6. Forest Users and Uses

The purpose of this section is to describe how different parts of the Apache-Sitgreaves National Forests are used and by whom. 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, and 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 ASNF is consistent with larger surveys of trends at the regional and national levels. These trends show a decline in 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 ASNF.

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 statues—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 Apache-Sitgreaves National Forests are used, who uses them, and how trends in forest users and uses compare to historical and national trends.

Uses and users of the national forests can be defined roughly as being either extractive or non-extractive. Extractive uses include livestock ranching, 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 recreation 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 Forest Service-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 Apache-Sitgreaves National Forests issued seventy-nine grazing permits, totaling 87,080 animal unit months (AUMs). 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. Permits have decreased since 2000, with permitted AUMs reduced from over 130,000 at that time (Jevons, pers. comm.). Forest plan monitoring documents show that $525,000 was spent on range betterment and range vegetation management programs. The forests' 1987 management plan expressed concern about livestock damage, especially in riparian areas, and the plan was extensively litigated over the course of several years and eventually amended (USFS 1987a).

The Forest Service 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 fiscal year 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 FS timber sales program reported a loss of $88.6 million (GAO 2001a).

Timber cutting in the Apache-Sitgreaves National Forests includes salvage logging and mechanical thinning treatments as well as more traditional logging. In 2000, the last year for which data are currently available, the forest harvested slightly less than 2,000 mbf of saw-timber and slightly more than 3,000 cords of pulpwood in addition to commercial fuel wood and other wood products. With growing awareness of fire regimes and wildland-urban interface issues, the Apache-Sitgreaves forests have initiated several mechanical thinning and salvage logging projects in recent years. Some of these projects have faced substantial opposition from citizen groups. For example, following the 2002 Rodeo-Chedeski fire, a series of timber sales was planned to clear commercial-size trees killed by the fire. Portions of the sales were litigated by the Forest Conservation Council but were eventually allowed to proceed by the Ninth Circuit Court of Appeals in 2004 (USFS 2004i). The forests are also the site of the White Mountain stewardship contract, an initiative aimed at large-scale forest restoration and the Forest Service's first large ten-year contract under new guidelines for federal-private stewardship contracts and agreements. This program was designed to promote timber harvesting for purposes of forest restoration and management and was in part a response to declining federal timber sales (USFS 2005h).

Mining in the national forests is directed by the General Mining Law of 1872, which allows individuals and corporations free access to prospecting on Forest Service lands. Upon discovery of a mineral resource, an individual or corporation can then stake a claim, which allows full access to mineral

[1] Data given are the most recent available.

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 fiscal year 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.).

Mining permits in the Apache-Sitgreaves forests are largely comprised of landscaping materials. In 2004, sale and/or free use permits were issued for river rock, pumice cinder, sand and gravel, landscape and decorative rock (including malpais), and crushed basalt/tuft. 3000 tons of cinders were also extracted for FS use. A total of 156 sale and free use permits were issued for the extraction of 71,391 tons at a total value of just under $60,000. This was a substantial increase from 2003 but a considerable decrease from 2002, when a much greater value of free use permits was issued (Jevons, pers. comm.).

Forests also commonly allow communities and other entities to use public lands for infrastructure, including power lines, rights of way, telecommunications, and the like. Permits for communications, utilities, and other infrastructure comprise nearly half of the 532 special use permits currently issued by the Apache-Sitgreaves National Forests. These include permits to local communities for debris and waste disposal areas, sewage transmission lines and other pipelines, power lines, road easements, water transmission lines, and school sites (Jevons, pers. comm.).

6.3 Non-extractive users and uses

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 Forest Service predicts that recreation pressure on undeveloped areas in most of the Southwest and Rockies 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 (USDA 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 11. Nationally, there were 209 million national forest visits in 2001. The forests of the Southwest (Region 3) received 19.5 million visits[2] (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

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

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 many 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 Apache-Sitgreaves forests received nearly 2 million visits during fiscal year 2001. A majority of these were male (approximately 73.7%). Visitors were predominately white (an estimated 89.8%); Spanish, Hispanic, or Latino visitors made up approximately 7.7% of total visits, while American Indian/Alaska Native and Asian users comprised only about 0.8% of visits each. About 21% of users were under the age of 16, while relatively few visitors were between 16 and 30 or over 70-years old. An estimated 63.2% of visitors were between the ages of 31 and 70 (Kocis et. al. 2002a). Cordell and others (2004) note a trend of increasing participation by older Americans in a variety of different recreational activities. Less than 1% of visitors to the ASNF were from a foreign country. The most frequently reported zip codes suggest that, while local residents of town such as Lakeside, Alpine, Holbrook, and Showlow are relatively frequent visitors, they tend to be outnumbered by visitors from the Phoenix metro area (Kocis et. al. 2002a).

The Recreation Opportunity Spectrum (ROS) system provides a framework for understanding recreation users, their needs and wishes, and the abilities of forests to accommodate them (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. 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).

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, lists the ten most popular recreation activities, summarized in Table 30 below:

Table 30. 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 (Cordell et. al. 2004):

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 non-motorized 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 Apache-Sitgreaves National Forests contain forty-six campgrounds, seven group campgrounds, four organizational camps, one horse camp, and many other dispersed camping sites. There are more than 700 miles of managed trails, including ATV, bicycle, hiking, pack and saddle, snowmobile, snowshoe, and cross-country trails. Notably, the forests report that demand for mountain biking is increasing while horseback riding is decreasing. These trends have significant implications, especially in the management of wilderness areas (see below).

Forest managers identify winter and water-based recreation as key components of Apache-Sitgreaves recreation. The forests offer lake and river access, including more than twenty developed boating and fishing sites. These kinds of sites are relatively rare in Arizona and in the Southwest in general, and they no doubt add to the forests' popularity. There are also three privately owned marinas (at Woods Canyon, Luna Lake, and Big Lake) in the forests that are managed under special use permits. Key winter uses include cross-country skiing, snowmobiling, snowshoeing, sledding, and dogsledding although these make up a very small percentage of visitor use (Jevons, pers. comm.; Kocis et al. 2002a).

