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The San Gorgonio Wilderness: A history of human presence and implications for management

Cynthia Jeanne Holman

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THE SAN GORGONIO WILDERNESS: A HISTORY OF HUMAN PRESENCE AND IMPLICATIONS FOR MANAGEMENT

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Education:
Environmental Education

by
Cynthia Jeanne Holman
June 2006
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ABSTRACT

The San Gorgonio Wilderness in Southern California is surrounded on three sides by roads, and receives thousands of visitors each year. Its character as a wilderness is threatened by the large populations of people nearby, as well as the humans who venture into its boundaries. This project outlines the history of human presence in the wilderness and describes the impact of that presence. There is a discussion of attempts by various organizations to mitigate that impact and deal with the increasing numbers of visitors. The project concludes with predictions and suggestions for the future of the San Gorgonio Wilderness.
DEDICATION

This paper is dedicated first to my father, Lt. Col. Charles M. Floyd (USAF Retired), who instilled in me a love of all wilderness, especially the mountains and canyons of the American Southwest.

Secondly, I’d like to recognize the men and women of the San Gorgonio Wilderness Association, with whom I proudly serve. Without them, the special place we love and protect would be just another patch of overused forest.
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CHAPTER ONE
INTRODUCTION

In order to assure that an increasing population, accompanied by expanding settlement and mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of wilderness. (The Wilderness Act, 1964, p. 1)

Context of the Problem

Only a small percentage of the American population has ever experienced a night in a wilderness, away from the lights and sounds of civilization. I have been one of the lucky ones, having spent dozens of nights in a sleeping bag next to a stream, or in dry desert wash, or on the side of a 14,000-foot peak. The peace and beauty of the wilderness provide a rejuvenation of the spirit that has kept me going back again and again. But the more I go to the wilderness, the more I see the changes: the deeper
ruts in the trails, the proliferation of blackened campfire circles, the increasing number of visible signs of human contact. There are other changes not visible to the human eye: the effects on wildlife as their habitats are encroached upon more and more, and the pollution of the once-pristine water sources, requiring that water be filtered in order to drink it.

The San Gorgonio Wilderness is literally in my backyard—I live one-half mile from the popular Vivian Creek Trailhead. Thousands of hikers go up that trail every summer, and I have seen the signs of their passing: discarded cans and bottles, food wrappers, cigarette butts, and pieces of broken camping gear. A century ago prospectors came into the San Gorgonio Wilderness, leaving behind the remnants of a water flume and rusted mining equipment. In the centuries before the prospectors, the Cahuilla Indians lived here, though little evidence remains of their impact. The future will see even more visitors—the number of people who backpack and hike has grown tremendously. Surrounded on three sides by roads, and within an hour’s drive of several million people, the San Gorgonio is practically an island of wilderness in a sea of humanity. This humanity will continue to encroach on the foothills surrounding the wilderness, and I believe
it is only the rules written by Congress in establishing the wilderness that will ensure its future.

I spent the summer of 2005 working as a volunteer ranger for the San Gorgonio Wilderness Association. In addition to spending several days along the heavily-traveled South Fork Trail, I helped staff the Big Falls Station near the Vivian Creek Trailhead. While many of the visitors I encountered were experienced and knowledgeable, I met an equal number of people who have never been to the wilderness, have never hiked a trail alongside a clear mountain stream, and were new to the concept of leaving civilization behind for the wilderness experience. I learned that when given explanations for regulations, or shown damage caused by failure to heed those regulations, people are much more willing to obey them. Wilderness managers can make rules and regulations regarding wilderness usage—they can limit numbers of hikers, size of parties, length of stay, and other such restrictions, but it is only through educating the visitors about the reasons for those regulations that there can be any expectation of compliance, or any expectation that the people who come to the wilderness will also be its protectors. The ultimate goal for this project is to show not only that it is important to
protect, manage, and restore the wilderness, but that it cannot be done without providing the public a foundation for understanding the necessity of wilderness.

Organization of the Project

The first section of this paper discusses the history of humans in the San Gorgonio Wilderness, from the first visitors, the Cahuillas and Serranos, who inhabited the lower elevations of the San Bernardino Mountains, to the present-day visitors, the hikers and backpackers. This history includes the physical impacts made on the wilderness by centuries of human visitation, such as water flumes, buildings, and survey markers. Since many of the marks made upon the wilderness are in conflict with the definition of wilderness, it has become necessary to address the human impact in order to both restore and maintain the character of the wilderness.

Early leaders of the wilderness movement, men like John Muir, Aldo Leopold, Arthur Carhart, and Robert Marshall, were concerned mainly with the setting aside of pristine lands as wilderness; their focus was on designation and protection. During that time, few people came to the San Gorgonio Wilderness. In the last 50 years, use of the wilderness by hikers and campers has exploded,
along with the physical impacts of the increased visitation and the booming growth of the population around the wilderness boundaries. An entire industry has been built around the wilderness experience, necessitating a shift in focus from designation and protection to management. As more and more visitors come to the San Gorgonio Wilderness, its very nature as a wilderness is threatened. The overused campsites will continue to deteriorate and the trails will continue to be used by hundreds of hikers each week, who leave behind their footprints, their trash, and their waste. Therefore, Chapter Four describes the activities of various organizations and agencies in attempting to mitigate the human impact. Numerous changes have been made both physical and regulatory, that have either restored the wilderness or lessened the impact made upon it.

Chapter Five discusses predictions and recommendations for the future of the wilderness and what it will take for it to retain the qualities that make it special. In addition to careful regulatory and physical management, environmental education will play a crucial role in the future of the wilderness. The outreach efforts of the institutions which have regulatory oversight must
include educating the visitors who utilize the wilderness and who can assist in its management.
CHAPTER TWO

METHODOLOGY

When I first decided on the San Gorgonio Wilderness as the topic for this project, I was living next to its southern boundary, but knew very little about its history, its physical characteristics, or the people who were dedicated to preserving it. I knew that I was going to not only conduct traditional research for the history portion, but I was going to have to find ways to become intimate with the wilderness itself, and make connections with people in the various government and volunteer agencies that are responsible for its management.

I began by reviewing my dog-eared copy of John Robinson's San Bernardino Mountain Trails, as I knew he discussed the history of the San Bernardino Mountains in the first section. I then purchased my own copy of his well-known book, The San Bernardinos, which I used as the foundation for further research.

The Heritage Room of the Smiley Library in Redlands was the source of a great deal of information about the 1800s and early 1900s, providing books, pamphlets, and typewritten manuscripts about mining, ranching, sheepherding, early tourism, movie-making, institutional
campgrounds, and skiing. The Pfau Library at California State University, San Bernardino, had in its archives several texts on early ranching in the San Bernardino Mountains, as well as several important government documents.

The Internet was the next source for information. This stage of research required at least 30 hours at the computer, and yielded many valuable sources for historical information, as well as information about the government and volunteer organizations which were responsible for management and protection of the San Gorgonio Wilderness. The San Gorgonio Wilderness Association website led me back to John Robinson, who had written a lesser-known book titled *San Gorgonio: A Wilderness Preserved*. This book filled in some of the blanks in the history I had compiled, and provided specifics about the battles against the developers and the passage of the Wilderness Act.

