

6. Forest Users and Uses

The purpose of this section is to describe various past and current uses of the Coronado National Forest (CNF) as well as the multiple groups that engage in these uses. This includes use for both extractive and non-extractive purposes as well as special uses and user groups. The following subsections include historical context and user groups, extractive users and uses, non-extractive users and uses (including recreation; recreation planning; special users and uses, such as Native Americans, wildlife, wilderness; and illegal uses).

A review of available data on users and uses within the Coronado NF is consistent with larger surveys of trends at the regional and national levels. These trends show a marked decline in the extractive uses of national forests concurrent with an increase in recreational use, particularly in visitors to wilderness areas and users of off-highway vehicles (OHVs). These and other socioeconomic factors discussed in this section present significant challenges for multiple-use management of the CNF.

6.1 Historical context and user groups

Federal agencies often struggle to balance the needs and wishes of different users on public lands. Not long after the establishment of the first national forest reserves in 1891, Congress passed the Organic Act to help direct the management of those forests. The forest reserves, later to become the national forests, were to be used in a way that protected or improved the forest itself (including protection from fire), secured waterflows for use in other areas, and provided a reliable supply of timber. Public lands deemed to be more valuable for mineral extraction or agricultural uses were not to be included in the national forests, and individuals were allowed free use for certain extractive purposes. Essentially, all types of use were permitted provided that the use was not destructive to the forest. At the time, this was considered to include grazing, recreation, the construction of homes and resorts, and use for rights-of-way. The essential aim of the policy was to use the forests wisely to support local, regional, and national development and growth (USFS 1993).

A practical doctrine of managing for multiple uses eventually developed out of the conflict and cooperation among competing users and user groups. This doctrine was formally expressed in the 1960 Multiple-Use Sustained-Yield Act (USFS 1993). Managers were directed to give equal consideration to all resource users, and national forest lands were to be used in the ways that best met the needs of the American people. They were specifically not to be managed with the singular goal of maximizing output or economic profit (Fedkiw 1998). Similarly, the National Forest Management Act of 1976 “reinforces the mission laid out in other governing statutes—that the agency will both provide goods and services, such as timber and recreation, and protect forest resources, such as clean air and water, aesthetics, and fish and wildlife habitat” (GAO 1999a). However, multiple-use laws generally provide little or no guidance as to how forests should balance conflicting or competing uses (GAO 1999a).

Fedkiw (1998) describes managing for multiple uses as, “the fitting of multiple uses into ecosystems according to their capability to support the uses compatibly with existing uses...in ways that would sustain the uses, outputs, services, and benefits, and forest resources and ecosystems for future generations.” From this perspective, forest users and uses are seen as the primary drivers of management. These ideas will be crucial in this section, which aims to describe how the CNF is used, who uses it, and how trends in forest users and uses compare to historical and national trends.

Uses and users of the national forests can be generally defined as being either extractive or non-extractive. Extractive uses include livestock grazing, timber cutting, and mining. While not strictly extractive, the use of public lands for infrastructure (such as power lines and communication sites) is also included in this group. Recreation is the most common non-extractive use although the national forests are also commonly used for research and tribal activities. Hunting, fishing, and gathering, though

arguably extractive, are included here because they are considered in recreation data. Notably, forest use can also be legal or illegal.

6.2 Extractive users and uses

Nationally, livestock grazing, timber cutting, and mining are the most common extractive uses on national forest land. Although extractive uses have historically played a major role in public-lands management, most recent evidence seems to suggest that they are being slowly succeeded in policy and management by an emphasis on non-extractive uses (Davis 2001). Also, environmental citizen groups and recreational users are increasingly challenging extractive uses.

In fiscal year 2002, 7,750 operators were permitted to graze livestock on a total of about 95 million acres of available FS-administered land (Vincent 2004).¹ As Davis (2001) notes, the number of permits issued for livestock grazing on public lands has decreased slightly over recent years. In 2004, the CNF issued 147 grazing permits totaling 185,154 authorized animal unit months (AUMs). The number of permits has decreased since the mid-1990s with permitted AUMs reduced from over 300,000 at that time (Ruyle, pers. comm.). Over 35,000 animals currently graze on nearly twenty Coronado allotments (USFS 2005p). One AUM is defined as the amount of forage required by an animal unit (the equivalent of one 1,000 pound cow and her suckling calf) for a one-month period. Thus, the total number of AUMs is equal to the number of animal units multiplied by the number of months they are on the range.

The FS sells timber for a variety of reasons, most commonly to support local mills and communities that were, in some cases, built around a specific forest's timber supply and to modify forest structure or composition to meet a variety of management goals (Gorte 2004). Timber sales on national forest land have been steadily decreasing since the late 1980s when total production reached 11 billion board feet annually (GAO 1999b). In contrast, just over 2 billion board feet were harvested during FY 2004 at a total value of approximately \$218 million. An additional \$3.17 million in special forest products, including Christmas trees, fuel wood, mushrooms and berries, and the like, were harvested that year (USFS 2005g). In 1997, the Forest Service timber sales program reported a loss of \$88.6 million (GAO 2001a). Data on timber permits were not available for the CNF.

Mining in the national forests is directed by the General Mining Law of 1872, which allows individuals and corporations free access to prospecting on FS lands. Upon discovery of a mineral resource, an individual or corporation can then stake a claim, which allows full access to mineral development and can in turn be patented to claim full title to the deposit. Small fees are generally required to stake, maintain, and patent a claim (Humphries and Vincent 2004). Nationally, mineral and energy production, from gravel to gold to carbon dioxide, totaled about \$2 billion in FY 2003 (USFS 2005i). In 2002, Region 3 issued \$557,042 in sale permits and \$1,773,756 in free use permits for mineral extraction (Jevons, pers. comm.).

Compared to other Arizona national forests, the Coronado's mineral program is all but non-existent. In 2002, the forest reported a mere \$225 in sale permits for sixteen tons of sand and gravel and landscape rock (Ruyle, pers. comm.). The forest is currently proposing the withdrawal of several areas from mineral entry in order to, "protect and preserve their natural resource values and integrity" (USFS 2001p). Included in this withdrawal are forty-three caves, three historic sites, six research areas, and two historic and/or recreation sites at various locations within the CNF.

Forests also commonly allow communities and other entities to use public lands for infrastructure, including power lines, rights of way, telecommunications, and the like.

¹ Data given are the most recent available.

6.3 Non-extractive uses and users

Non-extractive users, particularly recreation users, play a major role in forest use and planning. The national forests are mandated to provide outdoor recreation opportunities in natural settings, to maintain and enhance open spaces and public accessibility, and to maintain and enhance “cultural, wilderness, visual, and natural resource values” through a variety of management tasks and activities (FSH 2302). However, unmanaged recreation has also been identified by the Forest Service as one of four “key threats” to the nation’s forests and grasslands. As participation in outdoor recreation increases, the FS predicts that recreation pressure on undeveloped areas in most of the Southwest and Rocky Mountain regions will be heavy. Much of this pressure can be traced back to population trends throughout the West. The use of off-highway vehicles (OHVs, discussed below) is seen as a major component of unmanaged use (USFS 2005j).

Recreation use has increased steadily throughout the history of the national forests. Over the past few decades, the growth in recreation has been truly extraordinary; for example, participation in camping has increased from about 13 million people in 1960 to 19 million people in 1965 to almost 58 million people in 1994-95 (Cordell et al. 2004). The 2004 Roper Report estimated that nine in ten Americans had participated in some sort of outdoor recreation during the previous twelve months (RoperASW 2004). However, the same report showed a decline in recreation participation beginning in 2001. It attributes this trend in part to travel concerns following September 11, 2001 but also to the expansion of indoor recreation opportunities through internet and television (RoperASW 2004). Cordell and others (2004) also note slight decreases in several categories of outdoor recreation following September 11th. Nationally, there were 209 million national forest visits in 2001. The forests of the Southwest (Region 3) received 19.5 million visits² (USFS 2001e).

Arizona in particular (but also the West and the nation in general) has experienced significant demographic changes in recent years, and these demographic trends have likewise influenced recreation trends. In Arizona, where more than 42% of the land base is managed by federal agencies for public use, the population has increased about tenfold since 1940 to more than 5 million people in 2000. The state had the second largest growth rate in the nation in the 1990s (Arizona State Parks 2003). Perhaps even more importantly, the proportion of Arizonans living in urban areas has increased dramatically, so that more than 88% of Arizona residents lived in urban settings by the year 2000 (Arizona State Parks 2003). In phone surveys conducted by the Arizona State Parks in 1994 and 1998, nearly 50% of Arizonans said that they had visited an Arizona national forest within the previous twelve months (Arizona State Parks 2003). Access to public lands is considered a major contributor to quality of life by many Arizonans, and parks and forests are experiencing very high recreational use even while urban expansion is decreasing the amount of available open space. As a result, this trend of increasing pressure on recreational resources can be expected to continue well into the future.

According to National Visitor Use Monitoring (NVUM) data, the 1,780,000 acres of Coronado National Forest received over 2 million visits during FY 2001. A majority of visitors to the CNF are male (65.1%). Visitors are predominately white (89.6%); Spanish, Hispanic, or Latino visitors make up approximately 7.9% of total visits while American Indian/Alaska Native and Asian users comprise only about 0.1% and 1.3% of visitors respectively. About 10% of users are under the age of 16 while relatively few visitors are between 16 and 30 or over 70-years old. An estimated 71.6% of visitors are between the ages of 31 and 70. Nearly 3% of visitors were from a foreign country. The most frequently reported zip codes suggest that the vast majority of CNF visitors come from the Tucson metro area, including nearby communities such as Green Valley and Oro Valley (Kocis et al. 2002b).

² However, for the latter figure, there is a 41.2% margin of error at the 80% confidence level.

Recreation Planning

The Recreation Opportunity Spectrum (ROS) system provides a framework for understanding recreation users, their needs and wishes, and the abilities of forests to accommodate these needs and wishes (USFS 1982). As understood through an ROS lens, a recreation opportunity consists of three elements: the activities, the setting, and the experience. All land and water resources are classified in one of six categories based on physical, social, and managerial criteria (Table 29).

Table 29. Description of ROS Classifications

Category	Description
Primitive	Setting is unmodified and remote and of a fairly large size. Users are generally isolated from one another, and typical activities include hiking and walking, viewing scenery, horseback riding, tent camping, and hunting.
Semi-Primitive Non-Motorized	The environment is predominately natural and of moderate to large size. Users' opportunities to experience solitude are less than in primitive areas, but user density remains low. Motorized activities are not permitted.
Semi-Primitive Motorized	Setting is similar to semi-primitive non-motorized, but off-road motor vehicles are permitted.
Roaded Natural	Setting is predominately natural but with a moderate level of human impact. There is a probability of contact with other users. Roads are present, and there may be substantial motorized use, including automobiles, buses, trams, and boats.
Rural	Setting is substantially modified. Facilities and management practices allow multiple uses and a large number of users and may be designed to facilitate specific activities. There is convenient access, and user density is moderate to high.
Urban	Levels of modification and user convenience are high and characteristic of urbanized areas. Opportunities to interact with other individuals and groups are emphasized.

Source: USFS 1982

Another important element of recreational setting is scenic integrity, or the visual quality of the landscape. The Scenery Management System guides forests in planning management activities that harmonize with existing natural landscapes (USFS 2001e).

Nationally, the activities that recreation users prefer can also provide a guide for land management planning. The National Survey on Recreation and the Environment (NSRE), which tracks national outdoor recreation trends and lists the ten most popular recreation activities, is summarized in Table 30 below for 2000-2001:

Table 20. Ten Most Popular Recreation Activities, NSRE 2000-2001

Activity	Percent of Population Participating
1. Walking for pleasure	83.0%
2. Family gatherings	73.5%
3. Visiting nature centers	57.1%
4. Picnicking	54.5%
5. Sightseeing	51.8%
6. Attending outdoor sports events	49.9%
7. Viewing historic sites	46.2%
8. Viewing/photographing wildlife	44.7%
9. Swimming (lakes, streams)	41.8%
10. Swimming (outdoor pools)	41.0%

Source: Cordell et al. 2004

At the national level, walking is currently the most popular outdoor activity (Table 30). 83% of the adult population participates annually. Of the nearly 177 million people estimated to have walked outdoors for pleasure within the last year, an estimated 71 million did so in the form of a day hike or a visit to a wilderness or primitive area (Cordell et al. 2004). The most popular activities, such as picnicking, sightseeing, and swimming, tend to be available in a variety of settings and readily accessible to families and groups. Less popular activities, such as specialized hunting, rock climbing, and sailing, tend to require specialized equipment, specific skills and knowledge, and greater physical stamina (Cordell et al. 2004). Even activities that are only moderately popular, such as mountain biking, driving off-road, canoeing, or sledding, attract many millions of users annually (45.6 million, 37.2 million, 20.7 million, and 31.2 million respectively). The three least popular activities, snowshoeing, orienteering, and migratory bird hunting, claim a combined total of approximately 13.1 million participants annually (Cordell et al. 2004). NSRE data for several general kinds of outdoor activities are summarized in Table 31 below:

Table 31. Participation in General Outdoor Activities, NSRE 2000-2001

Activity	Percent of Population Participating
Viewing/learning/gathering activities ³	88.4%
Developed site activities	94.9%
Trail activities	40.4%
Swimming/surfing/beach activities	62.8%
Motorized activities	62.0%
Hunting and fishing	38.1%
Snow activities	19.3%
Risk activities	35.2%
Other nonmotorized activities	22.8%

Source: Cordell et al. 2004

³ Viewing/learning/gathering activities are defined as, "visits to... recreation sites, wildland, or open space sites... to watch study, identify, photograph, sample, observe, and learn about natural or cultural history, or to gather natural products" (121).

Locally, the CNF includes facilities for a variety of recreational activities, including camping and hiking, hunting and fishing, wildlife viewing, boating, skiing, rock climbing, and caving. The forest contains several lakes that are stocked by the Arizona Game and Fish Department, designated mountain bike trails, and a privately operated ski valley (USFS 2005p). One popular site for users from the Tucson area is the Sabino Canyon Recreation Area. Located adjacent to Tucson, this area is relatively developed, includes paved roads, a shuttle service, picnic areas, and interpretive activities and currently receives more than one million visitors annually. In 2001, the area was added to the Catalina Mountains Fee Demonstration Program.

The five most popular activities for visitors to Coronado were viewing natural features (63.2% participation), hiking or walking (50.9%), general relaxing (36.8%), viewing wildlife (36.4%), and driving for pleasure (24.3%). Visiting nature centers, nature trails, and other visitor information services, as well as camping and picnicking at developed sites, were also very popular (Kocis et al. 2002b).

6.4 Special users and uses

A number of special user groups merit attention from Arizona's national forests. They are unique in that they do not fit into the profile of the majority users described above. Some user groups need special accommodation, and this accommodation can at times become politically charged.

Tribes

Federally recognized American Indian tribes occupy about 53.5 million acres (7%) of land in the western states. These tribes are legally considered to be sovereign nations, so the relationship between the FS and tribes is a government-to-government one (Toupal 2003). Tribes that enter into contracts with the federal government do so just as state governments or sovereign nations do (NFF and USFS 2005). However, the federal government also holds a special responsibility to consult with tribes over management issues that may affect them. This process is governed by a variety of federal regulations and policies, including the Forest Service Handbook (FSH 1509.13), the National Environmental Policy Act, the National Indian Forest Resources Management Act, the Tribal Forest Protection Act, and the Archeological Resources Protection Act as well as several presidential executive orders.

Tribes' use of FS land includes free, non-permitted activities such as gathering boughs and basket materials as well as the use of products such as sawtimber, for which fees are charged (Jevons, pers. comm.). In 2003, the National Tribal Relations Task Force recommended a legislative proposal that would authorize the USFS to allow federally recognized tribes to use forest products for traditional cultural purposes free of charge. In addition, many national forests include traditional cultural places, whose locations are known only to the tribes. Because the tribes cannot divulge the locations, they cannot apply for permits (Jevons, pers. comm.).