The five most popular activities for visitors to Apache-Sitgreaves were relaxing (84.2% participation), viewing natural features (79.3%), viewing wildlife (73.5%), hiking/walking (62.2%), and driving for pleasure (53.3%)[4]. Camping, picnicking and family gatherings, fishing, and gathering forest products were also very popular (Kocis et al. 2002a).

6.4 Special users and uses

A number of special user groups merit attention in 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 relationship (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, the Archeological Resources Protection Act, and several presidential executive orders.

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

[4] In addition to regular forest roads, the forests have two designated Scenic Byways, the Coronado Trail Scenic Byway and the White Mountain Scenic Byway (Jevons, pers. comm.).

OHV Users

On public lands throughout the country, the use of off-highway vehicles (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 Forest Service devoted limited funding and staffing to managing OHV use, and 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 Forest Service 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 the 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).

In the 1987 Apache-Sitgreaves National Forests Plan, OHV recreation was identified as a source of conflict among user groups and a cause of resource damage. At that time, about 84% (all but 322,954 acres) of the forests' 2 million acres were open to OHV use although users in some areas were restricted to existing or designated roads and trails (USFS 1987a). In 2002, about 11% of forest visitors reported participating in OHV travel; however, only 3% reported using designated OHV areas, and less than 2% used trails developed for motorized vehicles (Kocis et al. 2002a).

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 16-years 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).[5] 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 that time. 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 Apache-Sitgreaves National Forests, wildlife viewing is a more common activity that either fishing or hunting. NVUM data from 2002 show that 73.5% of the visitors interviewed participated in some sort of wildlife viewing activity; however, only 1% described it as their primary activity.[6] Approximately 50% of interviewed visitors fished (with about 19.6% describing it as their primary activity), and only 3% hunted. 34.8% used a developed fishing site or dock (Kocis et al. 2002a). The heavy use by anglers reflects the popularity of the forests' water resources, which are rare in Arizona.

[5] Notably, however, an estimated 21.6% of ASNF visitors are under the age of 16.

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

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 OHVs), and the decision to designate a roadless area as wilderness can be controversial. 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 Apache-Sitgreaves National Forests include three designated wilderness areas, the nation's sole designated primitive area, and 322,000 acres of inventoried roadless areas (Jevons, pers. comm.; USFS 2001b). Users of designated wilderness areas fit a profile similar to other forest users: they are predominantly male (81.1%), white (92.0%) or Hispanic/Latino (5.3%), and often travel from the Phoenix area to use Apache-Sitgreaves' wilderness. NVUM data suggest that roughly 45,000 wilderness visits were made during fiscal year 2001 although the error rate on this data is very high (+/- 56%) because of the relatively low number of visitors interviewed (Kocis et al. 2002a).

Illegal uses

The Forest Service 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). The ten most common offenses are summarized below in Table 32.

Table 32. Most common offenses on Apache-Sitgreaves National Forests, 1995-2005

Activity
1) Littering
2) Leaving an un-extinguished fire
3) Unauthorized timber cutting
4) Property damage
5) Dumping
6) Building a fire when prohibited by order
7) Use of vehicle in a manner which damages or disturbs resources
8) Unauthorized burning
9) Illegal motor vehicle use or parking in a developed recreation site

Source: Jevons, personal communication

Special use permits

While research is rarely considered by the public to be a major use of federal lands, the Apache-Sitgreaves forests, like most forests, issue special use permits for research purposes. Research on flora, fauna, water quality, seismic activity, weather, and wildland fire effects is conducted on the forests by universities, private institutions, and other federal, state, and local agencies. A variety of special use permits are issued for different forest uses by the public. These include permits for privately managed facilities, including organizational camps, marinas, and a golf course, as well as one-time recreation events (varying from dog trials to historic reenactments to family reunions). Special permits can also be purchased for a number of gathering activities. Permits for gathering firewood and cutting Christmas trees are the most common among these (Jevons, pers. comm.).

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, the most recent reports issued by the USDA and Department of Interior on the condition of grazing allotments showed that more than half of the public rangeland was in either poor or fair condition, and a GAO survey of range managers' professional opinions showed that the BLM and FS authorized grazing levels 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).

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 Forest Service and other federal agencies have emphasized the development of a market for these fuels to help mitigate the costs of 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).

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 USDA Forest Service to the General Accounting Office, clearly illustrates these changes (GAO 1999a).