Once I was able to construct a chronological history of human presence in the wilderness, I knew I had to connect that presence to impact and to the current condition of the San Gorgonio Wilderness. During my research on the Internet, I learned of the existence of the San Gorgonio Wilderness Association (SGWA), and decided not only to become a member, but to train to be a
volunteer ranger and work in and near the wilderness.
Through the training and a summer of work with the organization, I learned first-hand the challenges faced by the Forest Service and the SGWA and made the acquaintance of several key people who would prove to be invaluable resources for the project. Interviews, conducted one-on-one and via the Internet, provided information about the physical condition of the wilderness that could not be obtained through any other method. In addition, some of these individuals taught me about the forms of public education being utilized by the SGWA in its mission of protecting and managing the wilderness. I will be continuing my role as a volunteer ranger again during the summer of 2006, and will therefore become part of the mitigation that I believe is so vital to the future of the San Gorgonio Wilderness.
CHAPTER THREE

THE HISTORY OF HUMANS AND HUMAN IMPACT

IN THE SAN GORONIO WILDERNESS

The Native Americans

Perhaps the first humans to visit the San Gorgonio Wilderness were the Serrano Indians, who lived on the southern and northern slopes of the San Bernardinos. Archeologists have uncovered several rancherias that are close to the Wilderness: Yucaipat, located east of present-day Yucaipa, Apuritaimibit, near Seven Oaks on the Santa Ana River, and Kutcaviat, on the upper Santa Ana River near the confluence of Converse Creek.

The Cahuillas also had village sites near the Wilderness, mostly on the eastern side of the mountains near the Whitewater River. During the winter, the Cahuillas and Serranos stayed in their lower-elevation villages, but in the warmer months they traveled into the mountains to gather piñon nuts, berries, and acorns, and to hunt the abundant wildlife that lived in the San Bernardinos. It is probable that some of them ventured into the areas now within the Wilderness boundaries (Bean & Vane, 1981). A network of trails was created by the Native Americans for hunting, food-gathering, and trading.
These pathways were used for centuries by desert Indians to trade with peoples living in the San Bernardino Valley and coastal plains (Robinson, 2003). Many of these pathways crossed the San Gorgonio Wilderness boundaries and led up into the meadows and streams of the higher elevations.

**Lumbering**

The first known lumbering in the San Bernardino Mountains came about from the need for timbers to support the roof of the San Bernardino Asistencia, an early Catholic mission (Beattie & Beattie, 1951). Father Zalvidea of Mission San Gabriel established the San Bernardino Rancho in 1819 in present-day Loma Linda. Its purpose was to establish the Catholic Church’s presence in the San Bernardino Valley and to instruct the local Indians in agriculture and stock raising. A storehouse that was built as part of the rancho most likely had timber beams as roof supports, and it is probable that the padres and the Indians used lumber in Mill Creek Canyon. While there is no direct evidence that lumbering occurred this early in the canyon, a zanja, or irrigation ditch, was dug from the mouth of Mill Creek Canyon to the rancho around 1820 (Robinson, 1989).
In 1831, a trapper named William Wolfskill needed a ship built so he could hunt sea otter off the Los Angeles coastline. He arranged to obtain his lumber from the same sawmill in Mill Creek Canyon (Clarr, 1959).

The Mormon Battalion was initially stationed in Cajon Pass in January of 1847 to prevent passage of marauding Indians or whites. They carried with them back home to Utah tales of the resources of the San Bernardino Valley, leading the way for the Mormon colonists who came in 1851. Later on in 1847 members of the Battalion were ordered to cut timber from the San Bernardino Mountains to fashion a flagpole for Fort Moore in Los Angeles. Historian J.M. Guinn stated,

Contract was let to Juan Ramirez to bring timber from the San Bernardino Mountains. Ramirez, with Indian laborers and an escort of ten Mormon soldiers, repaired to the headwaters of Mill Creek where he found suitable timber. He brought down two tree trunks, one about ninety feet and the other seventy-five or eighty feet long, fastened to the axles of a dozen old carretas, each trunk drawn by twenty oxen with and Indian driver to each ox. (1898, p. 145)
Following the arrival of the Mormon colonists, Mill Creek Canyon again became a prime source of wood. In 1953 a water-powered mill was built on the south side of Mill Creek a little west of Forest Home by Mormons Amasa Lyman, Charles Rich, and Theodore Thorpe (Robinson, 1989). It supplied lumber for nearly 10 years until a flood destroyed it in 1862. Lumbering had been done on both sides of the creek upstream as far as Big Falls, close to the present-day wilderness boundary (Beattie & Beattie, 1951). Mormons Amasa Lyman, Charles Rich, and Theodore Thorpe built a sawmill on Mill Creek immediately downstream from present-day Forest Home in May 1853. They used timber from the upper Mill Creek canyon, and some of the men working the mill may have ventured into the wilderness.

In 1883, a sawmill was established on Raywood Flat, in the southern part of the wilderness, by two men named Frazer and Kelly. Their sawmill operated for a few years, and evidence remains today of their four-mile flume which drew water from the south fork of the Whitewater River (Robinson, 1989).

The lumber industry was responsible for a great deal of damage to the once-pristine forest.
There was little or no regard shown by the lumber men toward practicing any methods of conservation. Only a small portion of each tree was used for lumber and the rest was left to decay. This ruinous cutting also created other problems. Streams were polluted with sawdust from the sawmills and silt from the barren eroding hillsides, with the result that the native trout that habitated [sic] the streams could not survive. (Johanneck, 1975, p. 13)

Since the denuded slopes could no longer hold the soil in place, flooding resulted which caused serious damage in the San Bernardino Valley. Fires also took a great toll up in the forest. Once a fire got started, there was little that could be done except to let it burn itself out.

Ranching

Cattle and sheep grazing developed in the San Bernardino Mountains around the same time as the lumbering. In 1856, surveyor Alvin Stoddard was directed to survey land in upper Mill Creek Canyon. On October 17, 1857, a preemption claim was recorded, with the land to be used for sheep grazing (Robinson, 1989).
Numerous sheep claims also existed on the upper Santa Ana River, extending into the wilderness boundaries. Dr. Benjamin Barton and Matthew Lewis pastured sheep in the area, and Charles F. Martin registered the "Heart Bar" brand in 1884 near present-day Heart Bar Campground. The meadows and brushland of the upper Santa Ana River were used for cattle grazing by brothers James B. and William S. McHaney during the first half of the 1880s (Robinson, 1989).

In 1907, Al "Swarty" Swarthout bought a half interest in the Heart Bar Ranch with Charlie Martin. After several changes in ownership from 1914 to 1921, with Swarthout selling and then buying back his half interest, the other half interest was purchased by San Bernardino businessman J. Dale Gentry. The cattle operations at Heart Bar expanded during the 1920s, since beef was in great demand. Swarty and his cowboys took their cattle through the northeastern part of the wilderness, driving them up Fish Creek, over the divide east of San Gorgonio Peak, and down Mission Creek to the loading pen at the Whitewater Station of the Southern Pacific Railroad, where they were shipped east (Hansen, 1973).
Hunting and Fishing

As early as the 1860s, local residents saw the attractiveness of the wilderness for hunting and fishing. Captain Lorin Shaw Jenks, built an earthen and log dam across a small creek in Barton Flats, and formed a small lake. He dug a ditch from Slushy Meadows (also known as South Fork Meadows) to divert some of the water in the South Fork of the Santa Ana. By 1878, his lake was marked on a survey map of the area and was reported in the Los Angeles Star of January 18, 1879 as "the largest fish pond in California" (Robinson, 1989, p. 198). While most of the fishing was limited to Jenks Lake and the Santa Ana River outside the Wilderness boundary, hunters were successful in bagging deer within the Wilderness for many decades.

