contribute to frustration about existing management and undermine support for continuing current resource management practices (cf., Cvetkovich and Winter 2002).

- Participants describe the solution to resource conditions is implementing management strategies focused on ecosystem health combined with a balance in the use of active management practices (e.g., timber harvesting and grazing). The following comment exemplifies one sub-theme about focusing on ecosystem health:

*We are only cutting about four million board feet a year now. We are never going to solve the problem of getting back to a healthy ecosystem where the watersheds are healthy and there are open pastures for cattle and wildlife. All these play hand in hand. It needs to be restored as a healthy ecosystem. The only way you can do that is manage the forest to be healthy. You can't do single species management and you can't just manage around the concerns of one specialist or another. There needs to be a perspective about the whole forest and if you have that, then there will be a place for the owl and the logger too.*

A similar sentiment about a strategic approach to ecosystem health is expressed in the following comment:

*There has been a move toward stewardship contracting and I think that is a good thing because it refocuses the Forest Service on thinking about doing what is good for the forest rather than doing what is most economically feasible. In the past they have been doing things based on what the timber industry needs or what the owl needs or what some other special interest needs. They have not done things based on what the land needs. One of the things we are trying to do here is change things, to restore the balance. There has been a whole generation of Forest Service land managers with a mind-sent that only knows how to deal with the old ways of doing things. They are starting to think in new terms about what is best for the land and I think if they do that, and think about landscape level treatments, then everything else will fall into place. The owl habitat will be improved, the watershed will improve, and there will be enough timber. But, if we lose sight of ecosystem health, we may not have a forest to manage.*

A perspective held by some participants emphasizes the solution to restoration of a healthy ecosystem as commercial use:

*The whole forest ecosystem may crash. There are a lot of stands at high risk from bark beetle and wildfire. What happens or really what does not happen on the Lincoln affects all of its neighbors. A heck of a lot more needs to be done. We want to see a lot more done to restore the ecosystem so there are healthy ecosystems. In the process the communities around the forest are going to be better off too. If you can restore those ecosystems to some natural range of variability, well that is the value of the forest because you don't then have the disease out breaks from insects and you don't have catastrophic wildfire. You can use industry to remove some of the larger stands. I know that small diameter is a big issue and there is a lot of that should come out too, but that has not been fully developed. We need to work on the use of small diameter. But, if you let industry in there, it could be a revenue source and I think in the long run it will all take care of itself*

## Implications

Participant concerns about resource issues are likely to be central issues in dialogue about the future of the Lincoln NF and revision of the existing forest plan. Although particular issues such as timber harvesting, watershed management, grass for grazing, and trails are likely to emerge as both place-specific and strategic issues, the broader issue of ecosystem conditions may focus the dialogue about the benefits and values of Lincoln NF resources. Collaboration and public participation efforts will benefit by a consideration of how to respond to questions such as:

- How will Lincoln NF mangers incorporate community based understandings about forest resource conditions into management decisions about ecosystem health?
- What role will commercial uses play in addressing issues about ecosystem health?
- Given the presence of important sidebar issues such as the Endangered Species Act, how can management for ecosystem health and ESA management coexist?
- How can a balance be achieved in the ecosystem services values and the benefits of economic uses of Lincoln NF managed lands and resources?
- With limited personnel and budgets, how will the Forest Service create partnerships with community and interest groups to restore ecosystem health?

These are not the only questions likely to emerge in future engagements with interested publics, but the issues addressed by these questions appear to be among the core resource concerns expressed in the discussion groups.

## Key Plan Revision Issues and Concerns

Preceding sections have discussed concerns about the planning environment, particular multiple-use issues, and the types and conditions of forest resources. Collectively, these topics express the range of concerns participants have about revision of the existing forest plan. The following points highlight some of the key issues and concerns expressed by participants.