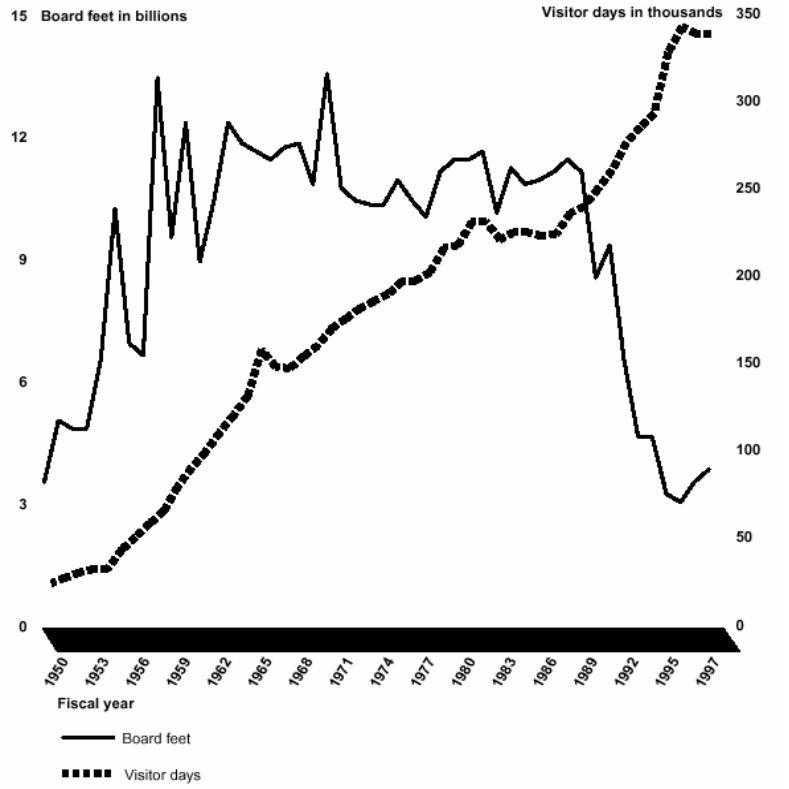

Figure 19. Visitor Recreation Days as Compared to Timber Extraction, 1950-1997

As the West becomes increasingly urbanized, managing recreation and its conflicts with other uses will doubtless be a priority for forest managers and planners.

Several important management issues have arisen from demographic and use changes. As discussed above, recreation users represent a wide variety of uses, and their management priorities also differ significantly and occasionally come into conflict. NRSE 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 developed campgrounds, 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 and 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 sited 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 increasing 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).

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 Apache-Sitgreaves National Forests (ASNF) 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 have been recognized as important to the public as so-called undesignated special places. An attempt was made to identify all designated areas and special places on the ASNF; 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, these people are reluctant to disclose the nature and location of these places.

A review of available information on designated areas and special places suggests that the ASNF contains considerable recreational, interpretive, and cultural resources. Forest GIS Staff provided specific designations and names of over 250 areas within the ASNF, including boating sites, campgrounds, picnic areas, trailheads, and wilderness areas. Additionally, the mountain ranges and water sources that characterize the ASNF are home to numerous special places for the area's numerous Native American communities.

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; however, 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 the idea of special places is complex, subjective, and often exceedingly difficult to define in a concise manner.

The methods used to identify these places were as follows. For the first category (i.e., designated areas) the Forest GIS Coordinator was asked to query the INFRA data base in order to identify the designated areas. Furthermore, many of these areas are also identified on the ASNF website found at http://www.fs.fed.us/r3/asnf/recreation/. Maps, geographic coordinates and brochures for these designated places can be found at http://www.fs.fed.us/r3/asnf/maps/.

The method used to identify the more elusive second category (i.e., undesignated special places) was to contact the Forest Archaeologist and Heritage Specialists. 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 ASNF is discussed in greater detail in the following section, Community Relationships.

7.2 Designated areas

Table 33 provides information on the designated areas within the Apache-Sitgreaves National Forests.

Table 33. Designated Areas on the Apache-Sitgreaves National Forests

Designated Area Type	Name
Boating Site	Big Lake Boating/Launch Site
Boating Site	Big Lake Marina
Boating Site	Big Lake-North Shore Boat. Day Use Area
Boating Site	Big Lake Railroad Cove Boating Site
Boating Site	Big Lake South Cove Boating Site
Boating Site	Bunch Reservoir
Boating Site	Crescent Lake Dam Area
Boating Site	Crescent Lake West Side (Store Area)
Boating Site	Fool Hollow East Launch
Boating Site	Fool Hollow West Launch
Boating Site	Lee Valley Reservoir
Boating Site	Luna Lake Boat Launch
Boating Site	Luna Lake Marina
Boating Site	Nelson Reservoir North
Boating Site	Nelson Reservoir South
Boating Site	River Reservoir - Main
Boating Site	Scott Reservoir Boat Launch
Boating Site	South Crescent Lake Boat Site
Boating Site	Tunnel Reservoir
Boating Site	Willow Springs Boat Launch
Boating Site	Woodland Lake Park
Boating Site	Woods Canyon Lake Area
Botanical Area	Phelps Cabin
Campground	Alpine Divide CG
Campground	Aspen CG
Campground	Bear Canyon Lake CG
Campground	Benny Creek
Campground	Black Canyon Rim CG
Campground	Black Jack CG
Campground	Blue Crossing CG
Campground	Brookchar CG
Campground	Brown's Creek
Campground	Buffalo Crossing CG
Campground	Canyon Point CG
Campground	Chevelon Crossing CG
Campground	Chevelon Lake CG
Campground	Coal Creek CG
Campground	Crook CG

Table 33 (cont.). Designated Areas on the Apache-Sitgreaves National Forests

Designated Area Type	Name
Campground	Cutthroat CG
Campground	Deer Creek (East Fork-Black River)
Campground	Diamond Rock CG
Campground	Fool Hollow Lake Recreation Area
Campground	Gentry CG
Campground	Granville CG
Campground	Grayling CG
Campground	Hannagan CG
Campground	Honeymoon CG
Campground	Horse Springs CG
Campground	KP Cienega CG
Campground	Lakeside
Campground	Los Burros
Campground	Lower Juan Miller CG
Campground	Luna Lake CG
Campground	Mogollon CG
Campground	Raccoon CG
Campground	Rainbow CG
Campground	Rim CG
Campground	Rolfe C. Hoyer CG
Campground	Scott Reservoir
Campground	Sink Hole CG
Campground	South Fork CG
Campground	Spillway CG
Campground	Strayhorse CG
Campground	Upper Blue CG
Campground	Upper Juan Miller CG
Campground	West Fork CG
Campground	Winn CG
CUA Camping Area	FR 171
CUA Camping Area	FR 195
CUA Camping Area	FR 9350
CUA Camping Area	Frisco Camp
Fishing Site	Aker Lake
Fishing Site	Big Lake Dam Parking
Fishing Site	Crescent Lake Point Area
Fishing Site	Hulsey Lake
Fishing Site	Lake Sierra Blanca
Fishing Site	River Reservoir South
Group Campground	Black Jack Group CG
Group Campground	Canyon Point Group CG
Group Campground	Horse Springs Group CG
Group Campground	Lewis Canyon
Group Campground	Luna Lake Group CG
Group Campground	Spillway Group CG
Group Campground	Winn Group CG
Group Campground	Woods Canyon Group CG
Group Picnic Site	Fool Hollow Day Use Area