The upper Santa Ana River became known as a prime trout fishery in 1869. Robinson (1989, p. 197) reported that the San Bernardino Guardian described a party that went "to the head of the Santa Ana and brought back near a wagonload of fish and eight deer." In 1871, two anglers caught 60 trout in two hours, and another pair of anglers landed 90 trout in a day. He further stated that in 1873, two San Bernardino residents "packed into the basin and caught 300 trout in one day" (Robinson, 1989, p. 197). While the upper Santa Ana still has trout, its native
population has all but disappeared, and the fishery is maintained only through periodic stockings by the California Department of Fish and Game.

**Mining**

In April of 1860, the gold rush began in what is now called Holcomb Valley, northwest of Big Bear Lake. Bill Holcomb started it all with his discovery of the valley while following a wounded bear. Returning to the valley with friends in order to search for more bear, Holcomb and his friends tried their hands at panning, and discovered some gold in their pans (Adams, 1996). Hundreds, perhaps thousands of miners soon descended on the area. As years passed and claims played out and were abandoned, the search for gold moved outward from Bear Valley. Mining occurred east of Broom Flat, close to the northeast boundary of the San Gorgonio Wilderness (Burke, 1992). One well-known mine is located at approximately 9,600 feet on what is now called Mineshaft Flats.

Another mining-related industry that briefly operated near (and possibly in) the Wilderness was marble quarrying. As early as 1888, quarrying took place on the north slope of Mill Creek Canyon three miles above Forest Home. The rock was used for building in Redlands. The
Cassin Marble Company purchased the claim in 1891, and in 1908 and 1909 the California Marble Company build a road to the canyon head. The company erected buildings and installed a “tramway from the quarry site, 300 feet up the north slope between Vivian and High creeks down to a rock bin on the canyon floor. Here the marble was loaded for shipment—first into wagons and later into trucks” (Robinson, 1989, p. 209).

An Environmental Working Group assessment of government land use records shows that mining, oil, and gas industries control numerous claims on public lands in or near San Gorgonio Wilderness. Currently, there are two “Tier 2” and two “Tier 3,” control claims within the wilderness boundaries. “Tier 2” control is land controlled by industry, or current mining claims. “Tier 3” control is land on which a claim has been abandoned or the operations are defunct. Fifty-two “Tier 4” control sites exist, which are mining claims formerly claimed by industry (Environmental Working Group, 2006). Today, hikers can see the remnants of two former mines, one located at the aforementioned Mineshaft Flats, and the other, called Mill Creek Mine, located on the north slope of Mill Creek Canyon about 100 yards up a steep slope. Scott Gardner (personal communication, February 11, 2006) stated that
all that remains of the mine at Mineshaft Flats is a small (approximately 10 feet x 10 feet) depression, and a few timbers. The Mill Creek Mine is visible today to hikers who continue east up the creek instead of taking the Vivian Creek trail north into the Wilderness.

Hydroelectric Power

The waters of Falls Creek, which end in a 240-foot waterfall now called Big Falls, were once targeted for hydroelectric power. Cyrus G. Baldwin and his associate Arthur W. Burt filed on water rights to Falls Creek (then called the North Fork of Mill Creek) in 1892, and soon realized they would need additional water sources to generate sufficient electricity to make their project worthwhile. They expanded their project to include all the waters along the north side of upper Mill Creek Canyon. In 1898, a line was surveyed for a "gravity flume and pipeline from High Creek to Vivian Creek, Falls Creek, Alger Creek, and Lost Creek, then a penstock down to a proposed powerhouse on the north side of Mill Creek opposite Forest Home" (Robinson, 1989, p. 223). Brothers John and Will Dobbs were hired to tunnel through the west ridge of Falls Creek and to dig a flume westward to Alger Creek. Though the grandiose project eventually failed,
remains of the cabin built by the Dobbs brothers can be seen near the original site high up on the north canyon above the east bank of Falls Creek, about a hundred yards downstream from Dobbs Trail Camp. Remnants of the Dobbs' flume still can be seen along most of the length of the Momyer-Alger Creeks Trail (Robinson, 1989).

The southeastern portion of the San Gorgonio is made up of recently-added lands which came with the passage of the California Wilderness Act in 1984. These lands surround the upper stretches of the Whitewater River, San Gorgonio River, and Mission Creek. In 1906, the Consolidated Reservoir and Power Company, located in Los Angeles, filed on water rights to the Whitewater's east and south forks. The company planned to divert water into Banning Canyon, build two hydroelectric plants, and flume the water to the Banning Bench to irrigate crop lands. Construction on various portions of the project took place from 1911 to 1917, when the Whitewater diversion conduit was irrigating 2500 acres on the Banning Bench. Two new powerhouses were completed in 1923 in Banning Canyon, but their usefulness dimmed in the last half of the 20th century (Robinson, 1989).
First Ascents and the Influx of Visitors

The first recorded ascent of a peak in the San Gorgonio Wilderness by a non-Native American most likely occurred in the fall of 1852. Colonel Henry Washington, a deputy surveyor for the United States government climbed San Bernardino Peak to erect a monument for survey use. Since the peak could be seen from as far away as Los Angeles, it was chosen as the initial point for the Army Corps of Engineers to establish an east-west base line. Colonel Washington, a deputy surveyor named Gray, and 11 workmen made the climb up the north slope of San Bernardino Peak. About a half-mile west of the true summit, they constructed a wooden monument 23 feet, 9 inches in height on November 7. Since the shimmering heat waves from the valley made it difficult to obtain true fixes on distant triangulation points, Colonel Washington lit several fires on the top of the peak, which were seen by the colonists in the valley below. In addition, fires were built at other triangulation points, and the surveying was successful (Robinson, 1989). On November 8, those with spyglasses could see his flag waving on the top of Mount San Bernardino (Beattie & Beattie, 1951). In 1949, as part of San Bernardino’s “Covered Wagon Days,” Colonel Washington’s bonfires were recreated by a group
representing the U.S. Army, the U.S. Forestry Service, the San Bernardino Argonaut Club, and including film star (and Highland resident) Edward Arnold. They used magnesium flares, which misfired, causing a huge explosion that was visible in San Bernardino (Richardson, 1977).

In the present day, all that is left of the monument built by Colonel Washington is a pile of rocks with logs, or wooden posts, set vertically in the middle and about the pile. The tallest one is in the middle. There are some rusted metal pieces on the monument as well. There is also a burn scar, most likely from the magnesium flare explosion from 1949 (Sharon Barfknecht, personal communication, February 17, 2006).

The first recorded ascent of San Gorgonio Mountain was made by W. A. Goodyear of the California Geological Survey and Mark Thomas of San Bernardino on June 2, 1872. While controversy remains as to whether they actually climbed San Gorgonio Mountain or nearby San Bernardino Peak, their attempt is recognized as the first successful ascent of San Gorgonio. By the late 1870s, climbs to the summit of San Gorgonio became commonplace (Robinson, 1989). By 1894, guided groups were being led up both San Gorgonio and its neighbor to the west, San Bernardino Peak. New trails and wagon roads soon followed (Gordon &
Saffle, 1996). Most hikers used the route still popular today: starting at Barton Flats, up to South Fork Meadow, southeast to Dollar Lake, and then up the long west ridge of Mount San Gorgonio to the summit. In 1875, a report appeared in the San Bernardino Guardian of July 3 of the first overnight stay at the summit. A party led by Hiram Barton achieved that feat during a week-long excursion into the wilderness (Robinson, 1991). Since pollution was unknown in southern California during the 19th century, climbers could see as far west as Catalina Island off the coast of California, as well as hundreds of miles in all directions (Brown & Boyd, 1922).