OHV Users

On public lands throughout the country, the use of OHVs has increased in popularity and is now a major concern to many forest managers. Between 1982 and 2000, off-road vehicle users increased by more than 109% nationally (Cordell et al. 2004). In 1995, a GAO study found OHV use on federal lands to be generally undermanaged. The study suggested that the FS devoted limited funding and staffing to managing OHV use and that forests relied heavily on state funding (GAO 1995). According to surveys conducted by the Arizona State Parks, most Arizonans consider the provision of OHV recreation opportunities to be a lower priority than other services, such as the preservation of cultural resources and

natural areas; however, more Arizonans considered management for OHVs to be important in a 1998 survey than in an earlier survey (Arizona State Parks 2003).

In 2004, the FS proposed a new rule to help manage OHV recreation in the national forests. Under the proposed rule, forests would establish a system of roads, trails, and areas designated for motor vehicle use and would prohibit motor vehicle use that is off the designated system or inconsistent with the designations. This system would replace the previous assumption that all areas are open to OHV use unless specifically posted otherwise (USFS 2004j). The Coronado currently works with the Arizona State Parks to educate the public on OHV issues (USFS 2005p). The 1986 forest plan emphasized the need on the part of the FS to continue providing opportunities for OHV recreation while regulating use to protect other forest resources and uses (USFS 1986).

Wildlife Users

The National Survey of Hunting, Fishing, and Wildlife-Associated Recreation collects longitudinal data on anglers, hunters, and wildlife watchers in the United States (USFWS 2001). The 2001 survey found that 82 million U.S. residents aged 16 and older participated in some wildlife-associated recreation during that year: 34.1 million fished, 13.0 million hunted, and 66.1 million engaged in some sort of wildlife-watching activity (including photographing, observing, or feeding fish and other wildlife). Their spending totaled an estimated \$108 billion, or 1.1% of the U.S. GDP. That year's 38.7 million hunters and anglers accounted for approximately \$70 billion of that amount (USFWS 2001). Generally, the rate of growth in fishing participation has been greater than U.S. population growth since the survey began in 1955 whereas the growth in hunting participation has failed to keep up with population growth during the same period. There has also been an overall decrease in wildlife-watching activities since 1980 (USFWS 2001). However, birding (viewing or photographing birds) has been the fastest growing recreational activity since the early 1980s, adding more than 50 million participants and growing 231% in just under twenty years (Cordell et al. 2004).

In the CNF, wildlife viewing is a more common activity than either fishing or hunting. National Visitor Use Monitoring (NVUM) data from 2002 show that an estimated 36.4% of the visitors interviewed participated in some sort of wildlife-viewing activity; however, only about 3.7% described it as their primary activity.⁴ Approximately 4.3% of interviewed visitors hunted and approximately 0.8% fished (opportunities for water-based recreation are extremely limited in the Coronado and throughout southern Arizona) (Kocis et al. 2002b).

Wilderness Users

With the Wilderness Act of 1964, Congress laid the foundation for a National Wilderness Preservation System comprised of federal lands "where the earth and its community of life are untrammeled by man, where man himself is a visitor and does not remain" (16 USC 1131 et. seq.). Wilderness areas are designated by Congress and are generally protected from commercial enterprises, road construction, mechanical vehicles, and structural development. The Forest Service Handbook directs managers to minimize the impact of human use while protecting the wilderness character and public values of wilderness land (FSH 2320.2).

As a result of these management requirements, wilderness areas are open to some uses (e.g., primitive camping, backpacking, horseback riding, hunting, and fishing) and closed to others (many extractive uses, bicycling, and off-highway vehicles), making the decision to designate a roadless area as wilderness a

⁴ The NVUM definition of wildlife viewing appears to be somewhat broader than that used by the national survey discussed above.

potentially controversial one. However, many forest users value the solitude and isolation, closeness to nature, and self-reliance experienced in wilderness areas. Activities available in wilderness or primitive areas attract millions of visitors nationally. For example, an estimated 34.1 million Americans participated in primitive camping in 2000-2001 while participation in backpacking and mountain climbing drew an estimated 22.8 million and 12.9 million visitors respectively (Cordell et al. 2004).

The Coronado NF includes eight designated wilderness areas and 423,000 acres of inventoried roadless areas (USFS 2001b). Users of designated wilderness areas fit a profile similar to other forest users: the majority are male (61.4%), predominantly white (94.9%) or Hispanic/Latino (3.6%), and generally live in the Tucson area. NVUM data suggest that nearly 437,000 wilderness visits were made during fiscal year 2001 although the error rate on these data is high (+/- 35.6%) because of the relatively low number of visitors interviewed (Kocis et al. 2002b).

Illegal Users

The FS uses a computerized database, LEIMARS (the Law Enforcement and Investigations Management Attainment Reporting System), to collect information on crimes and rule violations that occur on lands in the national forest system (USDA and OIG 2004). In the CNF, undocumented immigrants have become very common illegal “users.” Starting in 1994, when enforcement was stepped up and a wall constructed along the border between San Diego and the San Ysidro Mountains (then the most popular crossing place), attempts to control illegal immigration have increasingly motivated undocumented immigrants to attempt crossings through remote desert and mountain areas. In FY 2003, 40% of the 900,000 arrests of illegal border crossers were made in the Tucson sector of Arizona (Marek 2004). About sixty miles of this 260-mile stretch of border are part of the Nogales and Sierra Vista ranger districts of the Coronado. Further east, the Douglas ranger district, though slightly removed from the border, also experiences heavy immigrant traffic. The social, economic, and ecological impacts of illegal immigration through federal lands are poorly documented, but coping with these users is, and will likely remain, a high priority for CNF personnel.

6.5 Key issues for forest planning and management

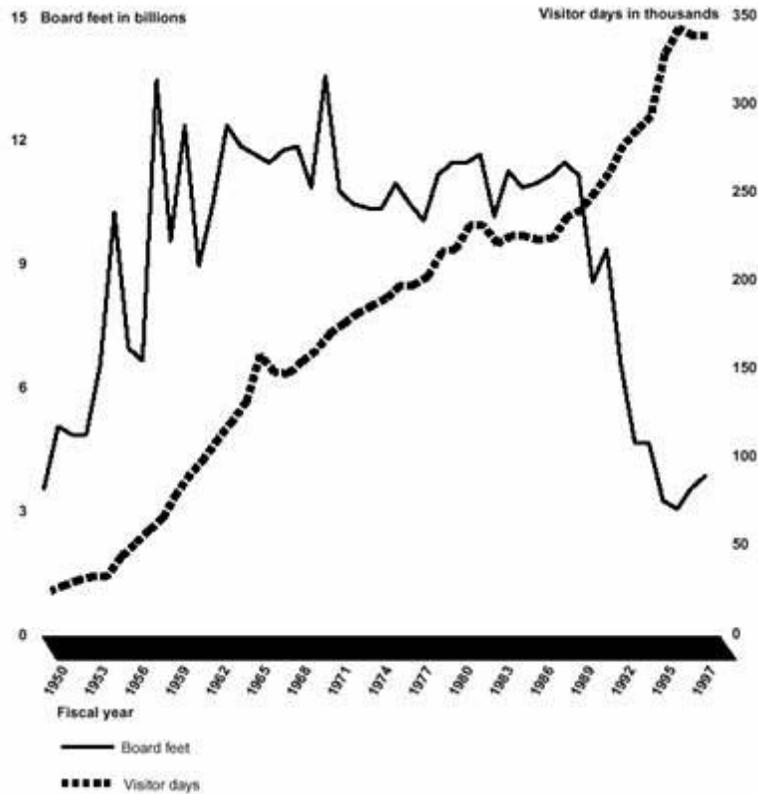
Extractive uses and non-extractive uses of national forests are often seen as competing with one another, and balancing the uses of these different groups can be challenging. Livestock grazing is no exception. Overgrazing, especially on arid lands, can seriously damage ecosystems. Soil erosion, watershed destruction, and the loss of native plants are commonly cited as potential impacts. In the late 1980s, reports issued by the USDA and the Department of Interior on the condition of grazing allotments showed that more than half of the public rangelands were in either poor or fair condition, and a GAO survey of range managers’ professional opinions showed that the BLM- and FS-authorized grazing levels were higher than the land could support on 19% of allotments (GAO 1988). Disagreements among citizen groups over the appropriate fee system for public-lands grazing, the refusal of some operators to pay grazing fees, the retirement of allotments, and calls for government buy-outs of permits are all key issues for both ranchers and other user groups (Vincent 2004).

Nationally, timber harvesting in the national forests has declined since the late 1980s (GAO 1999b). Meanwhile, a new emphasis is being placed on the utilization of small-diameter fuels, which are increasingly being removed from western forests to manage fire frequency and behavior. As public concern over wildland fire grows, the FS and other federal agencies have emphasized the development of a market for these fuels to help mitigate the costs of their removal. For example, the 2004 Healthy Forests Restoration Act provides direct subsidies for the development of industries that use previously unmarketable biomass from mechanical thinning projects (16 USC 6531).

The policies that govern mineral extraction in the national forests have also come under increasing scrutiny over the past two decades. Public concern over the Mining Law of 1872, under which about 3.2

million acres of public land had been sold by the late 1980s, was sparked in 1986 when the federal government, under the law's patent provision, sold 17,000 acres for \$42,500 to patent holders who then almost immediately resold the land to oil companies for \$37 million (GAO 1989). A GAO report called for substantial changes to the law. Many of these controversial aspects of mining law remain unchanged today, and calls for reform continue (Humphries and Vincent 2004).

Meanwhile, as the western United States becomes increasingly urbanized, national forests are experiencing increasing demand for recreational uses and, in many cases, decreasing support and demand for extractive uses. While these trends generally have not caused a clear rise in environmental or pro-conservation politics and policy, the forces of supply and demand are changing the face of the national forests (Davis 2001). The following figure, provided by the USFS to the General Accounting Office, clearly illustrates these changes (GAO 1999a).



Source: General Accounting Office (GAO) 1999a

Figure 19. Visitor Recreation Days as Compared to Timber Extraction, 1950-1997

Several important management issues have arisen from demographic and use changes. As discussed above, recreation users represent a wide variety of uses, resulting in the need for distinct management priorities which may lead to conflict. NSRE surveys identify trends in characteristics of outdoor recreation trips, wildlife as a component of recreation trips, service and accessibility issues for persons with disabilities, and user attitudes and opinions concerning site attributes, funding, and management policy. These data show that nationally, large proportions of recreation users visit both more developed areas, such as formal campgrounds and restaurants, and less developed areas, such as primitive camping areas, trails away from roads, and wilderness areas. At the same time, significant proportions of users prioritize such potentially contradictory values as accessibility and wilderness preservation or service provision and low use fees (Cordell, Teasley, and Super 1997). Striking an acceptable balance among these values will continue to be a major challenge for forest managers.

Under conditions of increasing recreation demand, simply maintaining services and facilities has become a challenge for many forests. Between 1989 and 1991, the GAO issued several reports on the condition of the Forest Service's recreational sites and areas which found that funding levels were hundreds of millions short of what would be needed to complete backlogged maintenance and reconstruction for trails, developed recreation sites, and wilderness areas. Funding shortages and a lack of consistent, uniform monitoring data were cited as the primary roadblocks to recreation management (GAO 1991). However, the practice of increasing recreation fees to fill funding gaps has been contentious. In 1996, Congress authorized a recreational fee demonstration program, allowing land management agencies to test new or increased fees to help address unmet needs for visitor services, repairs and maintenance, and resource management. Evaluations of fee demo programs have cited concerns about equity, administration, interagency coordination, and the use of fee monies, but concluded that increased fees have not negatively impacted overall visitor numbers (GAO 1998, 2001b). Conversely, the fees charged for recreational special use permits, especially for large-scale commercial operations such as ski lodges, resorts, and marinas, have been criticized for remaining well below fair market value (GAO 1996). For additional discussion regarding fees, see section 9.2.

Changes over time in forest uses and user groups can and should help guide forest managers in land use planning. The need to balance the priorities and values of a wide variety of extractive and non-extractive users aptly demonstrates both the challenges and the benefits of multiple use doctrine.

7. Designated Areas and Special Places

This section describes those places in and around the Coronado National Forest (CNF) which have been designated for public uses such as camping and picnicking, biking, hiking, OHV use, rock climbing, fishing, scenic drives and vistas, and so forth or recognized as important to the public as so-called undesignated special places. An attempt has been made in this section to identify all designated areas and special places on the CNF. However, the nature of these resources makes this task difficult. As will be discussed in later subsections, some of these areas are held in secrecy by the parties who regard them as special (indeed that is why they are “special”) and, thus, there is reluctance by these people to disclose these places and their locations.

A review of available information on designated areas and special places suggests that the CNF contains considerable recreational, interpretive, and cultural resources. Forest GIS Staff provided specific names and locations of 466 designated areas within the CNF, including dispersed sites, campgrounds, picnic areas, and scenic areas. Additionally, the mountain ranges, canyons, and caves that characterize the Sky Islands in the Coronado are home to numerous special places for Native Americans, descendents of settlers, recreational users, and wildlife enthusiasts in southern Arizona.

7.1 Historical context and methods of designation

Although the concept of special places has existed in social science literature for decades, the idea of incorporating it into forest management plans is relatively new. Traditionally, forest professionals focused on science-based management policies rather than on the subjective, difficult-to-quantify issues of public values (McCool 2001, Mitchell et al. 1993).

Special places can be described as spaces that have been given meaning by the humans who have experienced them in a way that inspired an emotional response (Cheng, Kruger, and Daniels 2003). Although often unrecognized in any official way, special places are significant to visitors of our national forests. The FS also recognizes special areas for their “unique or special characteristics” (USFS 2005c) and for the contributions the areas make to our public lands. These areas are noted for generally agreed-upon attributes such as scenic qualities, habitat significance, and other virtues and are delineated on FS maps. But, as will be shown, the distinction between those designated areas and special places—the subject of this section—involves more than semantics and, thus, is worthy of discussion.

The key difference between the two terms is that *areas* are considered special for their own attributes whereas the value of *places* derives from the people who experience them. A pristine riparian area, for example, is not necessarily a special place until a person or group forms an emotional attachment to it. More detailed explanations emphasize place as the intersection and integration of “ecological, economic, and spiritual values” (Williams and Patterson 1996) or of “biophysical attributes and processes; social and behavioral processes; and social and cultural meanings” (Cheng, Kruger, and Daniels 2003). All of these definitions make clear that special places are complex, subjective, and often exceedingly difficult to define in a concise manner.

The methods used to identify these special places were as follows. For the first category (i.e., designated areas) the Forest GIS Coordinator was asked to query the GIS data bases in order to identify the designated areas. Furthermore, many of these areas are also identified on the Coronado National Forest website found at <http://www.fs.fed.us/r3/coronado/index.shtml>.

Maps, geographic coordinates, and brochures for these designated places can be found at <http://www.fs.fed.us/r3/coronado/forest/maps/maps.shtml>.

The method used to identify the more elusive second category (i.e., undesignated special places) was to contact the forest archeologist, landscape architect, and recreation officer. These individuals were given

the opportunity to name and describe, to the best of their ability, the key special places in the forest. Also, they were asked to identify the key user publics and, finally, to specify the main management issues associated with these special places. Native American tribes are a particularly important constituency in the designation and protection of special places. The involvement of area tribes with the CNF is discussed in greater detail in the following section, Community Relationships.

7.2 Designated areas

Table 32 provides information on each of the designated areas within the Coronado National Forest.