Table 33 (cont.). Designated Areas on the Apache-Sitgreaves National Forests

Designated Area Type	Name
Horse Camp	Gabaldon CG
Information Site	Mogollon Rim Visitor Center
Information Site	Sheep's Crossing Point Parking
Information Site	White Mtn. Reservoir East Parking
Information Site	White Mtn. Reservoir North Parking
Information Site	White Mtn. Reservoir NW Parking
Interpretive Site (Admin)	Big Lake Visitor Center
Interpretive Site (Major)	Woods Canyon Amphitheater
Interpretive Site (Minor)	Big Springs
Observation Site	Blue Vista
Observation Site	Chase Creek Overlook
Observation Site	Military Sinkhole Vista
Observation Site	Pintail Lake
Observation Site	Point Of Mountain Scenic Overlook
Observation Site	Red Mtn. Overlook
Observation Site	Rim Lakes Vista
Observation Site	Woods Canyon Lake Vista
Other Rec. Concess. Site	Big Lake Dump Station
Other Rec. Concess. Site	Big Lake Shower
Picnic Site	Al Fulton Picnic Ground
Picnic Site	Bear Track Camp
Picnic Site	Black Canyon Lake Picnic Area
Picnic Site	Cherry Lodge
Picnic Site	Frisco Camp
Picnic Site	Hl Saddle Family Picnic
Picnic Site	Rocky Point Picnic
Picnic Site	Rose Peak Picnic Area
Picnic Site	Sardine Saddle Family Picnic
Picnic Site	Sheep Saddle Family Picnic
Picnic Site	Squirrel Springs Day Use Area
Picnic Site	Willow Springs Picnic Ground
Picnic Site	Woodland Lake Park
Primitive Area	Blue Range
Research Natural Area	Escudilla Mountain
Research Natural Area	Hayground
Research Natural Area	Phelps Cabin
Research Natural Area	Thomas Creek
Research Natural Area	Wildcat
Trailhead	237B Trailhead
Trailhead	Ad Bar Trailhead (#14)
Trailhead	Aker Lake/Fish Creek Trailhead
Trailhead	Alma Trailhead (#41)
Trailhead	Baseline Trailhead (#310)
Trailhead	Bear Canyon Trailhead (#46)
Trailhead	Bear Creek Trailhead
Trailhead	Bear Pen Trailhead (#32)
Trailhead	Bear Springs Trailhead (#19)
Trailhead	Bear Wallow Trailhead

Table 33 (cont.). Designated Areas on the Apache-Sitgreaves National Forests

Designated Area Type	Name
Trailhead	Big Springs
Trailhead	Big Tree Trailhead
Trailhead	Billy Creek
Trailhead	Blue Admin Trailhead
Trailhead	Blue Peak Trailhead
Trailhead	Blue Ridge #1
Trailhead	Blue Ridge #2
Trailhead	Blue River Trailhead (#101)
Trailhead	Bonanza Bill Trailhead
Trailhead	Buena Vista
Trailhead	Butler Canyon Trailhead
Trailhead	Carr Lake Trailhead
Trailhead	Cave Creek Trailhead (#10)
Trailhead	Charlie Moore Trailhead (#307)
Trailhead	Cottonwood Wash Trailhead
Trailhead	Country Club
Trailhead	Crescent Lake Trailhead
Trailhead	Divide Hill Trailhead
Trailhead	Drew Trailhead
Trailhead	Durfee Trailhead
Trailhead	Eagle Trailhead
Trailhead	East Baldy
Trailhead	East Fork Of The Little Colorado Trailhead
Trailhead	Escudilla Trailhead
Trailhead	Fish Creek Trailhead
Trailhead	Forest Lakes OHV Trailhead
Trailhead	Four-Springs
Trailhead	Fry Trailhead (#12)
Trailhead	General Crook Trailhead
Trailhead	Ghost Of The Coyote
Trailhead	Gobbler Point Trailhead
Trailhead	Government Springs
Trailhead	Grant Creek Trailhead
Trailhead	Granville Trailhead (#572)
Trailhead	Hagen Trailhead (#31)
Trailhead	Hangman Trailhead
Trailhead	Hannagan Meadow Trailhead
Trailhead	Hannagan Snowmobile Trailhead
Trailhead	Highline Trailhead (#47)
Trailhead	Homestead Trailhead
Trailhead	Horse Canyon Trailhead (#36)
Trailhead	Horse Ridge Trailhead
Trailhead	Horse Trap Trailhead
Trailhead	Horton Trailhead
Trailhead	Hot Air Trailhead (#15)
Trailhead	Ice Cave
Trailhead	Indian Springs #627 Trailhead
Trailhead	Juniper Ridge #1