Vincent Taylor discovered a little marshy valley under the north shoulder of Mount San Gorgonio in 1883, and dammed its outlet with rock and timber. This formed what is today called Dry Lake. He intended to build a resort cabin, but never did so. Dry Lake in recent years has been wet due to a couple of wet winters. In drought years, the meadow remains dry (Robinson, 1991).

In 1888, Thomas Aker built a tent camp in upper Mill Creek Canyon, and opened it as a resort first called Aker’s Camp, but then renamed Forest Home. He hired Thomas Dobbs and brothers Albert and Martin Vivian to lay out scenic trails up into the mountains for his guests to
hike. Robinson (1989) described the fishing in Mill Creek as excellent, and mentions that hunting for deer, bear, and bighorn sheep was also popular.

In 1898, the steep but popular Vivian Creek Trail was built. The trail originates in the upper end of Forest Falls and climbs up the south face of Mount San Gorgonio. Several years before, Peter Forsee had hacked a trail up in the same place, but now Aker, who had built Forest Home in 1888, wanted to stimulate interest among his guests in climbing the peak. He hired a labor crew under the guidance of a Yucaipa man named Albert Vivian. Vivian's crew used burros to assist in the construction of the trail, and completed it by September (Robinson, 1991).

Brothers Max and Perry Green of the Lake Arrowhead Water and Power Company were responsible for bringing the first crowds of tourists into the San Bernardino Mountains. While hauling supplies to support the building of the dam at Little Bear (now Lake Arrowhead) in 1914, they began carrying passengers in addition to the supplies. More and more people demanded passage into the mountains, so their operation expanded first in number, increasing to five multi-passenger vehicles, then in distance. "In 1915 the Greens extended their route all the way to Big Bear Lake, transporting as many as 400
passengers a week to its popular campgrounds” (Robinson, 1989, p. 141). By 1917, they were running routes all over the San Bernardino Mountains, “including three lines from Redlands—one to Forest Home, a second to Seven Oaks, and the third to Pine Knot Post Office in Big Bear Valley” (Holladay, 1987, p. E4). One can safely assume that some of these passengers disembarked along the way with their ultimate destinations being the trails, ridges, and valleys of the San Gorgonio Wilderness.

The Movie Industry

Even the Hollywood movie industry was a catalyst for bringing people into the Wilderness. “Eyes of the World,” shot in 1917, was filmed by the Clune Film Producers, who erected a set in upper Mill Creek Canyon near Forest Falls. In 1919, Mary Pickford’s production company shot “Heart O’the Hills” in Forest Falls. Portions of “Sutter’s Gold,” starring Edward Albert, were shot at Barton Flats. At least 100 films were shot either in part or wholly in the San Bernardino Mountains, most of them at Lake Arrowhead and Big Bear Lake. A few, however, utilized the lower slopes of the San Gorgonio Peak massif, and some scenes may have been shot in the wilderness itself. At any rate, having large numbers of people living and working in
such close proximity to the mountains most likely could have led to some of those people venturing into the Wilderness for fishing, hiking, and other forms of recreation (Cozad, 2002).

Recreational Use Expands

The Barton Flats area was developed as a major recreational area during the 1920s. In addition to several huge Forest Service Campgrounds, numerous church and youth-oriented organizations leased sites in Barton Flats and built huge camps. The increasing number of visitors to the area included hikers and climbers who made their way up the South Fork, Forsee Creek, and other trails into the Wilderness. During that time, the Barton Flats area also began to be developed as an underground water storage area. The Tri-Counties Restoration Committee, led by Francis Cuttle, repaired the Jenks Lake dam and rehabilitated the ditch Captain Jenks had dug from Slushy Meadows to the lake. Their work was taken over by the Bear Valley Mutual Water Company in 1927 and has continued the operation to the present day (Robinson, 1989).

In 1923, Harry James led 185 boys from the Western Rangers, a boys’ outdoor club, in a climb to the summit of San Gorgonio Peak. At the summit, one of the boys
expressed his concern that the area surrounding the mountain would soon be spoiled by development. James was inspired to propose to the Angeles National Forest Supervisor Rushton S. Charlton that the area be preserved as a wilderness. Charlton had already begun plans for massive development in the San Bernardino Mountains, but his plans were halted in 1929 by the announcement that the San Gorgonio high country would be protected as part of the new San Gorgonio Recreation Area. In the new recreation area, 11,800 acres were set aside where no roads would be allowed and only trails would be used for access by hiking parties. This area was expanded by an additional 20,000 acres in April of 1931, when the San Gorgonio Recreation Area was reclassified as the San Gorgonio Primitive Area (Gordon & Saffle, 1996).

Trail building and campground improvement began in 1933 with the enactment of President Franklin D. Roosevelt’s emergency relief measures, which included the establishment of the Civilian Conservation Corps (CCC) in April. Six CCC camps were built in the San Bernardino Mountains, and three served the future wilderness area: Camp Radford, Mill Creek Camp, and Banning Canyon. The crews of the CCC camps built campgrounds, roads, trails, telephone lines, and firebreaks, and sometimes fought
fires. A Forest Service crew from Big Bear Lake led by Ranger Harvey Robe constructed Dollar Lake Trail Camp in August 1934. This camp was the first one created within the primitive area, and contained tables, stoves, and sanitary facilities (Robinson, 1991).

Skiing and the Creation of the Wilderness

By 1931, local skiers had discovered the slopes of San Gorgonio Peak. The first known ski ascent of the mountain was on February 3 by Claremont photographer Loyd Cooper and three Pomona College students, George Gibbs, Bill Cover, and Murray Kirkwood. By 1934, hundreds of skiers were using the north slopes of San Gorgonio. They had to climb by foot up from Barton Flats, carrying their skis, and some camped in tents in South Fork Meadows (Robinson, 1989, p. 229). As recently as 1962 A hut called the Alpenglück existed near the Big Draw; it was outfitted with a stove, wood, blankets and food. In 1964, it was no longer there (Subcommittee on Public Lands of the Committee on Interior and Insular Affairs, 1965).

The Edelweiss Ski Club was born on the slopes of Mount San Gorgonio in the winter of 1934-35. It had 15 members at the beginning. In each of the 30 years since its founding [this statement was made in 1964], club
members have skied on Mount San Gorgonio and the surrounding mountains. The only known long-term record of snow conditions in this wilderness area appears in its logbook—admittedly somewhat lighthearted and sketchy—which was kept for many years at a crude shelter which the club maintained near the 10,000-foot elevation on Mount San Gorgonio (Subcommittee on Public Lands of the Committee on Interior and Insular Affairs, 1965). By the early 1940s, six or seven crude shelters were in existence in the flats and draws below the ski slopes, none of them approved by the Forest Service (Robinson, 1991). Harry James, who in 1994 spearheaded the effort to have the San Gorgonio area named a national monument, noted, “Present conditions in the Valley of a Thousand Springs...are deplorable....One slope of the mountain has been almost denuded of a fine stand of young trees to make way for a ski run. Half a dozen to a dozen shacks and shanties have been constructed through the area as overnight shelters for skiers. There are naturally no provisions for toilets or for the disposition of rubbish and garbage” (Robinson, 1991, pp. 87-88).

Following requests in 1946 from the California Ski Association and the California Chamber of Commerce to open up the San Gorgonio Primitive Area for winter sports
development, the Forest Service held public hearings in 1947. On June 18, 1947, Chief Forester Lyle Watts "rendered a decision denying ski development within the wilderness, but deleting 1,400 acres from the Primitive Area just above Barton Flats to allow construction of a road to Poopout Hill" (Robinson, 1989, p. 231). This decision would eventually lead to Congressional hearings in 1964, which were followed by a decision to delete 3,500 acres from the San Gorgonio Wild Area in order to permit ski development. The skiers' victory was short-lived, however, as passage of the 1964 Wilderness Act restored all of the Wild Area to full protection. President Lyndon Johnson signed the Act on September 4, 1964, and the Wild Area was renamed the San Gorgonio Wilderness (The Wilderness Act, 1964).