Table 32. Designated Areas on the Coronado National Forest

Designated Area Type	Name	District	Mountain Range
Boating	Parker Canyon Lake	Sierra Vista	Huachuca
Boating	Riggs Flat	Safford	Pinaleño
Botanical Area	Wild Chili Botanical Area	Nogales	Tumacacori
Cave	Cave of the Bells	Nogales	Santa Rita
Cave	Crystal	Douglas	Chiricahua
Cave	Happy Jack	Sierra Vista	Huachuca
Cave	Onyx	Nogales	Santa Rita
Cave	Peppersauce	Sierra Vista	Huachuca
Dispersed Site	Arcadia Overflow	Safford	Pinaleño
Dispersed Site	Bigelow/Bear Wallow	Santa Catalina	Santa Catalina
Dispersed Site	Blue-Alamo Canyon	Nogales	Tumacacori
Dispersed Site	Bull Spring	Santa Catalina	Santa Catalina
Dispersed Site	Bullock Corrals	Santa Catalina	Santa Catalina
Dispersed Site	Camp Bonita	Santa Catalina	Santa Catalina
Dispersed Site	Cargodera Road	Santa Catalina	Santa Catalina
Dispersed Site	Charouleau Gap	Santa Catalina	Santa Catalina
Dispersed Site	Chesley Flat	Safford	Pinaleño
Dispersed Site	Chimney Rock	Santa Catalina	Santa Catalina
Dispersed Site	Chiva Falls	Santa Catalina	Santa Catalina
Dispersed Site	Cinninaham	Safford	Pinaleño
Dispersed Site	Cluff Dairy	Safford	Pinaleño
Dispersed Site	Control Road (Lower)	Santa Catalina	Santa Catalina
Dispersed Site	Control Road (Upper)	Santa Catalina	Santa Catalina
Dispersed Site	Cottonwood	Santa Catalina	Santa Catalina
Dispersed Site	CP Flat	Safford	Pinaleño
Dispersed Site	Cruz Canyon	Nogales	Tumacacori
Dispersed Site	Gardner Canyon	Nogales	Santa Rita
Dispersed Site	Grand View Peak	Safford	Pinaleño
Dispersed Site	Grant Creek	Safford	Pinaleño
Dispersed Site	Happy Valley	Santa Catalina	Santa Catalina
Dispersed Site	Hell's Hole	Safford	Pinaleño
Dispersed Site	Incinerator Ridge	Santa Catalina	Santa Catalina
Dispersed Site	Kentucky Camp	Nogales	Santa Rita
Dispersed Site	Large Rock	Safford	Pinaleño
Dispersed Site	Lizard Rock	Santa Catalina	Santa Catalina
Dispersed Site	Loop	Safford	Pinaleño

Table 32 (cont.). Designated Areas on the Coronado National Forest

Designated Area Type	Name	District	Mountain Range
Dispersed Site	Lower Walker Canyon	Nogales	Tumacacori
Dispersed Site	Moonshine	Safford	Pinaleño
Dispersed Site	Nugget Canyon	Santa Catalina	Santa Catalina
Dispersed Site	Observatory	Santa Catalina	Santa Catalina
Dispersed Site	Old Prison Camo	Safford	Pinaleño
Dispersed Site	Peppersauce West	Santa Catalina	Santa Catalina
Dispersed Site	Peter's Flat	Safford	Pinaleño
Dispersed Site	Powers Cabin	Safford	Galiuro
Dispersed Site	Race Track	Santa Catalina	Santa Catalina
Dispersed Site	Rice Peak	Santa Catalina	Santa Catalina
Dispersed Site	Riffs Flat	Safford	Pinaleño
Dispersed Site	Soldier Camo	Safford	Pinaleño
Dispersed Site	Sykes Knob	Santa Catalina	Santa Catalina
Dispersed Site	Tanque Verde Falls	Santa Catalina	Santa Catalina
Dispersed Site	The Lake	Santa Catalina	Santa Catalina
Dispersed Site	Upper Hospital Flat	Safford	Pinaleño
Dispersed Site	Upper Walker Canyon	Nogales	Tumacacori
Dispersed Site	Wildcat Shooting Sight	Santa Catalina	Santa Catalina
Dispersed Site	Fish Canyon	Nogales	Santa Rita
Dispersed Site	Nogales Sycamore Canyon	Nogales	Tumacacori
Dispersed Site	Nuttall Ridge	Safford	Pinaleño
Dispersed Site	Pena Blanco Canyon	Nogales	Tumacacori
Dispersed Site	Snow Flat	Safford	Pinaleño
Dispersed Site	Sycamore Backcountry Area	Sierra Vista	Huachuca
Dispersed Site	Twilight	Safford	Pinaleño
Family Campground	Arcadia	Safford	Pinaleño
Family Campground	Bathtub	Douglas	Chiricahua
Family Campground	Bog Springs	Nogales	Santa Rita
Family Campground	Catalina State Park	Santa Catalina	Santa Catalina
Family Campground	Cochise Stronghold	Douglas	Dragoon
Family Campground	Cunningham	Safford	Pinaleño
Family Campground	Cypress Park	Douglas	Chiricahua
Family Campground	General Hitchcock	Santa Catalina	Santa Catalina
Family Campground	Geronimo	Douglas	Peloncillo
Family Campground	Gordon Hirabayashi	Santa Catalina	Santa Catalina
Family Campground	Herb Martyr	Douglas	Chiricahua
Family Campground	Hospital Flat	Safford	Pinaleño
Family Campground	Idlewilde	Douglas	Chiricahua
Family Campground	John Hands	Douglas	Chiricahua
Family Campground	Lakeview	Sierra Vista	Huachuca
Family Campground	Noon Creek	Safford	Pinaleño
Family Campground	Peppersauce	Santa Catalina	Santa Catalina
Family Campground	Pinery Canyon	Douglas	Chiricahua
Family Campground	Ramsey Vista	Sierra Vista	Huachuca
Family Campground	Reef Townsite Campground	Sierra Vista	Huachuca
Family Campground	Riggs Flat	Safford	Pinaleño
Family Campground	Rucker Lake	Douglas	Chiricahua

Table 32 (cont.). Designated Areas on the Coronado National Forest

Designated Area Type	Name	District	Mountain Range
Family Campground	Rucker Forest Camp	Douglas	Chiricahua
Family Campground	Rustler Park	Douglas	Chiricahua
Family Campground	Shannon	Safford	Pinaleño
Family Campground	Snow Flat	Safford	Pinaleño
Family Campground	Soldier Creek	Safford	Pinaleño
Family Campground	Stewart	Douglas	Chiricahua
Family Campground	Stockton Pass	Safford	Pinaleño
Family Campground	Sunny Flat	Douglas	Chiricahua
Family Campground	Sycamore	Douglas	Chiricahua
Family Campground	Treasure Park	Safford	Pinaleño
Family Campground	West Turkey Creek	Douglas	Chiricahua
Family Campground	White Rock	Nogales	Tumacacori
Family Campground	General Hitchcock	Santa Catalina	Santa Catalina
Family Campground	Molino Basin	Santa Catalina	Santa Catalina
Family Campground	Rose Canyon	Santa Catalina	Santa Catalina
Family Campground	Spencer Campground	Santa Catalina	Santa Catalina
Family Picnic	Alder	Santa Catalina	Santa Catalina
Family Picnic	Bear Canyon Overlook	Santa Catalina	Santa Catalina
Family Picnic	Box Elder	Santa Catalina	Santa Catalina
Family Picnic	Cactus	Santa Catalina	Santa Catalina
Family Picnic	Catalina State Park	Santa Catalina	Santa Catalina
Family Picnic	Chihuahua Pine	Santa Catalina	Santa Catalina
Family Picnic	Cypress	Santa Catalina	Santa Catalina
Family Picnic	Inspiration Rock	Santa Catalina	Santa Catalina
Family Picnic	Loma Linda	Santa Catalina	Santa Catalina
Family Picnic	Lower Sabino	Santa Catalina	Santa Catalina
Family Picnic	Lower Sabino East Dam	Santa Catalina	Santa Catalina
Family Picnic	Lower Sabino West Dam	Santa Catalina	Santa Catalina
Family Picnic	Lower Thumb Rock	Nogales	Tumacacori
Family Picnic	Madera Canyon	Nogales	Santa Rita
Family Picnic	Madera Trailhead	Nogales	Santa Rita
Family Picnic	Marshall Gulch	Santa Catalina	Santa Catalina
Family Picnic	Middle Bear Canyon	Santa Catalina	Santa Catalina
Family Picnic	Mt. Wrightson (Roundup)	Nogales	Santa Rita
Family Picnic	Noon Creek	Safford	Pinaleño
Family Picnic	Old Noon Creek	Safford	Pinaleño
Family Picnic	Red Rock	Nogales	Tumacacori
Family Picnic	Sabino Canyon Group	Santa Catalina	Santa Catalina
Family Picnic	Sabino Dam Overlook	Santa Catalina	Santa Catalina
Family Picnic	South Fork	Douglas	Chiricahua
Family Picnic	Sykes Knob	Santa Catalina	Santa Catalina
Family Picnic	Upper Sabino Canyon	Santa Catalina	Santa Catalina
Family Picnic	Upper Thumb Rock	Nogales	Tumacacori
Family Picnic	Wet Canyon	Safford	Pinaleño
Family Picnic	Whipple	Nogales	Santa Rita
Family Picnic	White House	Nogales	Santa Rita
Fire Lookouts Cabins Overnight	Kentucky Camp Rental Cabin	Nogales	Santa Rita
Fishing Site	Pena Blanca Lake	Nogales	Tumacacori

Table 32 (cont.). Designated Areas on the Coronado National Forest

Designated Area Type	Name	District	Mountain Range
Fishing Site	Riggs Flat	Safford	Pinaleño
Fishing Site	Rose Canyon Lake	Santa Catalina	Santa Catalina
Forest Service	Sollers Point Resident Housing	Santa Catalina	Santa Catalina
Forest Service	Palisades Visitor Center	Santa Catalina	Santa Catalina
Group Campground	Calabasas	Nogales	Tumacacori
Group Campground	Camp Rucker	Douglas	Chiricahua
Group Campground	Catalina State Park	Santa Catalina	Santa Catalina
Group Campground	Molino Basin	Santa Catalina	Santa Catalina
Group Campground	Peppersauce	Santa Catalina	Santa Catalina
Group Campground	Rock Bluff	Sierra Vista	Huachuca
Group Campground	Showers Point	Santa Catalina	Santa Catalina
Group Campground	Snow Flat	Safford	Pinaleño
Group Campground	Stockton Pass	Safford	Pinaleño
Group Campground	Treasure Park	Safford	Pinaleño
Group Campground	Twilight	Safford	Pinaleño
Group Campground	Upper Arcadia	Safford	Pinaleño
Group Campground	Upper Hospital Flat	Safford	Pinaleño
Group Campground	Whitetail Future	Santa Catalina	Santa Catalina
Group Picnic	Cactus	Santa Catalina	Santa Catalina
Group Picnic	Rose Canyon Group Site #1	Santa Catalina	Santa Catalina
Group Picnic	Rose Canyon Group Site #2	Santa Catalina	Santa Catalina
Horse Camp	Catalina State Park	Santa Catalina	Santa Catalina
Horse Camp	Clark Peak Corrals	Safford	Pinaleño
Horse Camp	Columbine Corrals	Safford	Pinaleño
Horse Camp	Deer Creek	Safford	Galiuro
Horse Camp	Gordon Hirabayashi	Santa Catalina	Santa Catalina
Horse Camp	Round the Mountain	Safford	Pinaleño
Hotel/Lodge/Resort Private Owner	Bellota Ranch	Santa Catalina	Santa Catalina
Hotel/Lodge/Resort Private Owner	Santa Rita Lodge	Nogales	Santa Rita
Information Site	Catalina State Park Entry Station	Santa Catalina	Santa Catalina
Information Site	Douglas District Office	Douglas	N/A
Information Site	Molino Fee Station	Santa Catalina	Santa Catalina
Information Site	Nogales District Office	Nogales	N/A
Information Site	Sabino Canyon Fee Station	Santa Catalina	Santa Catalina
Information Site	Safford District Office	Safford	N/A
Information Site	Sierra Vista District Office	Sierra Vista	N/A
Information Site	Supervisor's Office	Tucson	N/A
International Observatory	Mt. Graham International Observatory	Safford	Pinaleño
Interpretive Site	Sabino Canyon Nature Trail	Santa Catalina	Santa Catalina
Interpretive Site Major	Cave Creek Visitor Center	Douglas	Chiricahua
Interpretive Site Major	Columbine Visitor Center	Safford	Pinaleño
Interpretive Site Major	Palisades Visitor Center	Santa Catalina	Santa Catalina
Interpretive Site Major	Sabino Canyon Visitor Center	Santa Catalina	Santa Catalina
Interpretive Site Major	Smithsonian Visitor Center	Nogales	Santa Rita
Interpretive Site Minor	Camp Ruck Interpretive Trail	Douglas	Chiricahua
Interpretive Site Minor	Camp Rucker Historic Site	Douglas	Chiricahua
Interpretive Site Minor	Cave Creek Nature Trail	Douglas	Chiricahua
Interpretive Site Minor	Chesley Flat	Safford	Pinaleño

Table 32 (cont.). Designated Areas on the Coronado National Forest

Designated Area Type	Name	District	Mountain Range
Interpretive Site Minor	Cochise Stronghold Historical Marker	Douglas	Dragoon
Interpretive Site Minor	Cochise Stronghold Interp. Trail	Douglas	Dragoon
Interpretive Site Minor	Cochise Stronghold Nature Trail	Douglas	Santa Rita
Interpretive Site Minor	Columbine VIC Nature Trail	Safford	Pinaleño
Interpretive Site Minor	Council Rock Interpretive Trail	Douglas	Dragoon
Interpretive Site Minor	Dragoon Springs Stage Stop	Douglas	Dragoon
Interpretive Site Minor	Geronimo Pass Interpretive Site	Douglas	Peloncillo
Interpretive Site Minor	Gordon Hirabayashi	Santa Catalina	Santa Catalina
Interpretive Site Minor	Hospital Flat Trail	Safford	Pinaleño
Interpretive Site Minor	Kentucky Camp	Nogales	Santa Rita
Interpretive Site Minor	Lowell House	Santa Catalina	Santa Catalina
Interpretive Site Minor	Peter's Flat	Safford	Pinaleño
Interpretive Site Minor	Pinery Canyon Mill Site Cabin	Douglas	Chiricahua
Interpretive Site Minor	Proctor Parking	Nogales	Santa Rita
Interpretive Site Minor	Reef Townsite	Sierra Vista	Huachuca
Interpretive Site Minor	Reef Townsite Mining	Sierra Vista	Huachuca
Interpretive Site Minor	Romero Ruin Trial	Santa Catalina	Santa Catalina
Interpretive Site Minor	Rucker Baber Shop	Douglas	Chiricahua
Interpretive Site Minor	Rucker Information Site	Douglas	Chiricahua
Interpretive Site Minor	Sabino Canyon Bajada Nature Trail	Santa Catalina	Santa Catalina
Interpretive Site Minor	Santa Rita Water & Mining Co.	Nogales	Santa Rita
Interpretive Site Minor	Shannon	Safford	Pinaleño
Interpretive Site Minor	Slavin Interpretive Site	Douglas	Dragoon
Interpretive Site Minor	Treasure Park	Safford	Pinaleño
Interpretive Site Minor	Upper Hospital Flat	Safford	Pinaleño
Interpretive Site Minor	Upper Hospital Flat 1	Safford	Pinaleño
Interpretive Site Minor	Upper Hospital Flat 2	Safford	Pinaleño
Interpretive Site Minor	Whipple Nature Trail	Nogales	Santa Rita
Interpretive Site Minor	White House Ruins	Nogales	Santa Rita
Interpretive Site Minor	Sabino Canyon Interpretive Area	Santa Catalina	Santa Catalina
Mountain Bike Route	Elephant Head	Nogales	Santa Rita
Municipal	Summerhaven Town	Santa Catalina	Santa Catalina
Observation Site	Aspen Vista	Santa Catalina	Santa Catalina
Observation Site	Babad Do'ag	Santa Catalina	Santa Catalina
Observation Site	Cathedral Vista Point	Douglas	Chiricahua
Observation Site	Geology Vista	Santa Catalina	Santa Catalina
Observation Site	Hageas Point	Safford	Pinaleño
Observation Site	Molino Canyon Vista	Santa Catalina	Santa Catalina
Observation Site	San Pedro Vista	Santa Catalina	Santa Catalina
Observation Site	Seven Cataracts Vista	Santa Catalina	Santa Catalina
Observation Site	Thimble Peak Vista	Santa Catalina	Santa Catalina
Observation Site	Windy Point Vista	Santa Catalina	Santa Catalina
Organization Site-F.S. Owned	Girl Scout Camp	Santa Catalina	Santa Catalina
Organization Site-F.S. Owned	Kent Springs Center	Nogales	Santa Rita
Organization Site-Privately Owned	Amphi Camp	Santa Catalina	Santa Catalina
Organization Site-Privately Owned	Arizona Boys Ranch	Santa Catalina	Santa Catalina
Organization Site-Privately Owned	Baptist Camp	Santa Catalina	Santa Catalina
Organization Site-Privately Owned	Boy Scout Camp	Santa Catalina	Santa Catalina