Table 33 (cont.). Designated Areas on the Apache-Sitgreaves National Forests

Designated Area Type	Name
Trailhead	Juniper Ridge #2
Trailhead	Kellar Trailhead (#619)
Trailhead	KP North Fork/KP Rim Trailhead #93
Trailhead	KP Trailhead (#70)
Trailhead	Land Of The Pioneers
Trailhead	Larson Ridge Trailhead
Trailhead	Lengthy Trailhead (#89)
Trailhead	Lightning Ridge Trailhead
Trailhead	Limestone Trailhead (#84)
Trailhead	Long Draw North Trailhead
Trailhead	Long Draw South Trailhead
Trailhead	Los Burros #1
Trailhead	Los Burros #2
Trailhead	Los Caballos
Trailhead	Lower East Eagle Trailhead
Trailhead	Lower Robinson Trailhead (#27)
Trailhead	Lower Squirrel Trailhead (#34)
Trailhead	Luna Lake Bike Trailhead
Trailhead	Malay ATV Trailhead (#711)
Trailhead	Mallard Trailhead
Trailhead	Maverick Trailhead (#568)
Trailhead	McBride Trailhead (#26)
Trailhead	Meadow Trailhead
Trailhead	Merganser Trailhead
Trailhead	Mexican Hay Lake Trailhead
Trailhead	Military Sinkhole Trailhead
Trailhead	Mogollon Rim
Trailhead	Murray Basin Trailhead
Trailhead	Old Rim Trailhead
Trailhead	Painted Bluff Trailhead (#13)
Trailhead	Panorama
Trailhead	P-Bar Lake Trailhead
Trailhead	Pigeon Loop Trailhead (#301)
Trailhead	Pigeon Trailhead (#319)
Trailhead	Pintail Lake
Trailhead	Point of the Mountain Trailhead
Trailhead	Pole Knoll Parking Trailhead
Trailhead	Railroad Cove Trailhead
Trailhead	Railroad Grade Trailhead
Trailhead	Raspberry Trailhead (#35)
Trailhead	Red Hill Trailhead
Trailhead	Red Mtn. Trailhead (#25)
Trailhead	Reno Trail Trailhead
Trailhead	Rim Top Trailhead
Trailhead	Robinson Trailhead (#27)
Trailhead	Rocky Point Trailhead
Trailhead	Rose Spring Trailhead
Trailhead	Saffel Canyon OHV Trailhead

Table 33 (cont.). Designated Areas on the Apache-Sitgreaves National Forests

Designated Area Type	Name
Trailhead	Salt House Trailhead (#18)
Trailhead	Sawmill Trailhead
Trailhead	See Canyon Trailhead
Trailhead	Sheep Saddle Trailhead (#16)
Trailhead	South Fork Trailhead
Trailhead	Springs
Trailhead	Spur Cross Trailhead (#8)
Trailhead	Stateline Trailhead (#618)
Trailhead	Steeple (Only) Trailhead
Trailhead	Steeple Creek/Foote Creek Trailhead
Trailhead	Strayhorse Trailhead (#20)
Trailhead	Sunrise Trailhead
Trailhead	Tall Timbers Trailhead
Trailhead	Telephone Ridge Trailhead
Trailhead	Thompson Trailhead
Trailhead	Three Oaks Trailhead
Trailhead	Timber Mesa
Trailhead	Toboggan Hill Trailhead
Trailhead	Tutt Creek Trailhead
Trailhead	Two-o-Eight Trailhead
Trailhead	Upper East Eagle Trailhead (#33)
Trailhead	Upper Squirrel Trailhead (#34)
Trailhead	Warren Canyon Trailhead (#46)
Trailhead	Water Canyon Trailhead
Trailhead	West Baldy
Trailhead	West Fork of Black River Trailhead
Trailhead	West Fork of The Little Colorado Trailhead
Trailhead	Wildbunch Trailhead (#7)
Trailhead	Williams Valley Bike Trailhead
Trailhead	Williams Valley Snowmobile Trailhead
Trailhead	Williams Valley Trailhead
Trailhead	Willow Springs Lake Trailhead
Trailhead	Woodland Lake Park
Trailhead	Woods Canyon Lake Vista Trailhead
Trailhead	XXX Cabin Trailhead
Wilderness	Bear Wallow
Wilderness	Escudilla
Wilderness	Mt Baldy

Source: Apache–Sitgreaves National Forests GIS Coordinator
GIS and INFRA Databases

7.3 Special places

The following information on Special Places was prepared by Charlotte Tsali Hunter, Forest Archaeologist/Tribal Liaison for the Apache-Sitgreaves National Forests.

Ten federally recognized American Indian tribes are affiliated with the Apache-Sitgreaves National Forests: the Fort McDowell Yavapai Nation, the Hopi Tribe, the Navajo Nation, the Ramah Navajo Chapter, the San Carlos Apache Tribe, the Tonto Apache Tribe, the White Mountain Apache Tribe, the Yavapai-Apache Nation, the Yavapai-Prescott Tribe, and the Pueblo of Zuni. Public Law 95-341, the American Indian Religious Freedom Act (AIRFA), declares that the policies of the United States shall preserve and protect the American Indian's freedom to practice their religion. This includes the right to have access to religious sites, to use and retain sacred objects, and to conduct ceremonials and practice traditional rites on the Apache-Sitgreaves National Forests.

Most Native American belief systems exhibit a strong sense of place. Deities have visited many of the sacred places and some of these sacred places are thought to be the homes of these deities. The power of the supernatural is inherent in all of nature including mountains, plants, and animals, all of which are interdependent. Reciprocity regulates the persisting relationships between humans and all other beings. Sacred places may be places of prayer, places to collect material for ceremonies, places to gather medicine, or places to carry out other privileged, sensitive, or confidential activities which cannot be shared with the uninitiated. Visual aspects may in themselves be sacred. The responsibility to respect these sacred places is inherent in tribal belief systems. The places are known to the communities that consider them important. They are rooted in the communities' histories and pre-histories, and they are important in maintaining the continuing cultural identities of these communities. They are not necessarily regularly visited by tribal members but are known to the communities. Some tribes consider all ancestral archaeological sites as sacred sites and Traditional Cultural Properties (TCPs) as defined by the Department of the Interior.

In the ASNF, Mount Baldy, Rose Peak, and Escudilla Mountain are but a few of the sacred places. Many mountain tops have shrines but these locations are not divulged in respect for the tribes' need for confidentiality. For the same reason, specific areas which may be the ancestral home of clans are not revealed. Springs, rivers, pictograph and petroglyph panels, and places where sacred objects are found are TCPs to the Puebloan peoples and some other tribes. The White Mountains in general and the Little Colorado River are also TCPs to many of the tribes.

In the past, most ethnographic research was conducted by non-Indian contractors. More and more tribes prefer to conduct their own research and many have the needed capability. The process by which the locations of confidential sacred sites and TCPs can be designated without making the locations public has long been a difficult concept upon which the government and the tribes have been unable to agree, and it remains a challenge today. The ASNF relies upon tribal consultation and notification of individual projects to fulfill the government's obligation to preserve and protect the American Indian's freedom to practice their religion.