The idea that the north slopes of San Gorgonio Mountain should be open to skiing became an issue once again during the 1960s. A hearing was held in San Bernardino in 1965 to receive testimony concerning H.R. 6891, a bill that would have provided for family winter recreational use of the north side of the San Gorgonio Wilderness. Statements were provided by 232 witnesses. Wesley Break, a member of the San Bernardino County Board of Supervisors, testified about the need to keep the water
sources in the San Gorgonio Wilderness pure, and emphasized that the Board was unanimously opposed to the bill. Also in 1965, the California Department of Parks and Recreation proposed turning the Heart Bar area into a State Park, and included in their plans a winter recreation area (Subcommittee on Public Lands of the Committee on Interior and Insular Affairs, 1965). Two more attempts were made by the ski developers during the 1960s, but both bills, the Dyal Bill of 1965 and the Johnson Bill of 1967, died in committee before ever making it to the House floor (Robinson, 1989).

Microwave Experiments

In October 1945, the Raytheon Manufacturing Company of Waltham, Massachusetts received a permit from the Forest Service to use the summit Mount San Gorgonio to test high-frequency radio transmissions. The company built “two firmly anchored cabins, with walls of asbestos fiber board and thick insulation” 250 yards west of the summit monument (Robinson, 1991, p. 90). Pack trains from Barton Flat were used to bring up the supplies for the construction of the cabins, and twelve Raytheon technicians moved in. Raytheon had hoped to utilize the summit of Mount San Gorgonio as the main television
transmission station for southern California. Pack trains continued to provide food and supplies until they were halted by the first major winter storm. An airdrop was accomplished by a crew in a Douglas C-47 in February 1946. Raytheon then proposed a tramway from Mill Creek to the summit, and a consulting firm, Southwest Engineering, estimated the cost to be $118,000. The tramway was never built, and the crew left the summit in early fall of 1946 when their experiments were completed (Robinson, 1991).

Aircraft Disasters

Another way that the presence of humans has affected the wilderness certainly wasn’t deliberate. In several locations debris from aircraft accidents can still be seen, scenes that appear incongruous with the concept of a non-mechanized, remote wilderness. At about 10,500 feet on the side of Mount San Gorgonio hikers pass right through the wreckage of a C-47 that crashed during a blinding snowstorm on November 28, 1952. The plane was on its way from Offut Air Force Base in Nebraska to March Air Force Base, about 40 miles southwest of where it crashed. The pilot, Captain George F. Bingham and 12 other men on board were killed. Search efforts were extremely difficult. Over 60 aircraft flew over the wilderness, and when the
wreckage was sighted, heavy snowfall made it impossible to retrieve the bodies of the crew. An initial rescue/recovery effort resulted in the crash of a Marine Corps helicopter in the upper North Fork of the Whitewater on December 4. The pilot had dropped off two Air Force men, and was returning for one who had complained of frostbite, when the helicopter hooked a tree with a rotor blade (Robinson, 1991). It wasn’t until the following May that a recovery team could climb to the C-47 crash site. Remnants of the men’s parachutes, boots, winter coats lay scattered among the debris for years (Wilson, 2005). Today, all that remains are the largest pieces of the airplane, as anything small enough to be carried has been taken out by hikers and souvenir hunters (Kendall, n.d.). The helicopter, however, was another story. It was virtually intact, lying on its side, and salvage operations began as soon as the snow had melted. Marvin Greenlee of Compton Airport recruited 25 young Redlands men, who hiked into the North Fork of the Whitewater to the crash site. They lashed the helicopter frame to bamboo poles, “carried it up over Mine Shaft Saddle, down past Dry Lake and through South Fork Meadows to Poopout Hill—three days of strenuous work” (Robinson, 1991, p. 103).
Natalie "Dolly" Sinatra, mother of famous singer-entertainer Frank Sinatra, and three others were killed on January 6, 1977, when their private charter crashed into the 9,700-foot level of San Gorgonio Mountain. They had taken off from Palm Springs International Airport only five minutes before, and were on their way to Las Vegas to attend Frank Sinatra’s opening night performance at Caesar’s Palace. It took two days for the search and rescue personnel to remove the bodies from the wreckage (JayDeeBee Web Datasites, 2005). In an ironic connection, the son of one of Sinatra’s closet friends was killed in another wreck on Mount San Gorgonio. On March 21, 1987, Dean “Dino” Martin, Jr., son of singer-entertainer Dean Martin, flew his Phantom F-4 jet into a wall of solid granite on the side of the mountain at the 3,600-foot level. Searchers who discovered the wreckage after three days of searching reported that the plane was “literally pulverized into the granite” (Kebabjian, 1997, §1).

On February 23, 1998, a Beech A36 bound for Carlsbad, California crashed on top of the ridgeline a mile and a half southeast of San Gorgonio Peak at approximately 10,300 feet. The plane had taken off from Big Bear Airport in windy and cloudy weather. Two large trees close to the
accident site showed major damage on their trunks, and parts of the plane’s wings were observed on or near each tree. The pilot and passenger both died from injuries suffered in the wreck (National Transportation Safety Board Brief LAx98FA09).

Hiking, Backpacking, and Overuse

In 1949, paved roads were built to Jenks Lake and Poopout Hill, further increasing foot and horse travel into the Wilderness. Construction on State Highway 38 began in 1959 and was completed in 1961, bringing thousands of cars daily up Mill Creek, skirting the western flanks of San Bernardino Peak, and winding along the north slopes of the Wilderness above the Santa Ana River Canyon. Throughout the summers until 1963, Boy Scout troops from Camp Tahquitz made extensive use of the Slushy Meadows-Dollar Lake area for their backcountry experiences. Some troops made day hikes to Slushy Meadows or Dollar Lake, while other troops spent as many as 4 days in the backcountry. Most troops, however, hiked from Camp Tahquitz to Slushy Meadows or Dollar Lake, spent the night, and returned to camp the following afternoon. Many of the older boys climbed Mount San Gorgonio as part of their experience.
Beginning in 1964, several factors forced a shift in the use of the wilderness area from the Slushy Meadows-Dollar Lake to the Dry Lake-Fish Creek area. Slushy Meadows was too overcrowded. Troops often hiked for hours, only to find the meadows crammed with 200 and 300 other people. Dollar Lake was running out of firewood. Sanitary facilities were no longer very sanitary. Trails were showing signs of erosion from use and overuse and misuse. Trash and litter were accumulating at an alarming rate. Sydell Braverman, of the deBenneville Pines Conference Center testified, “This last July 3rd some of our leisure weekenders signed the Poop Out Hill Forest Service register at 9:30 a.m. and found that they were signed in near the bottom of the fourth page for that day” (Subcommittee on Public Lands of the Committee on Interior and Insular Affairs, 1965, p. 215).

The most common violations of wilderness regulations are the use of wood campfires, shortcutting switchbacks, and littering. It is against regulations to build wood campfires in the Wilderness, and permits are required for campstoves (which utilize propane, butane, or other fuels). Many of the designated campsites have fire scars, and sometimes the ranger or patrol volunteers find actual rock rings with wood coals. These are then broken up, the
rocks are dispersed, and fresh dirt is thrown around to cover the black scars in order to make them as disguised as possible.