Table 32 (cont.). Designated Areas on the Coronado National Forest

Designated Area Type	Name	District	Mountain Range
Organization Site-Privately Owned	LDS Camp	Santa Catalina	Santa Catalina
Organization Site-Privately Owned	Organization Camp	Safford	Pinaleño
Organization Site-Privately Owned	Pine Canyon United Methodist Camp	Douglas	Chiricahua
Organization Site-Privately Owned	Presbyterian Camp	Santa Catalina	Santa Catalina
Playground or Special Sport Site	Reddington Pass Backcountry Tour. Area	Santa Catalina	Santa Catalina
Playground or Special Sport Site	Rosemont Backcountry Touring Area	Nogales	Santa Rita
Playground Park Special Sport Site	Alambre Staging OHV	Santa Catalina	Santa Catalina
Playground Park Special Sport Site	Amphitheater	Nogales	Santa Rita
Playground Park Special Sport Site	Grant Hill Mountain Bike Loop	Safford	Pinaleño
Playground Park Special Sport Site	Pusch Ridge Archery Range	Santa Catalina	Santa Catalina
Playground Park Special Sport Site	Three Feathers	Santa Catalina	Santa Catalina
Possible Wild & Scenic River	Ash Creek	Safford	Pinaleño
Possible Wild & Scenic River	Canada Del Oro	Santa Catalina	Santa Catalina
Possible Wild & Scenic River	Grant Creek	Safford	Pinaleño
Possible Wild & Scenic River	Lower Cima Creek	Douglas	Chiricahua
Possible Wild & Scenic River	Post Creek	Safford	Pinaleño
Possible Wild & Scenic River	Redfield Canyon	Safford	Galiuro
Possible Wild & Scenic River	Romero Canyon	Santa Catalina	Santa Catalina
Possible Wild & Scenic River	Rucker Canyon	Douglas	Chiricahua
Possible Wild & Scenic River	Sabino Canyon	Santa Catalina	Santa Catalina
Possible Wild & Scenic River	South Fork Cave Creek	Douglas	Chiricahua
Recreation Concession Site	Parker Canyon Marina & Store	Sierra Vista	Huachuca
Recreation Residence	Bear Wallow Summerhomes	Santa Catalina	Santa Catalina
Recreation Residence	Carter Canyon Summerhomes	Santa Catalina	Santa Catalina
Recreation Residence	Cave Creek Summerhomes	Douglas	Chiricahua
Recreation Residence	Columbine Summerhomes	Safford	Pinaleño
Recreation Residence	Rustler Park Summerhomes	Douglas	Chiricahua
Recreation Residence	Soldier Camp Summerhomes	Santa Catalina	Santa Catalina
Recreation Residence	South Fork Summerhomes	Douglas	Chiricahua
Recreation Residence	Turkey Creek Summerhomes	Douglas	Chiricahua
Recreation Residence	Turkey Flat Summerhomes	Safford	Pinaleño
Recreation Residence	Loma Linda Summerhomes	Santa Catalina	Santa Catalina
Recreation Residence	Upper Sabino Summerhomes	Santa Catalina	Santa Catalina
Recreation Residence	Willow Canyon Summerhomes	Santa Catalina	Santa Catalina
Research Natural Area	Butterfly	Santa Catalina	Santa Catalina
Research Natural Area	Canelo	Sierra Vista	Huachuca
Research Natural Area	Elgin	Sierra Vista	Huachuca
Research Natural Area	Gooding	Nogales	Tumacacori
Research Natural Area	Goody	Safford	Pinaleño
Research Natural Area	Pole Bridge	Douglas	Chiricahua
Research Natural Area	Pole Bridge RNA Extension	Douglas	Chiricahua
Research Natural Area	Santa Catalina	Santa Catalina	Santa Catalina
Research Ranch	Elgin Research Ranch	Sierra Vista	Huachuca
Scenic/Sightseeing Route	Arizona Highway 83	Sierra Vista	Huachuca
Scenic/Sightseeing Route	Box Canyon Road (Forest Road 62)	Nogales	Santa Rita
Scenic/Sightseeing Route	Canelo Hills Loop	Sierra Vista	Huachuca
Scenic/Sightseeing Route	Carr Canyon (Forest Road 38)	Sierra Vista	Huachuca
Scenic/Sightseeing Route	Cave Creek/Portal/Paradise/Forest Road 42/4	Santa Catalina	Santa Catalina

Table 32 (cont.). Designated Areas on the Coronado National Forest

Designated Area Type	Name	District	Mountain Range
Scenic/Sightseeing Route	Charouleau Gap Road	Santa Catalina	Santa Catalina
Scenic/Sightseeing Route	Control Road	Santa Catalina	Santa Catalina
Scenic/Sightseeing Route	Happy Valley	Santa Catalina	Santa Catalina
Scenic/Sightseeing Route	Harshaw (Forest Road 49)	Sierra Vista	Huachuca
Scenic/Sightseeing Route	Madera Canyon	Nogales	Santa Rita
Scenic/Sightseeing Route	Middlemarch (Forest Road 345)	Douglas	Dragoon
Scenic/Sightseeing Route	Mt. Hopkins Road	Nogales	Santa Rita
Scenic/Sightseeing Route	Pinery Canyon (Forest Road 42)	Douglas	Chiricahua
Scenic/Sightseeing Route	Proctor Interpretive Trail	Nogales	Santa Rita
Scenic/Sightseeing Route	Redington Pass Road	Santa Catalina	Santa Catalina
Scenic/Sightseeing Route	Ruby Road (AZ 289, Forest Road 39)	Nogales	Tumacacori
Scenic/Sightseeing Route	Rucker/Texas Canyon (Forest Road 74)	Douglas	Chiricahua
Scenic/Sightseeing Route	Sabino Canyon Road	Santa Catalina	Santa Catalina
Scenic/Sightseeing Route	Sky Island Scenic Byway	Santa Catalina	Santa Catalina
Scenic/Sightseeing Route	State Highway 83	Nogales	Santa Rita
Scenic/Sightseeing Route	Stockton Pass	Safford	Pinaleño
Scenic/Sightseeing Route	Swift Trail	Safford	Pinaleño
Scenic/Sightseeing Route	Turkey Creek (Forest Road 41)	Douglas	Chiricahua
Ski Area	Mt. Lemmon Ski Valley	Santa Catalina	Santa Catalina
Trailhead	Agua Caliente Hill	Santa Catalina	Santa Catalina
Trailhead	Amphitheater	Nogales	Santa Rita
Trailhead	Aqua Caliente	Nogales	Santa Rita
Trailhead	Arizona Trail at Parker Lake	Sierra Vista	Huachuca
Trailhead	Atascosa	Nogales	Tumacacori
Trailhead	Babad Do'ag	Santa Catalina	Santa Catalina
Trailhead	Bear Canyon	Safford	Pinaleño
Trailhead	Bear Canyon-east end of VC Parking	Santa Catalina	Santa Catalina
Trailhead	Bellota/Italian Spring	Santa Catalina	Santa Catalina
Trailhead	Bigelow (Butterfly)	Santa Catalina	Santa Catalina
Trailhead	Bigelow (Palisades)	Santa Catalina	Santa Catalina
Trailhead	Blue Jay Ridge	Safford	Pinaleño
Trailhead	Bog Springs	Nogales	Santa Rita
Trailhead	Box Camp	Santa Catalina	Santa Catalina
Trailhead	Box Canyon OHV	Nogales	Santa Rita
Trailhead	Brown	Sierra Vista	Huachuca
Trailhead	Brush Corral	Santa Catalina	Santa Catalina
Trailhead	Bug Spring	Santa Catalina	Santa Catalina
Trailhead	Butterfly	Santa Catalina	Santa Catalina
Trailhead	Canada del Oro	Santa Catalina	Santa Catalina
Trailhead	Canada del Oro/Sanmaniego	Santa Catalina	Santa Catalina
Trailhead	Canelo	Sierra Vista	Huachuca
Trailhead	Carr Canyon Perimeter	Sierra Vista	Huachuca
Trailhead	Catalina State Park End of Road	Santa Catalina	Santa Catalina
Trailhead	Cave	Nogales	Santa Rita
Trailhead	Clark Peak	Safford	Pinaleño
Trailhead	Cochise Equestrian	Douglas	Dragoon
Trailhead	Cochise Stronghold	Douglas	Dragoon
Trailhead	Cody	Santa Catalina	Santa Catalina

Table 32 (cont.). Designated Areas on the Coronado National Forest

Designated Area Type	Name	District	Mountain Range
Trailhead	Columbine	Safford	Pinaleño
Trailhead	Cottonwood	Douglas	Chiricahua
Trailhead	Crystal Spring	Santa Catalina	Santa Catalina
Trailhead	Cunningham Loop	Safford	Pinaleño
Trailhead	Davis Spring	Santa Catalina	Santa Catalina
Trailhead	Deadman Trail	Safford	Pinaleño
Trailhead	Deer Creek	Safford	Galiuro
Trailhead	Dutch Henry Canyon	Safford	Pinaleño
Trailhead	Dutch Henry Lower	Safford	Pinaleño
Trailhead	East Divide	Safford	Galiuro
Trailhead	Elephant Head	Nogales	Santa Rita
Trailhead	Emigrant Canyon	Douglas	Chiricahua
Trailhead	Fife	Douglas	Chiricahua
Trailhead	Finger Rock/Pontatoc	Santa Catalina	Santa Catalina
Trailhead	Florida	Nogales	Santa Rita
Trailhead	Four Springs	Nogales	Santa Rita
Trailhead	Frye Canyon	Safford	Pinaleño
Trailhead	Gardner	Nogales	Santa Rita
Trailhead	Gardner & Cave Canyon OHV	Nogales	Santa Rita
Trailhead	Grant Creek	Safford	Pinaleño
Trailhead	Grant Creek Lower	Safford	Pinaleño
Trailhead	Grant Hill Loop	Safford	Pinaleño
Trailhead	Green	Douglas	Chiricahua
Trailhead	Green Mountain (Hitchcock)	Santa Catalina	Santa Catalina
Trailhead	Green Mountain (Near San Pedro Vista)	Santa Catalina	Santa Catalina
Trailhead	Greenhouse	Douglas	Chiricahua
Trailhead	Guindani Loop	Sierra Vista	Huachuca
Trailhead	Harshaw	Sierra Vista	Huachuca
Trailhead	Heliograph	Safford	Pinaleño
Trailhead	Herb Martyr	Douglas	Chiricahua
Trailhead	Hidden Spring	Santa Catalina	Santa Catalina
Trailhead	High Creek	Safford	Galiuro
Trailhead	Hoovey	Douglas	Chiricahua
Trailhead	Ida Canyon	Sierra Vista	Huachuca
Trailhead	Incinerator Ridge	Santa Catalina	Santa Catalina
Trailhead	Jesus Babcock	Safford	Pinaleño
Trailhead	Jesus Goudy Ridge	Safford	Pinaleño
Trailhead	Kentucky Camp	Nogales	Santa Rita
Trailhead	Ladybug	Safford	Pinaleño
Trailhead	Ladybug Saddle	Safford	Pinaleño
Trailhead	Last Chance	Santa Catalina	Santa Catalina
Trailhead	Linda Vista	Santa Catalina	Santa Catalina
Trailhead	Lower Tanque Verde	Santa Catalina	Santa Catalina
Trailhead	Lutz	Sierra Vista	Huachuca
Trailhead	Marshall Gulch	Santa Catalina	Santa Catalina
Trailhead	Middle March	Douglas	Dragoon
Trailhead	Miller	Sierra Vista	Huachuca
Trailhead	Miller Canyon Perimeter	Sierra Vista	Huachuca

Table 32 (cont.). Designated Areas on the Coronado National Forest

Designated Area Type	Name	District	Mountain Range
Trailhead	Miller Creek	Santa Catalina	Santa Catalina
Trailhead	Mint Spring	Santa Catalina	Santa Catalina
Trailhead	Molino Basin	Santa Catalina	Santa Catalina
Trailhead	Molino Basin End of Road	Santa Catalina	Santa Catalina
Trailhead	Molino Basin Group Site	Santa Catalina	Santa Catalina
Trailhead	Molino Basin/Prison Camp	Santa Catalina	Santa Catalina
Trailhead	Monte Vista	Douglas	Chiricahua
Trailhead	Montezuma Pass	Sierra Vista	Huachuca
Trailhead	Morse Canyon	Douglas	Chiricahua
Trailhead	Mt. Lemmon/Aspen	Santa Catalina	Santa Catalina
Trailhead	Noon Creek Ridge	Safford	Pinaleño
Trailhead	Old Baldy	Nogales	Santa Rita
Trailhead	Onion Saddle	Douglas	Chiricahua
Trailhead	Oracle Ridge (Lower)	Santa Catalina	Santa Catalina
Trailhead	Oracle Ridge	Santa Catalina	Santa Catalina
Trailhead	Oversite Canyon	Sierra Vista	Huachuca
Trailhead	Palisades	Santa Catalina	Santa Catalina
Trailhead	Papago Well	Santa Catalina	Santa Catalina
Trailhead	Parker Canyon Lakeshore Trail	Sierra Vista	Huachuca
Trailhead	Pima Canyon	Santa Catalina	Santa Catalina
Trailhead	Pine Gulch	Douglas	Chiricahua
Trailhead	Pinery-Horsefall	Douglas	Chiricahua
Trailhead	Price	Douglas	Chiricahua
Trailhead	Proctor	Nogales	Santa Rita
Trailhead	Ramsey Vista	Sierra Vista	Huachuca
Trailhead	Rattlesnake	Douglas	Chiricahua
Trailhead	Rattlesnake Canyon	Safford	Galiuro
Trailhead	Red Ridge	Santa Catalina	Santa Catalina
Trailhead	Rose Canyon Lake	Santa Catalina	Santa Catalina
Trailhead	Rosemont OHV	Nogales	Santa Rita
Trailhead	Round the Mountain	Safford	Pinaleño
Trailhead	Rucker	Douglas	Chiricahua
Trailhead	Rustler Park	Douglas	Chiricahua
Trailhead	Sanmaniego	Santa Catalina	Santa Catalina
Trailhead	Sanmaniego/Canado del Oro	Santa Catalina	Santa Catalina
Trailhead	Saulsberry	Douglas	Chiricahua
Trailhead	Sawmill/Carr Peak	Sierra Vista	Huachuca
Trailhead	Shake	Safford	Pinaleño
Trailhead	Shake-State Route 366	Safford	Pinaleño
Trailhead	Shannon	Safford	Pinaleño
Trailhead	Shaw Peak	Douglas	Chiricahua
Trailhead	Shuttle Stop 9	Santa Catalina	Santa Catalina
Trailhead	Silver Peak	Douglas	Chiricahua
Trailhead	Skeleton Canyon	Douglas	Peloncillo
Trailhead	Slavin Gulch	Douglas	Dragoon
Trailhead	Snowshed	Douglas	Chiricahua
Trailhead	Soldier	Santa Catalina	Santa Catalina
Trailhead	Soldier Creek	Safford	Pinaleño

Table 32 (cont.). Designated Areas on the Coronado National Forest

Designated Area Type	Name	District	Mountain Range
Trailhead	South Fork	Douglas	Chiricahua
Trailhead	South Skeleton	Douglas	Peloncillo
Trailhead	Sunnyside Canyon	Sierra Vista	Huachuca
Trailhead	Sunset	Santa Catalina	Santa Catalina
Trailhead	Super	Nogales	Santa Rita
Trailhead	Sutherland	Santa Catalina	Santa Catalina
Trailhead	Sycamore Canyon	Nogales	Tumacacori
Trailhead	Sycamore Reservoir	Santa Catalina	Santa Catalina
Trailhead	Taylor Canyon	Safford	Pinaleño
Trailhead	Temporal	Nogales	Santa Rita
Trailhead	Tripp Canyon	Safford	Pinaleño
Trailhead	Turkey Creek	Santa Catalina	Santa Catalina
Trailhead	Turkey Flat	Safford	Pinaleño
Trailhead	Turkey Pen	Douglas	Chiricahua
Trailhead	Turtle Mountain	Douglas	Chiricahua
Trailhead	Upper Arcadia	Safford	Pinaleño
Trailhead	Upper Tanque Verde	Santa Catalina	Santa Catalina
Trailhead	Ventana Canyon	Santa Catalina	Santa Catalina
Trailhead	Vista (Geology Vista)	Santa Catalina	Santa Catalina
Trailhead	Vista (Windy Point Vista)	Santa Catalina	Santa Catalina
Trailhead	Walker	Nogales	Santa Rita
Trailhead	Webb Peak	Safford	Pinaleño
Trailhead	West Divide	Safford	Galiuro
Trailhead	West Stronghold	Douglas	Dragoon
Trailhead	Witch	Douglas	Chiricahua
Trailhead	Wood Canyon	Douglas	Chiricahua
Wilderness	Chiricahua Wilderness	Douglas	Chiricahua
Wilderness	Galiuro Wilderness Area	Safford	Galiuro
Wilderness	Miller Peak Wilderness	Sierra Vista	Huachuca
Wilderness	Mt. Wrightson Wilderness	Nogales	Santa Rita
Wilderness	Pajarita Wilderness	Nogales	Tumacacori
Wilderness	Pusch Ridge Wilderness	Santa Catalina	Santa Catalina
Wilderness	Rincon Wilderness	Santa Catalina	Santa Catalina
Wilderness	Santa Teresa Wilderness Area	Safford	Santa Teresa
Wilderness Study Area	Mt. Graham Wilderness Study Area	Safford	Pinaleño
Zoological Botanical Area	Guadalupe Canyon	Douglas	Peloncillo
Zoological Botanical Area	South Fork Cave Creek	Douglas	Chiricahua

Source: Coronado National Forest, GIS Data Base, T. Austin

7.3 Special places

The following information on undesignated special places within the CNF was provided by the forest archaeologist, William Gillespie.