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 Smardon 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 this experience and the feelings they develop, but often, this is an unconscious process. The ability and opportunity to form these connections fulfills people's need 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 traditional extractive resources and the 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). According to these researchers, "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 displayed 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.

8. Community Relationships

The purpose of this chapter is to describe the relationship between the Apache-Sitgreaves National Forests (ASNF) and their neighboring communities. Knowledge of local communities is of interest to the Apache-Sitgreaves due to the importance of the reciprocal relationship that exists between the forests 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 ASNF 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 ASNF 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 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 ASNF. 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 ASNF. 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 acreage in Arizona according to current congressional districts.

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

Apache County	**http://www.azcommerce.com/doclib/COMMUNE/Apache%20County.pdf**
Eagar	http://www.azcommerce.com/doclib/commune/eagar.pdf
St. Johns	http://www.azcommerce.com/doclib/COMMUNE/saint%20johns.pdf
Springerville	http://www.azcommerce.com/doclib/COMMUNE/springerville.pdf
Coconino County	**http://www.azcommerce.com/doclib/COMMUNE/Coconino%20County.pdf**
Flagstaff	http://www.azcommerce.com/doclib/COMMUNE/flagstaff.pdf
Sedona	http://www.azcommerce.com/doclib/COMMUNE/sedona-oak%20creek%20canyon.pdf
Page	http://www.azcommerce.com/doclib/commune/page.pdf
Williams	http://www.azcommerce.com/doclib/commune/williams.pdf
Fredonia	http://www.azcommerce.com/doclib/COMMUNE/fredonia.pdf
Greenlee County	**http://www.azcommerce.com/doclib/COMMUNE/Greenlee%20County.pdf**
Clifton	http://www.azcommerce.com/doclib/COMMUNE/clifton-morenci.pdf
Morenci	http://www.azcommerce.com/doclib/COMMUNE/clifton-morenci.pdf
Navajo County	**http://www.azcommerce.com/doclib/COMMUNE/Navajo%20County.pdf**
Show Low	http://www.azcommerce.com/doclib/COMMUNE/show%20low.pdf
Fort Apache Indian Reservation	http://www.azcommerce.com/doclib/COMMUNE/ft%20apache.pdf
Snowflake	http://www.azcommerce.com/doclib/COMMUNE/snowflake.pdf
Pinetop- Lakeside	http://www.azcommerce.com/doclib/COMMUNE/pinetop-lakeside.pdf
Heber-Overgaard	http://www.azcommerce.com/doclib/COMMUNE/heber-overgaard.pdf

Source: Arizona Department of Commerce

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 Apache-Sitgreaves NF have a history of involvement with the national forests and with natural resource issues in general. East-central 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 ASNF 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 forests. 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 High Country Sentinel* (Heber-Overgaard) is a newspaper proximate to the ASNF and thus will be of special 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 Apache-Sitgreaves in many of the state's newspapers.

The keyword search (Table 36) 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 ASNF's nearest paper, *The High Country Sentinel*, is important in terms of natural resource news coverage. Furthermore, the search indicated that the Apache-Sitgreaves themselves were the subject of 278 news articles during the period examined (approximately 1999-2005 although the exact period varied by newspaper).

Table 36. Natural Resources-related Keyword Search of Six Arizona Newspapers

City:	Flagstaff	Phoenix	Williams	**Heber-Overgaard High Country**	Prescott	Tucson		
Newspaper:	Arizona Daily Sun	Arizona Republic	Grand Canyon News	**Sentinel**	Prescott Valley Tribune	Arizona Daily Star	Total	Percent of
Nearest National Forest:	Coconino	Tonto	Kaibab	**Apache-Sitgreaves**	Prescott	Coronado	Articles	Total Articles
Issues Searched:	1999-April 2005	1999-April 2005	2000-April 2005	**2000-April 2005**	2003-April 2005	1999-April 2005	Found	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 National Forests	**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 Arizona newspapers were also examined to determine the types of natural resource topics that were of interest to the public in the region surrounding the ASNF. Among the many natural resource issues of concern to the public, selected topics and their dates of publication are provided in Table 37 below:

Table 37. Selected Key Public Issues for the Apache-Sitgreaves National Forests

Topic	Date
1. Whistle blower alleges illegal pesticide use on SW NFs	April 2005
2. Poor prospects for Ponderosa pine following fire on A-S	March 2005
3. Rose Fire continues to grow on A-S	May 2005
4. Rodeo-Chediski Fire salvage hits a logjam	January 2003
5. FS limits OHV use to existing trails	April 2003
6. A-S to get thinning contract	March 2003

Source: http://www.50states.com/news/arizona.htm.

8.3 Communities of interest and forest partnerships

The Apache-Sitgreaves National Forests have many communities of interest: that is, entities that share an interest along with the Forest Service in the management of the forests. 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 ASNF. Some especially noteworthy communities of interest to the ASNF are the Native American tribes. The tribal contact list for the ASNF is found in Table 39. There are eight tribes for which the ASNF have consultation responsibilities.