Shortcutting switchbacks is a common form of damage in the Wilderness. Hikers get in too much of a hurry to either get up the mountain or back down, and shortcut the switchbacks in an attempt to gain time. This shortcutting destroys the vegetation, and requires the placing of logs and brush by the trail crews to prevent further damage. Often, hikers will remove the logs or brush and continue shortcutting (Sharon Barfknecht, personal communication, February 17, 2006).

The best example of littering as present-day human impact can be found in a "Special Report" from the San Gorgonio Wilderness Association. It describes the refuse packed out by two volunteer Rangers, Johnny Brown and Michael Gordon, who hiked up the South Fork Trail to Dry Lake on August 10 and 11, 1996. On that weekend, they packed out over 13 pounds of refuse, requiring two garbage bags. Included in the haul were the following: miscellaneous refuse (toothbrush, cigarette butts, foil, rubber bands, bread bag ties, plastic cheese spreader sticks, batteries, hair comb, tent stakes), 1.42 pounds; food wrappers and plastic bags, 0.36 pounds; toilet paper,
0.64 pounds; clothing (sock, shorts, shirt, towel, dog collar), 1.02 pounds; rope and string, 0.28 pounds; food remnants (bananas, apple cores, orange peels), 0.62 pounds; candles and plastic objects, 0.16 pounds; metal cans (sardine, soda, beer), 0.98 pounds; glass (smashed liquor bottles), 2.16 pounds; and wire (assumed to be left on the summit of Mount San Gorgonio after Raytheon microwave experiments in the 1940s), 5.64 pounds (San Gorgonio Wilderness Association, 1996).

Pollution and Fire

Less direct than the physical presence of humans, but perhaps even more devastating, is the impact that pollution has on the wilderness. The San Bernardino Mountains receive high concentrations of air pollutants due to the prevailing climatic conditions, which transport most of the air pollution from the Los Angeles basin east into the mountains. Chronic ozone injury to ponderosa pines was first identified in the San Bernardino Mountains in the 1950s. Mortality and damage of ponderosa pine and Jeffrey pine peaked with high ozone concentrations in the 1970s, and has declined with improving air quality since 1976. Ozone damage also renders trees more vulnerable to other stressors, such as drought and bark beetle
infestations. Pine mortality has been highest during extended droughts. Trees with chronic ozone injury enter periods of drought without the energy reserves required to withstand bark beetle infestations (Stephenson & Calcarone, 1999). A county ordinance that applies to private land in the San Bernardino Mountains prohibits the cutting, trimming, or removal of trees. This has led to a serious "overstock" condition in the forest (USDA Forest Service, 2005a).

Following several years of drought on top of several decades of ozone damage, the San Bernardino National Forest suffered a severe crisis caused by bark beetles. Millions of pines died, leading to dangerous conditions, and in October 2003, a fire that began in Waterman Canyon above San Bernardino burned 95,281 acres, destroyed 976 homes, and killed 6 people (RimoftheWorld.net, 2004).

The more recent Thurman Fire, which started in Mill Creek Canyon at the end of September 2005, burned 935 acres and came within several miles of the eastern border of the San Gorgonio Wilderness (USDA Forest Service, 2005b). This fire and the Old Fire of 2003 were caused by humans, and are examples used by critics to illustrate the (perceived) flawed policy limiting cutting and removal of trees.
Summary

The San Gorgonio Wilderness has a long history of human presence beginning with the Native American Cahuillas and Serranos. Through the centuries, the wilderness has been affected by lumbering, ranching, hunting, fishing, mining, hydroelectric power flumes, surveying, recreational hiking, climbing, and camping, moviemaking, skiing, microwave experiments, aircraft disasters, pollution, and fire. Most of these activities have damaged the pristine quality of the wilderness, which will require careful mitigation, management, and education in order to lessen the impact of humans and human presence.
CHAPTER FOUR

MITIGATION OF HUMAN IMPACT

Introduction

The popularity of the Wilderness has led to numerous problems. Wilderness writer Michael Frome (1974, p. 32) stated,

A heavily used wilderness is no wilderness at all. A lake or valley may be rich in appeal with 10 people present. It may retain most of its appeal with 50, or even 250. But at some point sheer numbers alone transform a wilderness into a housing colony and ultimately an outdoors slum. When 5 campers per summer use an area, building a campfire is a harmless delight. When 500 campers build fires, they provoke an environmental catastrophe.

The San Gorgonio Wilderness Area as the heaviest use per acre of any wilderness area in the United States. It has 20 times as much use per acre as the national average for wilderness acres in the United States (Subcommittee on Public Lands of the Committee on Interior and Insular Affairs, 1965).
Mitigation of the human impact on the San Gorgonio Wilderness has ultimately fallen on the shoulders of three organizations: The United States Forest Service (USFS), the San Bernardino National Forest Association (SBNFA), and the San Gorgonio Wilderness Association (SGWA). The San Bernardino National Forest (SBNF), a subsidiary of the USFS, is primarily responsible for statutory oversight, fire prevention and fire suppression, law and regulation enforcement, animal and plant species protection, and soil and water conservation, all while responding to the growing number of forest visitors and the increased demand for recreation. The SBNFA and the SGWA are nonprofit groups of volunteers, who work side-by-side with the SBNF, not only augmenting the work of the Forest Service, but providing numerous services that the Forest Service does not.

Early Mitigation

Early mitigation efforts took the form of laws and regulations that either set aside land for protection or restricted its use. Robinson (1989) reported that during the early 1870s, the San Bernardino Guardian (March 11, 1871) discussed a new law that would prevent sheep owners "from herding their hungry flocks across private land"
There was a loophole in the law, however, which allowed the herds to pasture in unoccupied public lands. Thousands of sheep roamed the mountains, grazing the meadows until they were bare before moving on to other meadows. The overgrazing led to erosion and loss of undergrowth.

As early as the decade of the 1880s, it had become evident that the mountains of southern California did not contain an inexhaustible supply of lumber, unlimited sources of water, and a self-healing watershed. Concerned citizens began to protest to legislators and other public officials in an effort to make them aware of the ecological problems that already existed or were developing. In 1891, Congress passed the Forest Reserve Act, which authorized the President of the United States to set aside forest reserves. The purpose of these reserves was to "protect the remaining timber resources and to insure an adequate flow of water in the streams" (Johanneck, 1975, p. 14). Other legislation was also passed that reserved the public domain for other uses than being exploited for its natural resources (Johanneck, 1975).

Lumbering, grazing, and mining activities continued throughout the mountains, primarily on lands that were...
privately owned. Several individuals, concerned about the devastation being wreaked on the natural resources of the San Bernardino Mountains, sought help from the government. In 1904, the San Bernardino Board of Trade petitioned Congress to pass legislation to halt the devastation. Following a series of visits to different lumber mills, representatives of the Board of Trade sent a report to Congress accusing the owners of the lumber mills of "destroying the forest by denuding thousands of acres of mountain slopes of timer and earmarking many more thousands of acres for the same fate" (Johanneck, 1975, p. 14). In addition to the felling of the trees, their report described a method of hauling the felled trees that resulted in further devastation:

A powerful "donkey" engine is placed and anchored on the crest of a ridge or hill and a wire cable of great length and strength is made ready to "snake" the logs from all points of the compass. The trees are felled and cut into logs of desired length; the cable is attached, the engine exerts its power and the log moves, plowing the ground and tearing up timber and undergrowth. This operation is repeated until all that particular mountain crest and slope is
completely bereft of timber—both large and small. (San Bernardino Board of Trade, 1904, p. 3)

Members of the Board of Trade recognized that the owners of the lumber mills were operating on private lands, and had the right to do whatever they wanted to do on their own lands. However, it was believed that the methods being utilized by these companies were harmful to persons living in the valley and surrounding areas. They included in their report to Congress a recommendation that the privately owned lands "pass under control of an agency of the federal government" (San Bernardino Board of Trade, 1904, p. 4). In addition, they recommended that a method of informing and educating the general public about the issues raised in their report be developed (Johanneck, 1975).