Native American Special Places and Traditional Cultural Properties

To date, one area, Mt. Graham (or *Dzil nchaas' an*), has been formally recognized as an eligible Traditional Cultural Property important to the Western Apache groups (White Mountain, San Carlos, and Yavapai Apache). Mt. Graham has been recognized as a place of outstanding significance in Western Apache religion, culture, and history: that is, a sacred site. A summary statement of the significance is given in the National Register of Historic Places Determination of Eligibility prepared by Dr. Patricia Spoerl of the CNF:

Mount Graham is significant in Western Apache spiritual beliefs and practices. The mountain is associated with their oral history and plays a role in stories, songs and myths that reflect ties to it, both in historic and contemporary traditional cultural activities. Sources that document its significance include ethnographic reconstructions of pre-preservation lifeways and spiritual practices that involve visitation to Mount Graham, myths and songs about the mountain, and contemporary tribal interviews that describe its use and importance today. The mountain is associated with a pattern of events both spiritual and historical as evidenced by information provided during the 1930s and 1990s. Four closely related themes have been identified to describe Mount Graham in terms of the values Western Apaches ascribe to it and the themes that could then be used to evaluate its significance in determining eligibility for the National Register of Historic Places. These themes are: 1) home of the Mountain Spirits (*gaan*); 2) source of natural resources and traditional medicine for ceremonial uses; 3) place of prayer; and, 4) source of supernatural power.

Other mountain ranges or smaller areas could also be recognized as traditional cultural properties but have not yet been evaluated in this context. In particular, the Dragoon Mountains, and specifically Cochise Stronghold (both East and West Stronghold Canyons), have long been recognized as special places for the descendants of the Chiricahua Apaches (including Mescalero and Chiricahua-Warm Springs-Fort Sill Apache Tribes). The O'odham people traditionally hold mountaintops, springs, caves, and rock art sites to be special places though no such specific locations have been formally identified on the Coronado.

In discussing Native American special places, it is important to bear in mind that native peoples in the Southwest often conceive of places differently than either researchers or FS planners. Many tribal people view all southern Arizona mountains as "special places" with importance rooted not only in history but in a more general spirituality, philosophy, and worldview. Tribal members have traditionally been reluctant to identify specific special places in part because of confidentiality and religious reasons but also because the notion of isolating and recognizing specific locations is considered an inappropriate Euro-American analytical procedure that is contrary to their worldview and way of thinking.

A location that has taken on "special place" attributes in recent years is Montosa Canyon in the Santa Rita Mountains, the site of the "To All Our Relations" sweat lodge. This site, operated under a special use permit, is used for spiritual cleansing and purification. Though not long in existence, numerous people, including both tribal and non-tribal members, have come to attach considerable emotional importance to the area.

In addition to Traditional Cultural Properties places, some areas traditionally used for collecting foods, basketry materials, and medicinal or ceremonial items could fit the definition of special places. Examples include acorn-collecting areas in the Huachuca and Pinaleño Mountains, and yucca- and beargrass-collecting areas around the Santa Catalina and Santa Rita Mountains.

Local Community Gathering Places

A number of local Euro-American communities have developed long-lasting traditions in particular areas in the Coronado NF—traditions which suggest that the areas fit the Special Places category. Some of these are traditional gathering places for extended families and communities on Easter or other events. Mexican-American families in the Santa Cruz Valley, between Tucson and Nogales, have developed a tradition of Easter celebrations in Madera Canyon and at Peña Blanca Lake. The Mexican-American community of Douglas has a comparable connection with Rucker Canyon in the Chiricahua Mountains. Descendants of the old community of Harshaw in the Patagonia Mountains frequently visit ancestral graves in the area and hold family picnics. In all of these cases, community members have developed emotional connections with specific places.

Another long-standing (over 100 years) tradition of using summer retreats to cooler mountains for relief from summer heat has developed for residents of Tucson with Mount Lemmon and the Gila Valley (Safford, Thatcher, and other communities) with Mount Graham. Both of these mountains have long-standing summer home communities. For summer home occupants and other community members, these mountain highlands rank as special places.

General Public “Scenic Special Areas”

There are a number of places that are considered special to the general public, particularly those people with a stronger general environmental awareness and an appreciation of outdoor places. These are places that seem to be a bit ambiguous in terms of the proposed distinction between “special areas” and “special places” noted above. Although these are areas that have notable intrinsic scenic values, they have inspired emotional responses in many people, and many people have formed emotional attachments to them and consider them special. These attachments are not unlike the attachment many people feel for the Grand Canyon—it is clearly a special area but also a special place.

On the Coronado, widely recognized scenic special places include Cave Creek (Douglas RD), Cochise Stronghold (Douglas RD), Sabino Canyon (Santa Catalina RD), Ramsey Canyon (Sierra Vista RD), and Madera Canyon (Nogales RD). All of these receive considerable eco-tourism visitation and have been identified as special. Perhaps less widely acclaimed candidates suggested by Coronado NF personnel are the Tumacacori Highlands and Sycamore Canyon (Nogales RD), Turkey Creek and Rucker Canyons (Douglas RD), Rattlesnake Canyon and Galiuro Mountains (Safford RD), and the Catalina State Park vicinity (Romero Canyon, Sutherland Wash, Pusch Ridge) (Santa Catalina RD).

Cultural Heritage Special Areas

Several places are considered special in large part for their historical or archaeological qualities. Examples include Kentucky Camp (Nogales RD), Camp Rucker (Douglas RD), Sutherland Wash (Santa Catalina RD), Marijilda Canyon (Safford RD), Carr Reef (Sierra Vista RD), American Flag Ranch (Santa Catalina RD), and historic lookouts in all districts.

“Special Interest” Special Areas

Finally, there are a number of places that are of value to more limited groups who use certain areas and develop emotional connections to them. They include:

- Birders
Ramsey Canyon and Carr Canyon (Sierra Vista RD), Cave Creek and Rucker Canyon (Douglas RD), Madera Canyon and California Gulch (Nogales RD);
- Rock climbers
Cochise Stronghold (Douglas RD), Santa Catalina Mountains (Santa Catalina RD);

- Spelunkers
Cave of the Bells and Onyx Cave (Nogales RD), Crystal Cave (Douglas RD); SP Cave, Happy Jack, Van Horn (Sierra Vista RD), Peppersauce Cave (Santa Catalina RD);
- Prospectors and Treasure-Hunters
Tumacacori Mountains and Greaterville area (Nogales RD) and Cañada del Oro (Santa Catalina RD);
- All-Terrain Vehicle users
Redington Pass area (Santa Catalina RD), eastern Santa Rita Mountains (Nogales RD);

In addition to the aforementioned user groups, others such as horseback riders, mountain bikers, hunters, and fishers undoubtedly would identify particular sites as special places. These special places on the CNF have also been organized according to their particular geographic location within the forest.

Table 33. Special Places by Geographic Area

Ranger District	Special Place
Douglas Ranger District	Cave Creek, Rucker Canyon, Turkey Creek, Cochise Stronghold, Dragoon Mountains.
Nogales Ranger District	Madera Canyon, Montosa Canyon, Kentucky Camp and the Greaterville area, Peña Blanca Lake, Sycamore Canyon, California Gulch, Tumacacori Highlands, Cave of the Bells, Onyx Cave
Sierra Vista Ranger District	Ramsey Canyon, Carr Reef, Happy Jack, Van Horn, and SP Caves.
Safford Ranger District	Mount Graham, Galiuro Mountains, Rattlesnake Canyon
Santa Catalina Ranger District	Sabino Canyon, Mount Lemmon, Cañada del Oro, Catalina State Park vicinity (Romero Canyon, Sutherland Wash, Pusch Ridge), American Flag Ranch, Redington Pass, Peppersauce Cave

Source: William Gillespie
Archaeologist, Coronado National Forest

7.4 Scenery management

The USFS has explored the issue of scenery management on the national forests, and several publications have been written which can serve as guides to the forest manager for management of scenic resources. Some of the more important publications are available on-line at <http://www.esf.edu/es/via/>. Two of these publications, which might be particularly useful, are *Our National Landscape: A Conference on Applied Techniques for Analysis and Management of Visual Resources* (Elsner and Sardon 1979) and *Landscape aesthetics: A handbook for scenery management* (USFS 1995). The latter deals with the character and nature of landscapes, the integrity of natural scenes, the means to obtain information from constituent publics regarding scenic preferences, the determination of landscape visibility, and the application of the Scenery Management System. The appendices contain information about the history of the scenery

management issue in the USFS. The scenery management issue, according to this handbook, arose during the 1960s as a result of public concern over the visibility of forest management activities, particularly timber cutting. This handbook provides a guide to practical methods for minimizing the impact of those activities on the user public, principally recreationists. The Forest Service also provides guidance to the national forests regarding landscape management in the Forest Service Manual, Chapter 2380 –“Landscape management.”

7.5 Key issues for forest planning and management

Special places exist because humans form emotional attachments to them based on sensory connections. Sometimes people are aware of these experiences and feelings, but often, this is an unconscious process. The ability and opportunity to form these connections fulfills people’s needs to feel a part of something greater than themselves, which is “an essential aspect of human existence” (Brandenburg and Carroll 1995). Researchers advise that the recognition of unique and special places is of growing importance because people, in today’s age of cultural homogenization, seek unique and special qualities in their public lands (Williams and Stewart 1998). This, in turn, places higher demands on public lands, particularly in a rapidly growing state like Arizona.

With the complexities of special places in mind, researchers like Williams and Stewart (1998) caution that it is unwise to reduce special places to “single attributes” as they are clearly a collection of values, contexts, and experiences. Consequently, it is not always possible to identify special places as discrete points on a map. The challenge of mapping special places is thus ideally accomplished in cooperation with the individuals that value the place, marking the general boundaries of the area (rather than a point) on the map (Richard and Burns 1998). Using a Geographic Information System (GIS) as a tool to combine the special place maps of different groups or individuals can be very helpful to forest planners seeking to identify overlapping areas that might indicate future sources of conflict (Brandenburg, Carroll, and Blatner 1995). Disputes can arise over the diverse place definitions people give the same physical space, and given the subjective emotional nature of special places, these disagreements can be quite contentious. Forest professionals are advised that “various sentiments—whether local or non-local in origin, new or long established—are all legitimate, real, and strongly felt” (Williams and Stewart 1998).

Given that these places require sensory experiences, distant landmarks and conditions can affect one’s experience of a particular special place and thus are a part of the place even if only to that person. Thus, management of forests for the traditional extractive resources and motorized vehicle use of some may have an impact on forest places that are considered special to others. These potential effects can generate conflict; therefore, a better awareness of the significance of special places can potentially enhance forest planning and management.

Researchers have recognized that the relationships people form with special places often cut across traditional categories of liberal/conservative, extractive/environmentalist, urban/rural, and so on (Brandenburg and Carroll 1995). Wondolleck and Yaffee (2000) advise that “places can be powerful symbols that encourage people...to interact with [others] that historically have been viewed as outside their geographic, interest-based, or perceptual boundaries.” As a result, it can be difficult to pin down special places in public town-hall meetings—people who strongly identify with a particular lifestyle group are often reluctant to speak out in a way not supported by that group and yet may feel strongly about a very personal place relationship. Therefore, it becomes important to consider a combination of styles of data collection in order to represent all of these interests. Some findings have suggested that the traditional public meeting may serve to exclude some interested groups or individuals and to encourage a ‘majority (or loudest) rules’ mentality (Brandenburg and Carroll 1995; Brandenburg, Carroll, and Blatner 1995). The potential loss of social capital within the community when voicing a dissenting opinion in a public meeting may outweigh one’s strong special place connection: “an individual may not share his or her emotive personal values regarding the place in a public or group setting because of the pressures of the primary

social groups' common values" (Brandenburg and Carroll 1995). Thus, a mixture of town-hall meetings, surveys, and open-ended individual interviews and conversations may provide a more balanced and clearer picture of special places in the forest (Brandenburg and Carroll 1995; Brandenburg, Carroll, and Blatner 1995).

Cheng, Kruger, and Daniels (2003) emphasize the importance of understanding human-place relationships in planning for, anticipating, and mitigating potential conflicts in multiple-use public land (e.g. forests). These researchers propose that "a key goal of place-based inquiry is to foster more equitable, democratic participation in natural resource politics by including a broader range of voices and values centering around places rather than policy positions." Another study suggested that attention to stakeholders' place-value concerns could help avoid "continued acrimonious debate" (Brandenburg, Carroll, and Blatner 1995).

Often, decision makers lack the tools and training necessary to achieve a deeper understanding of social issues (McCool 2003). Nonetheless, studies have shown that by becoming more aware of community values, the FS shows good will toward the public and is better equipped to make management decisions that consider all of the potentially affected people (Mitchell et al. 1993, Richard and Burns 1998). In a recent social assessment prepared for two Idaho forests, researchers noted that "[s]entiments about attachment to place...result in a configuration of social life, individual life, and geographic space that is likely to influence how forest management issues will be evaluated [by the public]" (Adams-Russell 2004). Thus, it benefits the forest managers to know the local communities and consider their individual interests during planning. Increased and continued interactions between forest managers and the visitor public are interpreted as a sign of respect for local knowledge and culture (Mitchell et al. 1993, Williams and Stewart 1998).

Unfortunately, it is not safe to assume that visitors to public lands will recognize and share the values for that landscape that are in its best interest (McCool 2003). By encouraging special place relationships, the Forest Service stands to gain caring partners in the stewardship of forest resources. This occurs because when people develop a bond with a location, they become emotionally invested in the continued health and balance of the ecosystem (Mitchell et al. 1993, Wondolleck and Yaffee 2000).

Arizona is one of the fastest growing states in the country, and like many states in the Interior West, the majority of its population is concentrated in a few urban areas. The FS should expect significant impacts on public lands near or adjacent to urban areas in Arizona. These stresses may come from increased day use, conflicts over traditional versus new uses, the desire of developers to build directly to the forest's edge, and more. Another growing concern for the state's forests, particularly in the southernmost districts of the Coronado, comes from the growing wave of unauthorized border crossers from Mexico and the associated problems of traffic, garbage, and other adverse environmental effects. The safety issues generated by smuggling activities are particularly problematic for land managers who may not have been trained to handle these risks.

8. Community Relationships

The purpose of this chapter is to describe the relationship between the Coronado National Forest (CNF) and its neighboring communities. Knowledge of local communities is of interest to the Coronado due to the importance of the reciprocal relationship that exists between the forest and these communities. Also, in some instances, there are legal authorities that require interaction with external communities. The subsections of this chapter are as follows: historical context and methods of designation, community profiles and involvement with natural resources, communities of interest and forest partnerships, historically underserved communities and environmental justice, community/forest interaction, and key issues for forest planning and management.