Table 38. Communities of Interest for the Apache-Sitgreaves National Forests

Governmental

Apache County Board of Supervisors
Apache County Planning Dept.
Apache County Sheriff's Dept.
Arizona Dept. of Transportation
Arizona State Land Department
Arizona Department of Public Safety
Arizona Game and Fish Department
Arizona State Parks
City of Show Low
Clay Springs / Pinedale Fire Dept.
Coconino County Board of Supervisors
Elder's Council - San Carlos Apache Tribe
Greenlee County Board of Supervisors
Greer Fire Dept.
Navajo County Board of Supervisors
Navajo Cultural Splst. / Trad. Cultural Prog.
Northern Arizona Council of Government
Salt River Project
San Carlos Apache Tribe
San Carlos Game & Fish Department
Town of Eagar
Town of Pinetop-Lakeside
U.S. EPA Region 9
U.S. Congressman
U.S. Fish & Wildlife Service
U.S. Post Office
U.S. Senator
USDA - NRCS / Apache NRCD
USDA Animal Damage Control
USDA Forest Service / Forestry Science Lab
USDA, APHIS, ADC
USDI Bureau of Indian Affairs
USDI Bureau of Land Management
W. Mtn. Apache Tribe / WL & Outdoor Recr.
White Mountain Apache Game & Fish
White Mountain Apache Tribe

Educational

NAU - School of Forestry
U of A - School of Renewable Resources
University of Arizona
Utah State Univ. - National Research Library

Special Advocacy Groups

American Fisheries Society AZ-NM Chapter
American Rivers
Apache County Historical Society
Arizona Wildlife Federation
Arizonans for Wildlife Conservation
AZ Riparian Council
AZ Association of Conservation Districts
AZ Wilderness Coalition
AZ Wool Producers Assoc.
Center for Biological Diversity
Coronado Scenic Trail Association
Economic Development for Apache County
Forest Conservation Council (FCC)
Forest Guardians
Greer Property Owners Association
Land and Water Fund
Little Colorado River Plateau RC & D
Montlure Presbyterian Church Camp
National Wildlife Federation
Natural Resource Conservation Service
Northern Arizona Audubon Society
Pacific Rivers Council
Sierra Club
Sonoran Bio Diversity Project
Southwest Environmental Center
Southwest Forest Alliance
The Nature Conservancy
The Wilderness Society
Western Land Exchange Project
White Mountain Conservation League
Wilderness Watch

Media

Eastern AZ Courier
KRVZ-AM / KQAZ - FM
KVWM-AM/FM
The Raven Review
White Mountain Independent

Business

Butler Farms Inc
Chevelon Butte Cattle Co
Cooke Ranches, Inc
Crosby & Sons Land & Cattle Ltd
Dobson & Dobson Livestock
Dobson Estate
Earl Dobson Estate
Flying Box Ranch
Fort Apache Timber Co
Greenlee County Cattlegrowers
Hunter Realty and Investment Inc
Jim's Garage
Lazy YJ Ranch
Lines, Lines and Lines
Lop Ear Ranch
Luna Irrigation Company
Milky Ranch
Navopache Electric Co-op
New Mexico Cattle Growers Assoc.
Norman R. Brown Ranch
Pacific Rivers Council
Page Land and Cattle Co
Pine Graphics
Powder River Ranch
Rancho Alegre Cattle Co
Red Hill Ranch Corp
Reid Smith Trucking
Reidhead Bros Lumber Mill
Round Valley Chamber of Commerce
Schubert & Associates
Sheep Springs Sheep Company
Steve Udall Ranch, Inc
Stone Container Corporation
T Link Ranches
U.S. West Communications
URS Environ. Eng. Consulting
Western Drug
Yost Ranch

Source: D. Jevons, Planning Staff Officer, Apache-Sitgreaves National Forests

Table 39. Tribal Consultation Responsibilities for the Apache-Sitgreaves National Forests

Native American Tribes
Hopi Tribe
Navajo Nation
Ramah Navajo Chapter
San Carlos Apache Tribe
Tonto Apache Tribe
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 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 ASNF are involved in multiple partnerships that contribute to forest health and fire management, the construction of community infrastructure, economic involvement with natural resources, and issues involving Native American peoples and tribes. 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 ASNF 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/
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/

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

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/
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 Apache-Sitgreaves National Forests

Apache County
Apache Natural Resource Conservation District
Arizona Department of Corrections
Arizona Department of Environmental Quality
Arizona Department of Transportation
Arizona Department of Water Resources
Arizona Game and Fish Department
Arizona State Land Department
Arizona State Parks
Arizona State University
Arizona Wilderness Coalition
Chevelon Butte Cattle Company
Coconino County
Coconino County Sheriff's Office
Coconino Rural Environment Corps
Collins Park Milling, LLC
Eagar, Town of
Eastern Arizona Counties Resource Advisory Comm.
Environmental Economic Communities Organization
Environmental Forest Solutions
Federal Land Exchange, Inc
Fernau, Rick and Kim
Garrett, Dave, Dr.
Genesis Real Estate & Development, Inc
Gila County
Greenlee County
Gust, Morgan
Heber-Overgaard Fire District
High Country Green Waste
Hopi Tribe
Kent State University
Kohany, Patty
Little Colorado River Plateau RC&D
Mountain Top Wood Products
Mt. Graham Regional Medical Center
National Arbor Day Foundation
National Wild Turkey Federation
Natural Resources Working Group
Nature Conservancy
Navajo County
Navajo County Natural Resource Conservation Dist.
Navajo County Sheriff's Office
Northeastern Arizona Fire Chief's Association
Northern Arizona Natural History Association
Northern Arizona Wood Products Association
Nutrioso Contracting
Old Woodland Log Accents
Pinetop-Lakeside, Town of
Precision Components, Inc
Prowlers Off Road Organization
Public Lands Interpretive Association
R.E.B. Properties
Recreation Resource Management of America, Inc.
Rim Community Library Corporation
Rocky Mountain Elk Foundation
Round Valley Chamber of Commerce
San Carlos Apache Tribe
Springerville, Town of
Student Conservation Association
Tonto Weed Management Area, Inc
University of Arizona
University of Virginia
US Department of the Army, Corps of Engineers
US Department of the Treasury, FEDSOURCE
USDA Natural Resource Conservation Service
USDI Bureau of Indian Affairs
USDI Bureau of Land Management
USDI Bureau of Reclamation
USDI Fish and Wildlife Service
USDI National Park Service
USDOT Federal Highways Administration
W.B. Contracting, Inc
Webb Ways, Inc
White Mountain Apache Tribe
White Mountain Stewardship Monitoring Board
Youth Corps of Southern Arizona

Source: R. Dyson, Apache-Sitgreaves NF

8.4 Historically underserved communities and environmental justice

This section deals with special communities located near the ASNF 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 ASNF 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). In 2000, Native Americans were the largest minority group in Apache, Coconino County, and Navajo Counties (76.88%, 28.51%, and 47.74% respectively) while Hispanics represented the predominant minority group in Greenlee and Catron Counties (43.07% and 19.42% respectively). Note that individuals claiming Hispanic heritage may also claim identification with other ethnic and racial groups and be counted in those categories as well. As of 2000, individuals of Hispanic origin accounted for 25.25% of the statewide population.