The Board of Trade's report to Congress also cited fire as another serious threat to the forest. The use of donkey engines, mill engines, and railroad equipment all contributed to conditions that caused devastating fires and posed constant threats to the forest. The blame for the fire threat was not placed solely on the lumbering industry, however. Ranchers and shepherders were accused of purposely burning tracts of trees in order to create
pasturage for the following year (San Bernardino Board of Trade, 1904).

Congress responded to the report of the Board of Trade by creating fire regulations and increasing the number of agents assigned to the forest reserves created a few years before. Up until 1897, the Forest Reserve Act provided for no federal administration or policing of the reserves. Problems were handled long-distance from Washington, D.C., and local problems were often delegated to San Bernardino County officials. B.F. Allen was appointed Special Forest Agent for the Southwest in 1897, and he appointed the first federal officer assigned to the San Bernardino Forest Reserve, Charles Stedman Newhall. Newhall was responsible for tracking down illegal timber cutters, chasing sheep off government lands, and investigating fires. Following Allen's request for additional manpower, Newhall was allowed to hire two federal rangers for the San Bernardino Mountains, C. Matthew Lewis and William D. Williams. By the end of 1989, seven federal rangers were patrolling the San Bernardino Mountains. Their responsibilities included policing the forest lands, educating the public about fire dangers, building trails, and assisting lost or injured travelers (Robinson, 1989).
The San Bernardino National Forest

Out of the Forest Reserve Act of 1891 which had created the San Bernardino Forest Reserve, came the San Bernardino National Forest in 1907, a name change ordered by Gifford Pinchot, head of the United States Forest Service. The San Bernardino National Forest’s first supervisor was Rushton H. Charlton, who served from 1906 to 1925. During his term, the San Bernardino and San Gabriel National Forests were combined as Angeles National Forest by order of President Theodore Roosevelt, and were administered as one until 1925 (Robinson, 1989).

Charlton initiated many of the programs that are currently in place in national forests throughout the country. He wrote regulations restricting the activities of the lumber industry, further regulated the sheep and cattle grazing, and developed rules for campers. He began work on a network of firebreaks, roads and trails, established a tree nursery to provide seedlings for burn areas, developed improved fire control methods, and worked with the Tri-Counties Reforestation Committee to improve public education (Robinson, 1989).

During the next few decades, focus remained on fire prevention and suppression. Lookouts were built, automobiles replaced horses as the mode of transportation
for patrolling the forest, huge, miles-long firebreaks were constructed, and fire control districts were created. During the great depression of the 1930s, state labor camps were opened, providing lodging and meals to unemployed workers who worked on roads, trails, and firebreaks. As part of President Theodore Roosevelt’s New Deal, Congress passed the Emergency Conservation Act. One of the Act’s major provisions created the Civilian Conservation Corps (CCC), which put unemployed young men to work in the national forests and parks. Several CCC camps were located in the vicinity of the San Gorgonio Wilderness: Camp Radford, Mill Creek Camp, Oak Glen, and Camp Comfort on the Banning Bench. In addition to massive fire prevention projects, the young men of the CCC built campgrounds and picnic areas for forest visitors. The 1940s and 50s saw the Forest Service focus on watershed protection as well as fire prevention.

During the 1960s, the attention of the forest supervisor, Don R. Bauer, began to fall on the challenges of dealing with increased visitation. Robinson (1989) reported that the number of visitors to the San Bernardino National Forest increased from 5.6 million visitors in 1958 to 12.2 million in 1973. In addition to the enlarging of campgrounds and the building of more picnic areas,
trails, and winter sports facilities, forest recreational sites were placed on fee basis to help them pay for their own management. Following the passage of the Wilderness Act in 1964, all existing ski huts were removed by the Forest Service in keeping with the requirements of the Act (Ohl, 1987).

Succeeding forest supervisors not only had to deal with the increasing number of forest visitors, but had to work to mitigate the damage and potential damage caused by having forest areas situated close to one of the largest metropolitan areas in the nation. As wilderness usage increased, the parking lot at Poopout Hill was full on a daily basis during the summer months, and dozens of hikers camped in Slushy Meadow. During the late 1960s groups even played volleyball and football there. Campers moved rocks to make crude fireplaces, and quickly stripped the surrounding areas clean of usable firewood. An outhouse existed above the meadows, probably contaminating the watershed. Dollar Lake was littered with beer cans and trash (Subcommittee on Public Lands of the Committee on Interior and Insular Affairs, 1965).

Originally, the South Fork Trail began where it begins now—at the Jenks Lake road. There was a 2 1/2 mile hike up to the top of Poopout Hill, given that name
because it was such a long uphill pull. In 1947 the Forest Service revised the wilderness boundary and extended the road up to the summit of Poopout Hill, thus shortening the trail into the Slushy Meadows (Subcommittee on Public Lands of the Committee on Interior and Insular Affairs, 1965). Overuse of South Fork (Slushy) Meadows, the most used part of the Wilderness, led to the closure of the road to Poopout Hill in 1989. Hikers start their trek into the Wilderness at a new parking lot and trailhead located on Jenks Lake Road, go up about a mile and a half up the hill to Horse Meadows, a former horse ranger station. From there, the trail continues another mile before hikers reach the boundary of the wilderness. In addition, all camping at South Fork Meadows is now prohibited. It is hoped that prohibiting camping will the meadows area to rejuvenate itself, thus restoring not only the beauty of the place, but bringing back the pristine quality of the springs from which the Santa Ana River originates (Robinson, 2003).

Forest Plans

In September 2005, the USFS released revised Land Management Plans (Forest Plans) for the national forests of southern California. Included in the Plan for the SBNF
are a number of goals that directly affect or relate to the San Gorgonio Wilderness. For example, Goal 1.2.3 is "Maintain long fire-free intervals in habitats which are slow to recover" (USDA Forest Service, 2005d, p. 29). The habitats referred to include the alpine and sub-alpine forests above 8,000 feet in elevation, which would cover much of the upper reaches of the wilderness. Goal 5.2 focuses on improving riparian conditions, a goal that is surely relevant to the San Gorgonio Wilderness, which is the headwaters of two major rivers (the Santa Ana and the Whitewater) and numerous tributaries (USDA Forest Service, 2005d).

Goal 3.2 reads "Retain a natural evolving character within wilderness" (USDA Forest Service, 2005d, p. 37). Within this goal are the desired conditions for wilderness: ecological processes continue untrammeled by human activities, vegetation management mimics natural process (this includes reducing the risks and consequences of wildland fires), increasing or maintaining opportunities for solitude, consideration of air quality and human health, environmental education (connecting people to the values of wilderness resulting in support and stewardship for these values), and science baseline
information, or using the wilderness as a benchmark for ecological studies (USDA Forest Service, 2005d).