Information gathered on the nature of the relationships between the CNF and surrounding communities reveals a complex network of interests involved in a variety of issues that affect forest management and planning. In addition to wider public concern for issues such as water provision, wildlife protection, and fire prevention, a growing number of local government organizations and special advocacy groups are seeking to participate directly with the CNF in the formation of policy. Although a comprehensive analysis of the social network surrounding the forest is beyond the scope of this assessment, this section provides insight into the roles and purposes of key stakeholders and establishes a framework for the development of a comprehensive community-relations strategy.

8.1 Historical context and methods of designation

The concept of community relations in a culturally diverse society is about working together as one, both respecting and valuing individual differences (McMillan 1999). It encourages a greater degree of acceptance and respect for, as well as communication between, people of different ethnic, national, religious, cultural, and linguistic backgrounds. Furthermore, it promotes notions of inclusiveness, cohesion, and commitment to the way we shape our future. Above all, a good community relations system ensures that people from all backgrounds have full access to programs and services offered by government service providers, recognizing and overcoming barriers faced by some groups to enjoy full participation in the social, cultural, and economic life of the community.

The act of understanding and maintaining good community relationships is one of the most central responsibilities of the National Forest System. Nonetheless, the importance placed on documenting and enhancing community relationships as part of the overall process of forest planning must be regarded as a relatively recent development. At the time of the creation of the national forest system through the Forest Reserve Act of 1891 and the Transfer Act of 1905, the principal community of concern to the agency was limited, consisting for the most part of a select group of forestry professionals, scientific and professional societies, special interests, and politicians. As such, the forest “community” of the late 19th and early 20th century was considerably less complex than the collection of interested stakeholders today.

However, following World War II, the general public began to show a greater interest in the activities of the national forests. By the late 1960s, with the advent of modern environmental concern, the forest community had expanded to include an extremely broad spectrum of the general public. Statutes such as the National Environmental Policy Act of 1969, the National Forest Management Act of 1976, and more recently, laws such as the Native American Sacred Lands Act of 2002, have officially recognized the array of publics and mandated that the USFS actively involve them in their management decisions. In addition to these and other statute laws, there are other written authorities that require and provide direction for external contacts: these include 36 CFR 219.9 (Public participation, collaboration, and notification), the Forest Service Manual chapters 1500 (External relations) and 1600 (Information services), and the Forest Service Handbook chapters 1509 and 1609. Effective public involvement requires knowledge, thus the purpose of this section is to assist in improving that knowledge base.

In this report, the term and concept “communities” received a broad interpretation and, hence, designation. In one sense, “communities” refers to the towns and cities located in the counties surrounding the CNF. In a broader sense, however, “communities” refers also to tribes, governments, the media, educational entities, partners, and special advocacy groups. Both of these types of “communities” are examined in this section.

8.2 Community profiles and involvement with natural resources

This section presents links to community profiles of the towns and cities which are found in the counties surrounding the Coronado. It also provides information on local news sources as a gauge of community involvement with natural resources, including Arizona’s national forests. Weblinks to community profiles for each of the counties and selected municipalities within the area of assessment are listed below in Table 34. These profiles generally contain the following information for each community: historical information, geographic/location information, population data, labor force data, weather data, community facilities (e.g., schools, airports), industrial properties, utilities, tax rates, and tourism information. They were developed by the Arizona Department of Commerce which also provides data for many other communities than those listed in Table 34. Table 35 categorizes national forest service acreage in Arizona according to current congressional districts.

Table 34. Weblinks to Community Profiles for Counties and Municipalities in the Area of Assessment

Cochise County	Http://www.azcommerce.com/doclib/COMMUNE/Cochise%20County.pdf
Sierra Vista	Http://www.azcommerce.com/doclib/COMMUNE/sierra%20vista.pdf
Douglas	Http://www.azcommerce.com/doclib/commune/douglas.pdf
Bisbee	Http://www.azcommerce.com/doclib/commune/bisbee.pdf
Benson	Http://www.azcommerce.com/doclib/commune/benson.pdf
Willcox	Http://www.azcommerce.com/doclib/commune/willcox.pdf
Graham County	Http://www.azcommerce.com/doclib/COMMUNE/Graham%20County.pdf
Safford	Http://www.azcommerce.com/doclib/commune/safford.pdf
Thatcher	Http://www.azcommerce.com/doclib/commune/thatcher.pdf
Hidalgo County	Http://www.hidalgocounty.org/
Lordsburg	Http://www.hidalgocounty.org/lrdsbrg.html
Pima County	Http://www.azcommerce.com/doclib/COMMUNE/Pima%20County.pdf
Tucson	Http://www.azcommerce.com/doclib/commune/tucson.pdf
Oro Valley	Http://www.azcommerce.com/doclib/COMMUNE/oro%20valley.pdf
Green Valley	Http://www.azcommerce.com/doclib/COMMUNE/green%20valley.pdf
Catalina	Http://www.azcommerce.com/doclib/commune/catalina.pdf
Marana	Http://www.azcommerce.com/doclib/commune/marana.pdf
South Tucson	Http://www.azcommerce.com/doclib/COMMUNE/south%20tucson.pdf
Pinal County	Http://www.azcommerce.com/doclib/COMMUNE/Pinal%20County.pdf
Apache Junction	Http://www.azcommerce.com/doclib/COMMUNE/apache%20junction.pdf
Casa Grande	Http://www.azcommerce.com/doclib/COMMUNE/casa%20grande.pdf
Florence	Http://www.azcommerce.com/doclib/commune/florence.pdf
Eloy	Http://www.azcommerce.com/doclib/commune/eloy.pdf
Coolidge	Http://www.azcommerce.com/doclib/COMMUNE/coolidge.pdf
Queen Creek	Http://www.azcommerce.com/doclib/COMMUNE/queen%20creek.pdf
Santa Cruz County	Http://www.azcommerce.com/doclib/COMMUNE/Santa%20Cruz%20County.pdf
Nogales	Http://www.azcommerce.com/doclib/commune/nogales.pdf
Patagonia	Http://www.azcommerce.com/doclib/commune/patagonia.pdf
Sonora, Mexico	Http://www.sonora.gob.mx/
Nogales	Http://www.sonora.gob.mx/portal/Runscript.asp?p=ASP\pg212.asp
Agua Prieta	Http://www.sonora.gob.mx/portal/Runscript.asp?p=ASP\pg171.asp
Naco	Http://www.sonora.gob.mx/portal/Runscript.asp?p=ASP\pg208.asp

Source: Arizona Department of Commerce
 Sonora, Mexico: <http://www.sonora.gob.mx/>

Table 35. Acreage of Arizona National Forests in Federal Congressional Districts

Congressional District	County	National Forest	Total Forest Service Acres
2nd	Pima	Coronado NF *	42,961
	Santa Cruz	Coronado NF *	418,879
			461,840
3rd	Coconino	Coconino NF	848,725
		Kaibab NF	1,528,594
		Prescott NF	43,695
	Mohave	Kaibab NF	5,487
	Yavapai	Coconino NF	431,119
		Kaibab NF	25,119
	Yavapai	Prescott NF	1,195,551
		Tonto NF	317,051
		4,395,341	
5th	Cochise	Coronado NF *	489,396
	Graham	Coronado NF *	396,174
	Pima	Coronado NF *	346,910
		1,232,480	
6th	Apache	Apache NF *	447,223
		Sitgreaves NF	45,591
	Coconino	Coconino NF	569,772
		Sitgreaves NF	285,693
	Gila	Coconino NF	6,063
		Tonto NF	1,698,631
	Greenlee	Apache NF *	751,151
	Maricopa	Tonto NF	657,695
	Navajo	Sitgreaves NF	488,158
	Pinal	Coronado NF *	23,331
Tonto NF		199,558	
		5,172,866	
	State Total		11,262,527

Source: USFS Lands and Realty Management

<http://www.fs.fed.us/land/staff/lar/LAR04/table6.htm>

The communities surrounding the Coronado NF have a history of involvement with the national forests and with natural resource issues in general. Southern Arizona, like the rest of the state, has long been dependent upon natural resources for commodity production, tourism, and aesthetic enjoyment. As a result, the public has frequently expressed intense interest in the use and management of these resources. The best and most generally available record of community involvement and interest in the CNF and in natural resources is to be found in the state's newspapers. Journalists publish hundreds of articles each year dealing with almost every aspect of community involvement surrounding natural resources and the forest. Links to Arizona's major newspapers can be found at <http://www.50states.com/news/arizona.htm>.

A search of natural resource keywords was conducted for six state newspapers: *The Arizona Daily Star* (Tucson), *The Arizona Daily Sun* (Flagstaff), *The Arizona Republic* (Phoenix), *The High Country Sentinel*

(Heber-Overgaard), *The Prescott Valley Tribune* (Prescott), and *The Grand Canyon News* (Williams). These newspapers were chosen because they represent the principal newspapers for cities located near each of the six national forests. In addition to the names of the six Arizona national forests, the keyword search included terms such as “forest,” “conservation,” “wildlife,” and “endangered” species. The results of this keyword search are presented in Table 36. *The Arizona Daily Star* (Tucson) is the newspaper most proximate to the CNF and thus will be of greatest interest to this assessment. However, the other five newspaper searches are also presented because journalism today has broad statewide and even national coverage which might reveal stories related to the Coronado in many of the state’s newspapers.

The keyword search indicated that the six newspapers have collectively published more than 100,000 articles potentially related to natural resources since 1999. This would indicate a tremendous public interest and opportunity for involvement with the state’s natural resources. Also, the data indicate that the CNF’s nearest paper, *The Arizona Daily Star*, is one of Arizona’s most important in terms of natural resource news coverage. Furthermore, the search indicated that the CNF itself was the subject of 906 news articles during the period examined (approximately 1999-2005 although the exact period varied by newspaper).

Table 36. Natural-resource Related Keyword Search of Six Arizona Newspapers

City:	Flagstaff	Phoenix	Williams	Heber-Overgaard	Prescott	Tucson		
Newspaper:	Arizona Daily Sun	Arizona Republic	Grand Canyon News	High Country Sentinel	Prescott Valley Tribune	Arizona Daily Star	Total	Percent of
Nearest National Forest:	Coconino	Tonto	Kaibab	Apache-Sitgreaves	Prescott	Coronado	Articles	Total
Issues Searched:	1999-April 2005	1999-April 2005	2000-April 2005	2000-April 2005	2003-April 2005	1999-April 2005	Found	Articles Found
Key Word Searched:								
Forest	8,066	319	732	399	367	3,414	13,297	13.2%
Natural Resources	690	79	29	23	16	688	1,525	1.5%
Conservation	732	133	109	7	62	732	1,775	1.8%
Water	0	1,382	741	244	728	10,960	14,055	14.0%
Lake	7,313	788	294	294	178	2,708	11,575	11.5%
River	5,033	625	370	131	279	n/a	6,438	6.4%
Stream	1,602	169	24	36	67	n/a	1,898	1.9%
Recreation	3,224	2,334	483	314	211	1,969	8,535	8.5%
Fish	4,708	5,028	131	248	285	2,646	13,046	13.0%
Native fish	98	2	15	15	3	135	268	0.3%
Sportfish	22	0	0	0	2	1	25	0.0%
Fishing	480	502	55	434	147	1,035	2,653	2.6%
Forest Fire	247	15	28	3	16	2,491	2,800	2.8%
Mining	165	282	25	9	43	1,504	2,028	2.0%
Endangered species	544	18	23	2	14	638	1,239	1.2%
Wildlife	2,747	167	185	135	120	2,824	6,178	6.1%
Native Wildlife	22	4	5	0	0	24	55	0.1%
Bird Watching	17	26	1	30	1	153	228	0.2%
Hunting	3,231	514	56	253	63	1,114	5,231	5.2%
Range	0	1,194	56	67	146	1,062	2,525	2.5%
Grazing	865	41	40	11	19	402	1,378	1.4%
The National Forests:								
Coconino National Forest	1,046	15	15	3	0	22	1,101	1.1%
Coronado National Forest	120	9	2	20	0	755	906	0.9%
Apache-Sitgreaves Nat. For.	109	12	2	87	0	68	278	0.3%
Kaibab National Forest	441	16	245	0	0	20	722	0.7%
Tonto National Forest	135	37	3	14	7	176	372	0.4%
Prescott National Forest	141	11	7	73	78	27	337	0.3%
Total articles found	41,798	13,722	3,676	2,852	2,852	35,568	100,468	100.0%

Past issues of *The Arizona Daily Star* were also examined to determine the types of natural resource topics that were of interest to the public in the region surrounding the CNF. Among the many natural resource issues of concern to the public were the wildfires that occurred during the 2004 fire season, incidents related to wildlife encroachment on recreation areas, drug smuggling, lost hikers, and the location of utility rights-of-way. Selected topics and their dates of publication in the *Arizona Daily Star* are provided in Table 37 below:

Table 37. Selected Key Public Issues for the Coronado National Forest

Topic	Date
1. Wildfires (including the Aspen fire)	Spring – Summer, 2004
2. Mountain lion encroachment on Sabino Canyon Recreation Area	May 2004
3. Border Patrol finds 1,500 lbs. of marijuana on the CNF	December 2004
4. Utility companies seek power line right-of-way through CNF.	July 2004, January 2005
5. Two hikers lost on CNF walk-out at Pima Canyon	June 2004
6. Black bear slain at Madera Canyon after it rips tent	June 2004

Source: Arizona Daily Star.

8.3 Communities of interest and forest partnerships

The Coronado National Forest has many communities of interest: that is, entities that share an interest along with the Forest Service in the management of the forest. For the purpose of this assessment, a distinction should be made between communities of interest and forest partners. Communities of interest may include residents of physical communities or members of an interest group, agency, or private organization that are influenced by, and in turn, stand to influence forest planning and management. Consideration of their stake in forest management is important but not specifically directed through formal partnership agreements. Following, in Table 38, is a listing of some of those communities of interest. These are grouped according to government agencies, special advocacy groups, educational, business, and media organizations. Specific contact information and the names of principal individuals are available from the CNF. An especially noteworthy community of interest to the CNF is the Native American tribes. The tribal contact list for the CNF is found in Table 39. There are fourteen tribes for which the CNF has consultation responsibilities.

Table 38. Communities of Interest for the Coronado National Forest

Governmental	Special Advocacy Groups	Educational
Arizona Land Department	A.A. Jernigan Testamentary	American Museum of National History
AZ Game & Fish Dept.	Animas Foundation	Arizona Sonora Desert Museum
AZ State Legislature, Dist. 8	AZ Wildlife Federation	Desert Botanical Garden
Bureau of Land Management	Center for Biological Diversity	Laboratory of Tree Ring Research
Catalina State Park	Cochise County Cavers	University of Arizona
Chiricahua National Monument	Columbine Cabin Owners Assoc.	University of Arizona South
Chiricahua Regional Council	Coronado Rangeland User Committee	Water Resources Research Center
City of Sierra Vista	Douglas Rifle and Pistol Club	
City of Thatcher	Economic Development Foundation	Businesses
Cochise County Board of Supervisors	Forest Guardians	Canyon Ranch
Cochise County Planning Commission	Friends of Kentucky Camp	E Lazy H Ranch Partnership
Douglas Chamber of Commerce	Friends of Sabino Canyon	Lone Mountain Ranch, Inc.
Graham County	Green Valley Hiking Club	Sabino Canyon Tours, Inc.
Graham County Board of Supervisors	Malapai Borderlands Group	Santa Rita Lodge
Graham County Chamber of Commerce	People for the West, SE AZ Chapter	Summerset Homeowners Assoc.
Hereford Natural Resource Conservation Dist.	Quail Unlimited	Tanque Verde Guest Ranch
Mt. Lemmon Fire Department	Sabino Canyon Volunteer Naturalists	Walter Dawgie Ski Corp.
NM Dept. of Game & Fish	San Pedro 100	
Pima Town Manager	Sierra Club	Media
Pinal County Board of Supervisors	Singing Valley Ranch	Arizona Daily Star
Ramsey Canyon Preserve	Sky Island Alliance	Green Valley News & Sun
Safford City Manager	Society of American Foresters	Nogales International Newspaper
Saguaro National Park	Sonoran Bioregional Diversity	
Santa Cruz County Board of Supervisors	Sonoran Institute	
Santa Cruz County Emergency Management	Southern Arizona Hiking Club	
Santa Cruz County Planning	The Nature Conservancy - AZ Office	
Santa Cruz County Sheriff's Dept.	Wild Turkey Sportsmen Association	
Tumacacori National Historical Park		
U.S. Border Patrol, Nogales Station		
U.S. Fish and Wildlife		
Willcox Chamber of Commerce & Agriculture		

Source: J. Ruyle, Forest Planner, Coronado National Forest

Table 39. Tribal Consultation Responsibilities for the Coronado National Forest

Arizona Indian Tribe

Ak-Chin Indian Community
Ft. McDowell Mohave-Apache Indian Community
Ft. Sill Chiricahua-Warm Springs Apache Tribe
Gila River Indian Community
Havasupai Tribe
Hopi Tribe
Mescalero Apache Tribe
Pascua Yaqui Indian Tribe
Salt River Pima-Maricopa Indian Community
San Carlos Apache Tribe
Tohono O'odham Nation
White Mountain Apache Tribe
Yavapai-Apache Nation
Pueblo of Zuni

Source: D. Firecloud, Regional Tribal Program Manager, Southwestern Region, USDA Forest Service

National Forest Partnerships

Although the USFS claims responsibility for approximately 193 million acres of forests and grasslands throughout the United States, it acknowledges that effective management and protection of the vast resources within forest boundaries would be virtually impossible without the effective involvement of individuals and organizations from neighboring communities. Given the agency's constraints on personnel, funding, and other resources, as well as the direct links between forest management and community well being, the FS places a high priority on the development of partnerships. In addition to the obvious financial benefits that accrue from partnerships, the agency views them as part of its continuing cultural shift from "lone rangers" and "rugged individualists" to facilitators and conveners. As such, partnerships have become a central strategy for strengthening relationships between the Forest Service and surrounding communities (USFS 2005c).