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 ASNF 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 Businesses by County, 2002

County	All Businesses	Total Minorities	African American	Native American	Asian or Pacific Islander	Hispanic	Women
Apache	4,855	1,404	-	1,202	-	-	1,189
Coconino	17,940	2,456	-	1,046	341	927	5,339
Greenlee	697	-	-	-	-	-	-
Navajo	10,045	1,884	-	1,393	-	357	1,977

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 affect 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, low-income people, and 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. Frentz 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 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 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 ASNF's social linkages is 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 ASNF (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 Apache-Sitgreaves; 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 which effectively describes the actors and relationships in the Apache-Sitgreaves' 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?

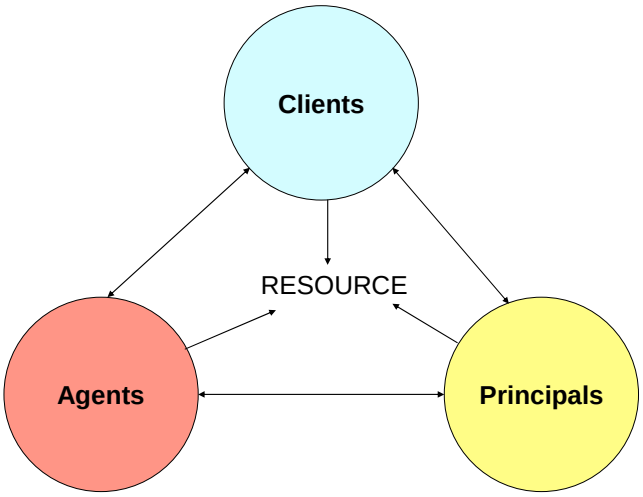

Figure 20. Social Networks in Natural Resource Management

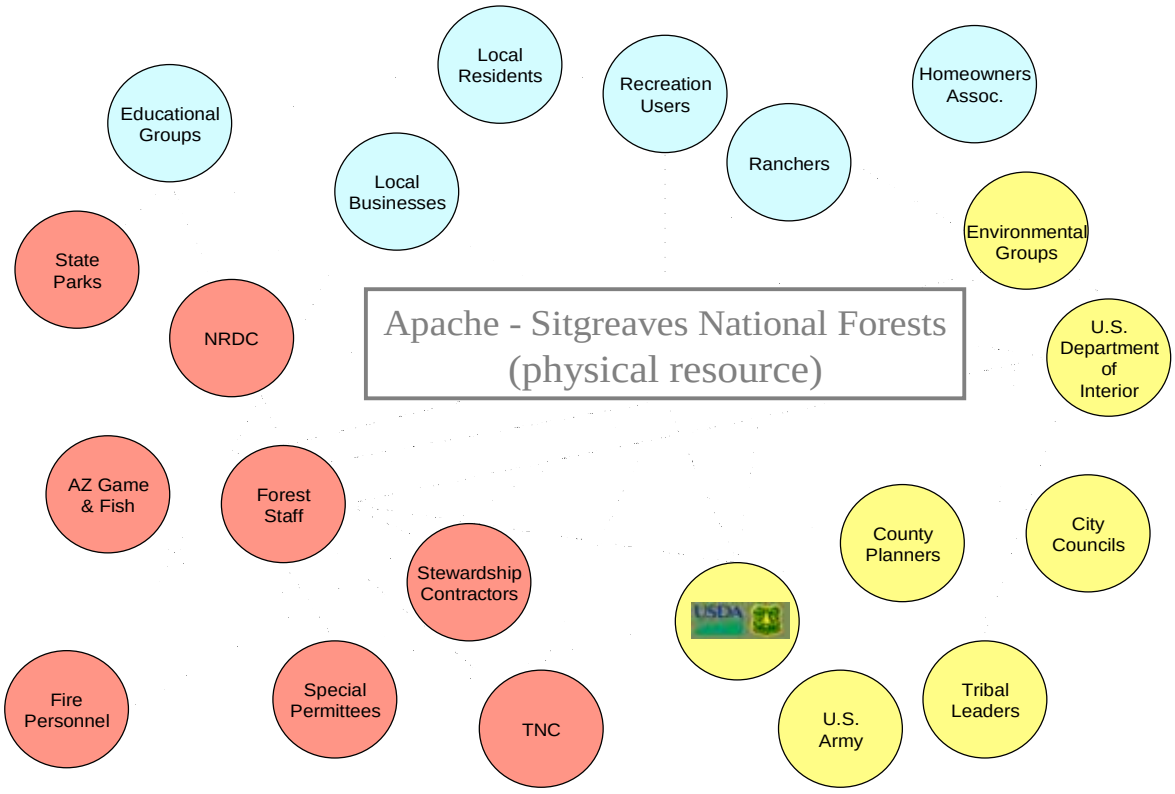

Figure 21. Partial Social Network for the Apache-Sitgreaves National Forests

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, Kruger 2003).

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 affect on communities (Kruger 2003).

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” (Kruger 2003). Evidence of the dynamic nature of relationships between the ASNF and various groups, individuals, and organizations is found in ongoing debates over the preservation of open space, the administration of recreation and grazing fees, and the protection of water resources and wildlife.

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 relations needs 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*—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 ethic 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 Apache-Sitgreaves National Forests face as they take positive steps to respond to a rapidly-changing demographic, political, and physical environment.