### Planning Process Issues

- Use a planning process that is adaptive and open to adjustment as conditions and resources change.
- Build on existing documents and planning efforts rather than create new plans.
- Plan for what is realistic and can be accomplished.
- Consider local differences and regional variation in communities and forest conditions.
- Monitor conditions as part of an approach to adaptive planning.
- Focus on implementation.
- Ensure collaboration with interested publics.
- Provide Forest Service personnel information and training in the necessary skill sets for effective collaboration.

### Multiple-use and Resource Issues

- Provide for economic uses of forest resources that contribute to ecosystem health.
- Recognize and incorporate consideration of local custom and culture in forest management and planning.
- Develop a strategic focus on education about land ethics and proper use of forest resources. Include collaboration and partnerships with interest groups to effectively implement public education processes.
- In additional to educational efforts, address the enforcement of problem behavior and abuse of forest resources with penalties sufficient to deter misuse.

- Consider approaches other than closures to off-road-vehicle abuse. This can include a combination of education, enforcement, and partnerships with OHV organizations.
- Develop a management approach to trail resources that include improved signage, coexistence of motorized and non-motorized users, and road and trail maintenance.
- Address the potential for catastrophic fires that will destroy resources and can damage private property. Include management strategies that consider the effects of fire on communities, adjacent Indian lands, and private land owners.
- Explore the potential for using commercial timber harvesting as part of the strategic mix of management activities to address fire danger and overall forest health. Consider commercial harvesting as a compliment to prescribed burns for treatment of appropriate areas.
- Develop consistency across Districts in plans for forest thinning efforts.
- Incorporate watershed values as part of the mix of important resources in future management plans and decisions.
- Consider development of a Lincoln NF specific plan for spotted owl recovery.
- Further develop stewardship contacting as a means to focus on forest health.

These key issues are connected to a range of values, beliefs, and attitudes about the linkages of humans with forest resources. Implicit in these distinct beliefs and values are explanations about the overall relationship of humans with nature (cf. Kempton, Boster, and Hartley 1995). These explanations often begin with different assumptions about the human—nature relationship: some assume that balance in nature depends on human intervention while others assume nature thrives when human intervention is limited. These types of explanations and assumptions are likely to pervade the process of collaboration and public involvement in future efforts for forest plan revision. This will require attention to clarifying the positions and understandings of all participants who exchange ideas and express their values and beliefs about the future of the Lincoln National Forest.

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# Appendix. Topic Areas for Discussion

Please describe where you live and your interest in national forest lands.

**Community Character and Recent Changes**

How has this community changed in the last 10-15 years? What are the sources of community change?

Have these changes had any consequences for forest lands?

What communities, occupations, or lifestyles are most and least affected by how this national forest is managed?

**Uses**

Describe your use or the uses of family members of Forest lands. (Please indicate use areas on the national forest map.)

Are there types of uses of forest lands that you feel need to be enhanced or better managed by the Forest Service? (Please indicate on the map)

Are there areas where some types of uses are in conflict? (Please indicate on the map)

Is there anything the Forest Service should do to change how Forests are used in the future?

**Resources**

What are the special qualities and characteristics of this national forest?

> For example, wildlife, vegetation, vistas, climate, historical structures or sties, timber, grazing, trails, quiet places, etc…

Locate on the map the forest resources that are important to you.

What changes would you like to see in the management of forest resources?

**Favorite Places**

Do you have a picture or a story about a favorite place on this forest? Can you describe what makes it a favorite place for you?

What are your thoughts about the benefits of Wilderness, Roadless, and similar areas for this national forest?

Do you believe there is a need for additional designations for lands or resources within this national forest?

**National Forest Benefits and Values**

What do you value about this national forest" (e.g., Products, Services, Opportunities, Existence)

What are the benefits to nearby communities and groups from this national forest?

## Desired Futures

How would you compare the conditions in the forest now to how you would like to see them in the future?

What should the Forest Service do to achieve your future vision for these lands?

## Key Management Issues and Priorities for Future Forest Management

What do you think is broken and what needs to be fixed in management of this national forest?

What has the Forest Service done well in its management of lands and resources here?

Are there any additional issues would like the forest to consider or address in future management?