In an effort to promote partnerships and guide individual forest managers through the process of establishing and maintaining cooperative relationships with surrounding communities, the USFS has recently updated its Partnership Guide. Intended as a reference tool for employees and partners of the FS, the guide offers insight into the structure and management of non-profit organizations, issues surrounding forest cooperation with volunteers, and use of grants and other agreements as well as information on the common challenges and ethical issues involved in sustaining effective partnerships. The guide also includes an array of resources and tools based on previous partnership efforts of the Forest Service (NFF and USFS 2005).

Like other forests throughout the country and the region, the CNF is involved in multiple partnerships that contribute to forest health and fire management, the construction of community infrastructure, economic involvement with natural resources, and, most recently, issues surrounding the U.S.-Mexico border region. Previous planning processes such as the National Forest Management Act (NFMA) have attempted to implement policies aimed at enhancing participation of a growing number of interested stakeholders in forest planning and management.

Meanwhile, the Southwest Region (Region 3) of the FS has also outlined several priorities which directly affect the development of partnerships. They include the restoration of ecological functionality to forests

and rangelands, the protection of communities adjacent to national forests, and the contribution to the economic vitality of communities. In addition to these priorities, the Southwestern Region of the FS has established five objectives regarding the formation and maintenance of partnerships. They are to continue to increase the visibility and understanding of successful partnerships and collaboration, encourage and promote cultural change that supports and expands partnerships and collaboration, develop and maintain an accessible and user-friendly partnership process, identify the opportunities and needs for forest and regional coordination, and educate and train for a common understanding of partnerships.

Although the term “partnership” may be defined differently by individual stakeholders with distinct agendas, the FS has identified nine broad categories of forest partnerships. They are volunteers, cost-share contributions, donations and gifts, memoranda of understanding, cooperating associations, grants, “payments to states,” stewardship contracting, and interagency collaboration.

Obviously, the number and quality of forest partnerships varies over time according to the level of interaction between individual forests and their communities. The Southwest Region, however, has established a list of partner organizations according to the nature of their involvement. This list, obtained from the regional partnership website, is included as Table 40 below. Additional information on partnerships in the Southwest Region is available at <http://www.fs.fed.us/r3/partnerships/>. Table 41 presents a list of the partnerships between the CNF and external groups.

Table 40. United States Forest Service, Southwest Region Partners

Conservation Organizations	
Ducks Unlimited	http://www.ducks.org/
Environmental Systems Research Institute (ESRI)	http://www.conservationgis.org/
Federation of Flyfishers	http://www.fedflyfishers.org/
Mule Deer Foundation	http://www.muledeer.org/
National Wild Turkey Federation (NWTF)	http://www.nwtf.org/
Quail Unlimited	http://www.qu.org/
Rocky Mountain Elk Foundation	http://www.rmef.org/
Trout Unlimited	http://www.tu.org
Wildlife Management Institute	http://www.wildlifemanagementinstitute.org/
Arizona Conservation Partners	
Arizona Department of Game and Fish	http://www.gf.state.az.us/
Arizona Wildlife Foundation	http://www.azwildlife.org/
Sonoran Institute	http://www.sonoran.org/

Table 40 (cont). United States Forest Service, Southwest Region Partners

New Mexico Conservation Partners	
New Mexico Department of Game and Fish	Http://www.wildlife.state.nm.us/
New Mexico Wildlife Federation	Http://leopold.nmsu.edu/nmwf/
Audubon Society – New Mexico State Office	Http://www.audubon.org/chapter/nm/nm/rdac/index.html
New Mexico Museum of Natural History	Http://museums.state.nm.us/nmmnh/nmmnh.html
Youth Conservations Organizations	
AmeriCorps – New Mexico	http://www.nationalservice.gov/state_profiles/overview.asp?ID=38
National Association of Conservation and Service Corps	http://www.nascc.org/
Student Conservation Association	http://www.thesca.org/
Rocky Mountain Youth Corps	http://youthcorps.org/
National Ecosystem Health Organizations	
National Arbor Day Foundation	http://www.arborday.org/
Arizona Ecosystem Health Organizations	
The Nature Conservancy – Arizona	http://www.nature.org/wherework/northamerica/states/arizona/
Sky Island Alliance	http://www.skyislandalliance.org/
Grand Canyon Trust	http://www.grandcanyontrust.org/
Greater Flagstaff Forest Partnership	http://www.gffp.org/
Northern Arizona University	http://www.for.nau.edu/cms/
New Mexico Ecosystem Health Organizations	
New Mexico Forestry Division	http://www.emnrd.state.nm.us/forestry/index.cfm
New Mexico Highlands University	http://www.nmhu.edu/forestry/
The Nature Conservancy – New Mexico	http://www.nature.org/wherework/northamerica/states/newmexico/
National Interpretive Recreation	
Public Lands Information Center	http://www.publiclands.org/home.php?SID=
Association of Partners for Public Lands	http://www.appl.org/
Tread Lightly	http://www.treadlightly.org/
National Outdoor Leadership School	http://www.nols.edu/
Leave No Trace	http://www.lnt.org/
Arizona Interpretive Recreation	
Arizona Trail Association	http://www.aztrail.org/
Arizona State Association of 4-Wheel Drive Clubs	http://asa4wdc.org/

Table 40 (cont). United States Forest Service, Southwest Region Partners

New Mexico Interpretive Recreation	
New Mexico Environmental Education Association	http://www.eeanm.org/
Back Country Horsemen – New Mexico	http://www.bchnm.org/
New Mexico Council of Guides and Outfitters	http://nmoutfitters.org/
New Mexico Volunteers for the Outdoors	http://www.nmvfo.org/
Arizona Environmental Organizations	
Sierra Club – Arizona Chapter	http://www.sierraclub.org/az/
New Mexico Environmental Organizations	
New Mexico Wilderness Alliance	http://www.nmwild.org/
Sierra Club – New Mexico Chapter	http://www.sierraclub.org/nm/

Source: USDA Forest Service, Southwest Region – Partnerships
<http://www.fs.fed.us/r3/partnerships/>

Table 41. Partnerships for the Coronado National Forest

New Mexico Department of Game and Fish	US Army - Ft. Huachuca
Pima Natural Resource Conservation District	AZ Game & Fish Department
Winkelman Natural Resource Conservation Dist.	University Of Arizona, Sponsored Projects
Santa Cruz Natural Resource Conservation Dist.	Cochise County, Juvenile Court Services
Redington Natural Resource Conservation Dist.	Pima County Dept. of Transportation
Arizona State Land Department	El Conquistador Stables
USDI NPS Saguaro National Park	Friends of Madera Canyon
USDI, National Park Service	US Dept. of Treasury - ATF
USDA Natural Resources Conservation Service	Pima County Dept of Transportation
US Border Patrol, Customs & Border Protection	Youth Corps of Southern Arizona (YCOSA)
USDI, BLM, Safford Field Office	Univ. of Arizona, School of Nat. Resources
USDI, BLM, Tucson Field Office	Pima County Sheriff's Department
Federal Highway Admin., Central Fed.	Santa Cruz County Sheriff's Department
USDI, Fish and Wildlife Service	Graham County Sheriff's Department
Tucson Electric Power	Friends of Sabino Canyon
Mt. Lemmon Fire District	Arizona State Parks Board
Malpai Borderlands Group	Cochise County Sheriff's Department
NPS, Chiricahua National Monument	Don Ricketts
Upper San Pedro Partnership	Friends of the Huachucas

Source: Coronado National Forest, Grants and Agreements

8.4 Historically underserved communities and environmental justice

This section deals with special communities located near the CNF which may have been historically underserved in terms of public services received and their participation in business. This information will be of particular interest to CNF managers as they consider ways to improve delivery of services to minority groups which may have been underserved in the past.

Arizona’s rapid population growth has affected the availability of affordable housing and fundamental social services, segregated social groups, created urban sprawl, stressed the state’s infrastructure, and caused financial burdens and conflicts for local and state governments (Arizona Town Hall 1999). These factors can have an especially negative influence on Arizona’s ethnic and racial minorities and their employment opportunities.

Data on individual racial and ethnic groups as a percentage of total county population were presented in Chapter 2 of this report (Table 7). Those individuals of Hispanic/Latino origin represent the largest minority group, ranging from 27% in Graham County to 80% in Santa Cruz County. Note that individuals claiming Hispanic heritage may also claim identification with other ethnic and racial groups and be counted in those categories as well. The percentage of Native Americans is particularly noteworthy in Graham and Pinal counties. African Americans represent 4.5% of Cochise County.

The Census Bureau has estimated that, by 2025, Whites will comprise 57.5% of Arizona’s population. The number of people of Hispanic origin is expected to increase from its 1995 level of 20.6% of the population to 32.2% in 2025. The African American population is projected to grow by 65.7% and the Native American population by 34.9% (U.S. Census Bureau 2005, Partnership for Community Development 2000). Thus, in the future, the national forests must prepare to serve even larger minority populations than at present.

Possible assistance in the formation of minority- and woman-owned businesses is another issue for the CNF to consider. Table 42 presents data on minority- and woman-owned businesses for surrounding Arizona counties. As the data indicate, minorities currently own a smaller number of businesses than the size of their populations might suggest.

Table 42. Minority- and Women-owned Business by County, 2002

County	All Businesses	Total Minorities	African American	Native American	Asian or Pacific Islander	Hispanic or Latino Origin	Women
Graham	2,933	301	-	-	-	-	943
Cochise	12,625	2,696	341	321	252	1,781	4,005
Hidalgo (NM)*	298	n/a	n/a	n/a	n/a	n/a	n/a
Pima	112,293	18,847	1,117	1,860	2,868	14,033	31,485
Pinal	12,625	2,094	-	337	-	1,553	3,562
Santa Cruz	6,343	3,342	-	-	-	3,148	1,634

* 2002 Survey of Business Owners (including minority- and women-owned business) U.S., states, counties, places and metro areas projected early 2006

Sources: Arizona Dept. of Commerce, 2002

U.S. Census Bureau – 1997 Economic Census

Finally, the long term goals of the USFS have led to the development of specific outreach activities designed to enhance the participation of underserved populations in forest planning and management. They include the provision that each FS unit will perform the following tasks (USFS 2000b):

Ecosystem Health

- plan for underserved communities and develop an outreach analysis
- ensure the representation of underserved communities in team membership, participation, and implementation of decisions
- develop a nationally coordinated effort to establish dialogue with underserved communities about FS programs and land management

- expand financial and technical support for underserved communities' participation in land management activities

Multiple Benefits to People

- develop relationships by establishing a FS presence within networks of urban and rural community-based organizations that represent underserved people and conduct community assessments with underserved populations by working closely with existing leadership and resources
- partner with a broad range of non-governmental organizations to increase benefits and other FS resources to underserved communities to help them organize and develop national and localized programs of work which reflect their priorities
- collaborate with underserved populations to create customized delivery systems

Scientific and Technical Assistance

- conduct a research and development review with the direct involvement of underserved people to identify their concerns
- share and conduct collaborative social science research through a Federal Center of Excellence to share information across organizations, foster effective use of federal research resources, and include the needs of underserved communities in setting social science research priorities
- improve access to and distribution of information, including research findings and technical assistance, through partnerships with existing public and private networks involving cities and counties (such as the Joint Center for Sustainable Communities), federal agencies (such as the Sustainable Development Network), culturally sensitive employees (such as employee resource groups), and professional marketing specialists with expertise that benefits underserved communities

Effective Public Service

- develop training programs that strengthen the capabilities of employees and partners to engage underserved communities
- increase scholarship, education, and work experience opportunities to train employees and partners in how to engage underserved groups
- implement grants and training agreements for employees along with representatives of underserved communities

In addition to these general guidelines, the FS currently interacts with its neighboring communities in the following ways:

Rural Community Assistance

The FS implements the national initiative on rural development in coordination with the USDA Rural Business and Cooperative Development Service and State rural development councils. The goal is to strengthen rural communities by helping them diversify and expand their economies through the wise use of natural resources. Through economic action programs, the FS provides technical and financial assistance to more than 850 rural communities that are adversely affected by changes in availability of natural resources or in natural resource policy.

Urban and Community Forestry

The FS provides technical and financial assistance to more than 7,740 cities and communities in all States, the District of Columbia, and Puerto Rico for the purpose of building local capacity to manage their natural resources.

Human Resource Programs

Human Resource Programs provide job opportunities, training, and education for the unemployed, underemployed, elderly, young, and others with special needs, simultaneously benefiting high-priority conservation work. These programs are a major part of the FS work force.

Southwestern Strategy

In November of 1997, the Secretaries of Agriculture and the Interior issued a directive to their agency leaderships to develop a collaborative approach to resolving the quality of life, natural resource, and cultural resource issues in Arizona and New Mexico. The result was the Southwest Strategy, which addresses community development and natural resources conservation and management within the jurisdictions of the involved federal agencies.

Environmental justice is the fair treatment and involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, or tribal programs and policies. Inequities can result from a number of factors, including distribution of wealth, housing and real estate practices, and land use planning that may place African Americans, Latinos, and Native Americans at greater health and environmental risk than the rest of society (Bullard 1993).

The White House, with Executive Order 12898, elevated environmental justice issues to the federal agency policy agenda. EO 12898 instructs each federal agency to identify and address “disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations” (Clinton 1994).

The USDA’s goals in implementing EO 12898 are as follows (from USDA 1997):

- To incorporate environmental justice considerations into the USDA's programs and activities and to address environmental justice across mission areas;
- To identify, prevent, and/or mitigate disproportionately high or adverse human health and environmental effects of USDA programs and activities on minority and low-income populations;
- To provide the opportunity for minority and low-income populations to participate in planning, analysis, and decision making that affects their health or environment, including the identification of program needs and designs;
- To review and revise programs in order to ensure incorporation and full consideration of the effects that agency decisions have on minority and low-income populations;
- To develop criteria consistent with the USDA's environmental justice implementation strategy which determine whether the agency's programs and activities have, or will have, a disproportionately adverse effect on the health or the environment of minority or low-income populations;
- To collect and analyze data to determine whether agency programs and activities have disproportionately adverse human health or environmental effects;

- To collect, maintain, and analyze information on the consumption patterns of populations that principally rely on fishing, hunting, or trapping for subsistence;
- To develop, as part of ensuring the integration of the USDA's environmental justice strategy, outreach activities that include underserved populations in rural and urban America, including women, minorities, persons with disabilities, and low-income people, as well as tribal governments, in natural resource management activities;

Native Americans pose a special environmental justice case since few reservations possess environmental regulations or waste management infrastructures equivalent to those of the state and federal governments. In the past, these areas have been targeted for landfills and incinerators. However, these ecological inequities have met with an increasingly resistant environmental justice movement.

8.5 Community/forest interaction

As the national forests and other federal agencies focus on stakeholder and community-based management, the social linkages, or social networks, formed by different groups and individuals are becoming increasingly important. Social networks provide a framework for balancing needs and priorities in the forest, and they often provide a cadre of willing and eager participants in the forest planning process. Nonetheless, they can also represent a significant challenge to managers trying to accommodate conflicting multiple uses.

The Forest Service has identified three processes resulting from greater agency attention to the social value of forests, the need for greater public involvement, and the ecosystem approach to management. Frenzt and others (1999) describe them as follows:

- An increasing demand by the general public, interest groups, and local communities to become more involved in resource management planning and decision-making;
- An awareness that stewardship of natural resource systems by knowledgeable and committed community members is more effective than top down governmental mandates and regulatory procedures; and
- Growing support for an ecosystem management approach that is community based and incorporates both ecosystem and community sustainability into an overarching theory of holistic ecosystem health.

As awareness and commitment to these processes grow, so does the need for forest managers and planners to understand the social linkages within and surrounding the national forests. The FS emphasizes these ideas in many of its policies and publications. For example, it lists among its guiding principles,

- Striving to meet the needs of our customers in fair, friendly, and open ways;
- Forming partnerships to achieve shared goals; and
- Promoting grassroots participation in our decisions and activities. (USFS 2005n)

Recent changes to the NFMA planning process similarly underscore the role of social linkages in forest management, stating, "Public participation and collaboration needs to be welcomed and encouraged as a part of planning. To the extent possible, Responsible Officials need to work collaboratively with the public to help balance conflicting needs, to evaluate management under the plans, and to consider the need to adjust plans" (USFS 2005o). A careful examination of existing and potential social networks can help guide these planning processes.

A social network analysis visualizes social relationships as a set of “nodes” (individual actors within the network) and “ties” (the relationships between the actors) (Hanneman 1999). Formal network analyses generally diagram social networks of interest and often attempt to quantify the personal relationships involved. Computer software is available to conduct formal network analyses by calculating aggregate measures of centrality, density, or inclusiveness and aiding in the visualization of social networks (Garson 2005). A variety of methods exist for graphically displaying these networks (Brandes et al. 1999).

In addition to displaying and/or quantifying the relationships among individuals, sociologists and other social scientists often use social network theory to study relationships among organizations (Stevenson and Greenberg 2000). The distinguishing feature of social network analysis is that it focuses on the relationships among individuals or organizations instead of analyzing individual behaviors, attitudes, or beliefs. The social interactions are seen as a structure that can be analyzed, and formal network analysis aims to describe social networks as compactly and systematically as possible (Galaskiewicz and Wasserman 1994, Hanneman 1999).

While social network analysis offers a significant alternative to analyzing individuals and organizations as if they were isolated from one another, it also contains some problematic simplifications. First, in viewing social networks as analyzable structures, this method inevitably treats networks as static and overlooks the dynamic nature of interpersonal and inter-organizational relationships (Sztompka 1993). It is assumed that the position of the actor in the network is static (Stevenson and Greenberg 2000); however, most managers that work with the public would agree that the relations among network members are not only changeable but are, in many cases, in almost constant flux.

In addition, the focus on quantitative features of social linkages overlooks a wide variety of important qualitative factors, including the kinds of ties involved and the power relationships among the actors (Bodemann 1988). For example, the ties in a social network can represent relationships as different as kinship, patronage, reciprocity, avoidance, or assistance (Breiger 1988). Managers attempting to explain community relationships through social network analysis would no doubt consider ties between network members involved in cooperative management and those between opponents in litigation to be very different; however, in the mere visual representation of a network it would be difficult, if not impossible, to represent this difference.

Finally, network analysis often assumes that social networks operate as constraints on action (or, at the very least, as constraints on peripheral actors) and fail to recognize the agency of individuals acting within the network (Stevenson and Greenberg 2000). This is not a necessary function of network analysis, but this common assumption can easily hamper attempts at cooperative management.

As such, a reliance on formal network analysis for understanding stakeholder linkages can be somewhat misleading. Unfortunately, the graphic representations and statistical conclusions of social networks offered by formal network analyses often convey an impression of objectivity and inclusiveness. It is important to note that research on networks has thus far generally failed to draw reliable conclusions on the actions of individuals based on the characteristics of their networks (Stevenson and Greenberg 2000). In line with many other social researchers, this assessment suggests that the qualities of relationships and strategies used by actors should be of more concern than a visual or mathematical representation of networks.

In place of a formal network analysis, which is both time consuming and based in an incomplete conception of social interactions, a view of the CNF’s social linkages has been offered that communicates the importance of relationships and the uncertain, active, and dynamic nature of the actors.

Provan and Milward (2001) outline three broad groups of “network constituents,” or stakeholders: principals, agents, and clients. Principals are individuals or groups which “monitor and fund the network and its activities.” Agents “work in the network both as administrators and service-level professionals,” and clients “actually receive the services provided by the network.” However, as Provan and Milward also note, actors can and often do fulfill multiple roles, acting, for example, as a client at one geographical or political

level and as an administrator at a different level. Figure 20 illustrates the interactions of these groups in the context of natural resource management. Different stakeholders interact with one another and with the resource being managed.

According to this view, a national forest is managed not simply by a USDA chain of command but by a network that includes a wide variety of stakeholders. The resource itself forms the “center” of the network, and these stakeholders both affect the management of the resource and are in turn affected by its management direction. In a very real sense, non-USDA actors such as county officials, the U.S. Border Patrol, and even media and citizen groups participate in forest management. Figure 21 provides examples of principals, agents, and clients involved in the management of CNF (see Table 38 for a more complete list).

While this network is by no means exhaustive, Figure 21 shows how different actors interact in the social network involved in managing the Coronado. However, this typology is neither unambiguous nor static. For example, forest-level administrators can function as principals, agents, or clients, depending on the situation and geographic scale. They monitor and administrate the network, but they also receive services provided by other stakeholders, such as recreation users and those with special permits. Local residents are generally seen as clients of the forest, but some residents also actively participate in network monitoring to ensure that they receive the services they expect. Environmental groups, while perhaps most often seen as clients, can also play an important role in monitoring management and even directly helping manage the forests. While none of these designations is set in stone, this framework provides a unique perspective on the linkages among and the roles of different stakeholders (or network members) in managing the forest.

The framework and diagrams presented here are intended to facilitate a discussion of social networks and the roles of stakeholders that effectively describes the actors and relationships in the Coronado social network. Future research might address the different needs, priorities, skills, and challenges of different kinds of stakeholders. For example, how does policy or practice differentiate among principles, agents, and clients? Does the Forest Service’s vision of visitors and users (i.e., clients) as customers in any way influence the latter’s ability to participate in forest planning processes? What management practices help Forest Service personnel treat different kinds of stakeholders in a fair and equitable manner? And, perhaps most importantly, how can managers and planners use existing networks to bring maximum benefit to the forest itself?

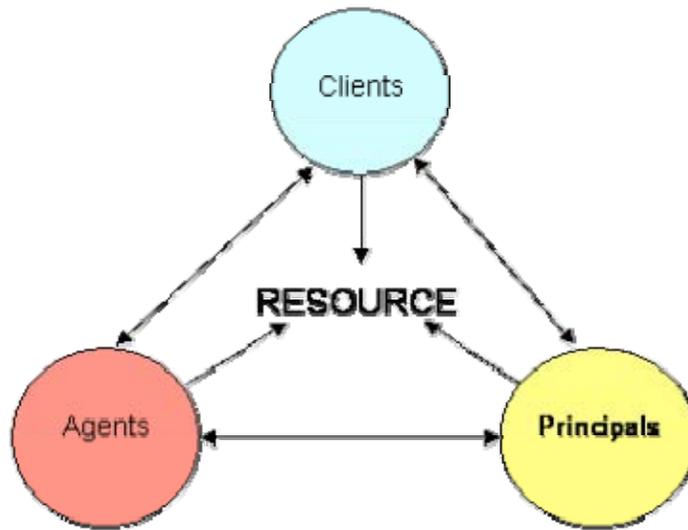


Figure 20. Social Networks in Natural Resource Management

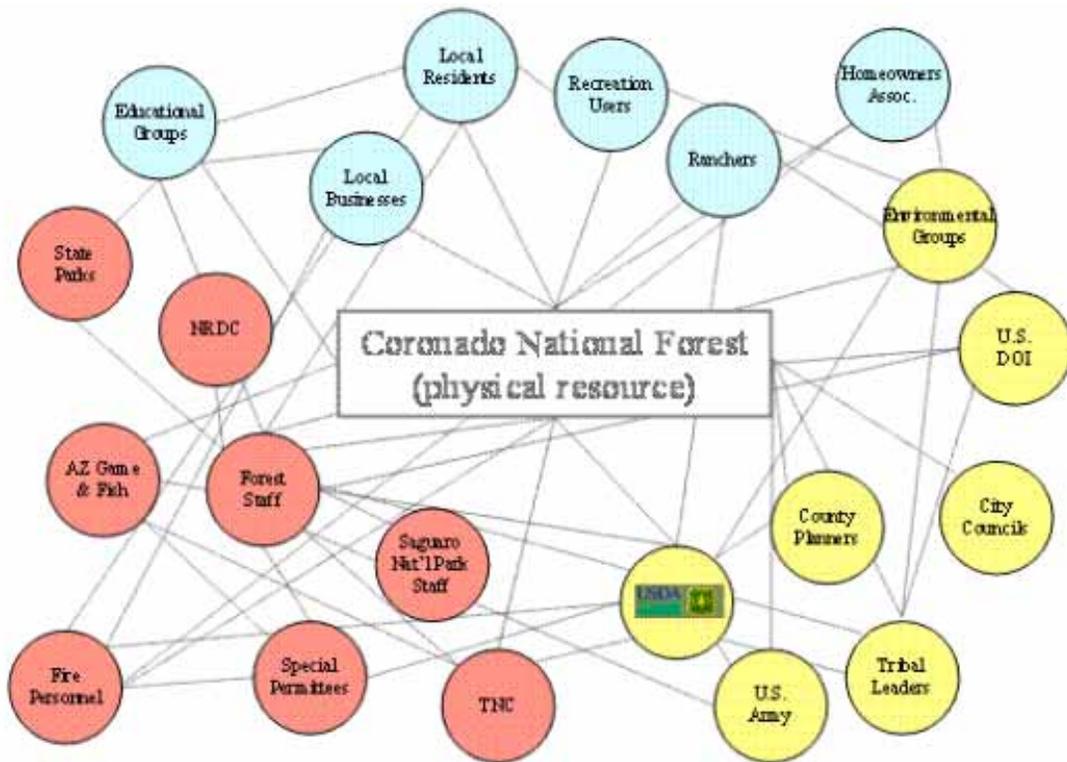


Figure 21. Partial Social Network for the Coronado National Forest

8.6 Key issues for forest planning and management

Arizona communities are experiencing rapid economic and demographic transformation, resulting in considerable changes in racial and economic diversity, multiculturalism, and social values. These trends have been well documented in other parts of this assessment through analysis of both quantitative and qualitative data which point to the challenges the national forests face as they try to accommodate diversity while delivering forest-based goods and services to the public.

Such an identification and analysis of social and economic trends, however, does not provide sufficient information on community stability, satisfaction, or capacity needed to fully analyze interactions between individual communities and national forests. Therefore, increasing attention has been paid to assessing community interaction with natural resource managers. Methods such as social impact assessments and community surveys have gained prominence as communities evolve from rural to urban patterns of development while striving to incorporate more diverse interests in participatory decision making. An added benefit of these community-based approaches is that they can provide opportunities for community members to verify, comment on, and learn from collected secondary economic and social data. Perhaps most importantly, previous studies have shown that participants in these types of social assessments are better able to identify common concerns and links to structural conditions in a manner that contributes to resource and community development planning (Kruger 1996, USFS 2003f)

Although the size and organization of communities have traditionally been considered important influences in the fields of natural resource and forest management, there remains a lack of appreciation for the various roles and modes of interaction between communities and resource managers. The failure to recognize these different roles and purposes contributes to increasingly polarized debates over the appropriateness of forest management practices. A case in point is the common conflict between communities clinging to historic dependence on commodity use and those expanding communities seeking to capitalize on natural amenities to support retirement and recreation-based activity. Such disputes often make management objectives for stewardship and sustainability difficult, if not impossible, to achieve. Alternatively, a better understanding of the nature of relationships between forests and neighboring communities can provide important insight into divergent and sometimes competing interests and concerns. Ultimately, this process could provide for an enhanced analysis of forest management alternatives and their potential effects on communities (USFS 2003f).

The task of planning for multiple resource use is further complicated by the number and nature of interest groups and stakeholders that interact with the forest in a given community. In fact, as a Forest Service Technical Report asserts, “There are as many potential measures of organization and interaction in social communities as there are ecological interactions in biophysical systems” (USFS 2003f). Evidence of the dynamic nature of relationships between the CNF and various groups, individuals, and organizations is found in ongoing debates over the preservation of open space, the administration of recreation and grazing fees, the protection of water resources and wildlife, and the security of forest lands and communities along the international border.

Despite a growing consensus as to the importance of analyzing community relationships for forest planning and management, there remain relatively few applicable guidelines for developing an effective community-forest relations strategy. Whereas the Forest Service Manual and the Forest Service Handbook provide some guidance for the conduct of external relations, there is an opportunity for a more comprehensive plan to guide the management of local community relations. A good starting point for the development of such a plan is offered by research conducted by the Queensland Government in Australia on strengthening relationships between communities and government agencies (McMillan 1999).

The study focuses on five principal recommendations for enhancing the effectiveness and sustainability of community relations that may also prove useful to Arizona’s national forests. They include 1) development of a concept and definition of community relations relevant to the national forest; 2) development of an understanding of the possible benefits of a positive community relations program; 3) development of a

common agency image of what a positive community relations program might resemble; 4) development of some essential principles of an effective community relations program; and 5) development of a list of potential community relations questions and issues to be dealt with by the community relations plan (McMillan 1999).

Although identification of the essential principles in an effective community relations program will require community input and therefore vary in individual cases, the Queensland study offers the following examples:

- *Leadership*—improvements in community relations require leadership at the forest level.
- *Local Ownership*—community relations strategies work best when they are owned and designed by the local community, the groups in that community, and the institutions that serve that community.
- *Administrative Support*—community relationships need to be supported by appropriate forest administrators.
- *Planning*—in seeking to ensure positive conditions for community relations, planning is the key.
- *Positive Framework*—community relationships seek to provide a positive framework and infrastructure for dealing with community-related problems.
- *Integration*—community relationships work better when they are integrated into existing forest processes and procedures rather than regarded as add-ons that can be addressed outside the framework of those processes and procedures.
- *Holistic Approach*—effective community relations strategies frequently need to be multi-pronged and very frequently require the collaboration of a number of organizations, groups, and agencies in order to work effectively.
- *Informed Decision Making*—information from the community is vital in informing community relations, as is information from other sources (including research literature), from other organizations who have tried community relations projects, and from people with knowledge and expertise in the field.
- *Inclusion of Diversity*—community relations values and respects diversity and works to include all cultural and linguistic backgrounds into the social, cultural, and economic life of the community as well as into the decision-making mechanisms of the community.
- *Ongoing Effort*—Managers must recognize that improved community relations is an on-going effort and requires a long-term commitment by the agency. (McMillan 1999)

Finally, a list of issues and potential questions for inclusion in a comprehensive community-forest relationships plan should address the following:

- *Access to services*—how will the forest improve its delivery of goods and services and what will those goods and services be?
- *Employment opportunities*—does the forest have a role in providing improved employment opportunities for the community?
- *Information*—how might the forest improve its flow of information to the community?
- *Racial sensitivity*—how might the forest be more sensitive in accommodating the needs of different racial and ethnic groups who use the forest?
- *Youth*—is there a special role for the forest in helping the community's youth?

- *Media*—how might the forest develop a positive working relationship with the community’s media services?
- *Change*—finally, how will the forest cope with the future in terms of changes in the community and in the delivery of forest-based goods and services to that community? (McMillan 1999)

Although these lists represent a fraction of the elements that may be addressed in any single plan for community-forest relations, they reflect the diversity and urgency of the issues the Coronado National Forest faces as it takes positive steps to respond to a rapidly-changing demographic, political, and physical environment.