Several specific programs are outlined in Part 2 of the Forest Plan, which is specific to the San Bernardino National Forest. Conservation Education "will receive a substantial emphasis including a focus on developing land stewardship ethics" (USDA Forest Service, 2005e, p. 143). The Landscape and Scenery Management Program focuses on conserving and restoring "aesthetic, recreation, and open space values, especially those of high-valued landscapes...." (USDA Forest Service, 2005e, p. 144). The Place-Based Program identifies numerous "Places" in the SBNF, including the San Gorgonio Wilderness. Fire is a concern in the Wilderness, due to the history of drought in southern California, the presence of old-age chaparral, and the density of the forest. The highest priority for the SBNF in the San Gorgonio Wilderness is community protection from fire, which will be emphasized through public education, fire prevention, and fuels management. Other priorities for the San Gorgonio "Place" include conserving the habitat of deer and the Nelson’s bighorn sheep, the maintaining or enhancing of wildlife corridors, and the establishment of minimum in-stream flows and groundwater standards (USDA Forest Service, 2005e).
Of special interest to backpackers and hikers who utilize the trails of the San Gorgonio Wilderness is the Forest Service’s plan to acquire land for reroutes of the Pacific Crest National Scenic Trail. The intended purpose of the proposed reroutes is “to improve recreation opportunities and to protect sensitive resources, as well as providing a contiguous land base in the wilderness” (USDA Forest Service, 2005e, p. 79).

Another goal in the Forest Plan that backpackers and hikers will find interesting is the “continued emphasis on preventing establishment of off-route vehicle travel and unauthorized off-trail use by mountain bikes” (USDA Forest Service, 2005e, p. 8).

The Adventure Pass

One of the most important components of the San Bernardino National Forest’s plan is the Adventure Pass. The Adventure Pass program has its roots in the National Performance Review authorized by Vice President Al Gore in 1994 and 1995. With the support of Anthony Williams (Chief Financial Officer and Deputy Secretary of the US Department of Agriculture), a regional recreation fee project for Southern California was accepted as one of the proposals to help government to become more effective and
service oriented. The national forests in Southern California (Angeles, Cleveland, Los Padres, and San Bernardino) were involved in several pilot programs under this project. This initial multi-forest effort became known as Enterprise Forest Project #501.

With the passage of PL 104-134, the Recreation Fee Demonstration Program, in 1996, the Enterprise Forest project became one of the first Fee Demonstrations authorized in the Forest Service. Over 25 million people live within two hours of the Southern California National Forests, and the Forest Service faces the huge challenge of dealing with the thousands of people who come to utilize Forest Service facilities. The challenges include dealing with litter, graffiti, and vandalism, cleaning and maintaining public restrooms, protecting the natural resources, and maintaining the various ranger stations, visitor centers, and interpretive sites within the forests.

A large cross-section of forest visitors was surveyed between 1996 and 1997 regarding their willingness to pay for using the forests. Seventy-seven percent of the people surveyed stated they were willing to pay a fee if the money was returned to the forests and used to improve the recreation sites and opportunities in the forests.
In 1996, legislation was passed which authorized federal agencies to keep 80 percent of the revenue to reinvest in the area where the fees were collected. The Adventure Pass program was born. Prior to passage of this law, fees were returned to the U.S. Treasury. The Southern California’s national forests have been able to keep more than 95% of all revenues collected. From May 1997 through September 2005, more than $23,822,000 has been collected and retained for improving these 4 national forests (USDA Forest Service, 2005c).

The Adventure Pass is a vital part of the recreation fee program for the San Bernardino National Forest. Volunteers with the San Gorgonio Wilderness Association sell these passes at the Mill Creek Ranger Station, the Big Falls Station in Forest Falls, and the Barton Flats Visitor Center. In addition, Adventure Passes are also sold at several stores in Forest Falls, Angelus Oaks, and Seven Oaks.

Proceeds from the sale of Adventure Passes were used in six main categories: Ranger programs, restrooms, trails, facilities, forest health, and information. The field ranger program was revitalized, providing important services such as extinguishing illegal or abandoned campfires, providing emergency assistance, talking with
forest visitors, and enforcing federal regulations. In the four Southern California national forests, Adventure Pass proceeds have enabled the Forest Service to provide 41 paid field rangers have been available to perform these services (USDA Forest Service, 2005c). One full-time field ranger, Sharon Barfknecht, is assigned to the San Gorgonio Wilderness.

Between 1996 and 2004, the Forest Service has been able to add over 600 portable toilets, repair over a thousand, and retrofit 53 public restrooms for use by persons with disabilities. In addition, the permanent restroom facilities have been cleaned four times as often as they were before the Adventure Pass program began. These include facilities at Barton Flats Visitor Center, Big Falls Station, and several key San Gorgonio Wilderness trailheads.

When the survey was conducted in 1996 and 1997, it was learned that forest visitors expected better trails. Adventure Pass proceeds have been used to provide repair and maintenance to almost 3,000 miles of trails, to refurbish 39 trailheads and campsites, and to repair and maintain 18 OHV (Off-Highway Vehicle) staging areas. The Forest Service personnel assigned to maintain the trails of the San Gorgonio Wilderness are augmented by volunteers
from the San Gorgonio Wilderness Association. In addition to weekend patrols during the summer months, one day each June is set aside for all the volunteers in the association to work on a specific trail within the wilderness.

Another key finding from the 1996-1997 survey was the demand for the repair and upgrade of Forest Service facilities. In responding to that demand, the Forest Service refurbished over 500 picnic sites, several of which are in close proximity to the San Gorgonio Wilderness at Big Falls, adjacent to the Vivian Creek Trailhead, and Jenks Lake, near the South Fork Trailhead. Over 1300 campsites were refurbished, including sites at six campgrounds near the wilderness boundaries. At least 400 bear-proof trash containers were placed in campgrounds, and over 7,600 traffic-control devices, such as barriers, curbs, and fencing, were placed. All of these improvements were made possible through the sale of Adventure Passes.

Since the survey respondents also expected cleaner forests, money from the Adventure Pass program has been used to remove over 51,000 cubic yards of trash and litter from Forest Service sites. At least 170 abandoned car bodies have been removed from locations throughout the
four Southern California National Forests, and removed graffiti from nearly 6,000 sites.

Forest visitors and managers agreed that providing information was important, and the Forest Service embarked on a huge public education project. In 2005, 20 information and interpretive sites were staffed by 39 full-or part time rangers, who made contact with almost 200,000 visitors. The Adventure Pass proceeds also help pay for 117 informational kiosks and 59 different forms of media such as handouts, brochures, newsletters, and audio-visual programs (USDA Forest Service, 2005g).

The San Bernardino National Forest Association

The San Bernardino National Forest Association, while not working directly in the San Gorgonio Wilderness, has as part of its mission activities which benefit the forest in general. The Association runs the San Bernardino National Forest Fire Lookout Program, which staffs seven mountaintop lookouts (with two more pending). The lookouts serve a dual purpose: keeping an eye out for smoke and fire, and welcoming visitors in order to “increase public awareness and create a desire among visitors to conserve and help care for public lands” (Fire Lookout Host Program, 2005, §1).
The San Gorgonio Wilderness Association

The organization which works directly in and for the San Gorgonio Wilderness is the San Gorgonio Wilderness Association (SGWA). The SGWA uses volunteers and donations to provide many services that were formerly provided by the USFS. Volunteers lead nature walks and conduct interpretive programs, completely staff and manage the Barton Flats Visitor Center, augment the staff at the Mill Creek Ranger Station, staff the Big Falls Station and the Horse Meadows Historical Site, sell Adventure Passes, issue wilderness hiking and camping permits, patrol trails throughout the wilderness to assist visitors, clean up campsites, pick up litter, and call in emergency medical care, and construct and maintain trails throughout the wilderness (San Gorgonio Wilderness Association, 1996-2006c). The SGWA was created out of a response to the continued threat from ski associations to develop the north slopes of Mount San Gorgonio. It was originally called the Defenders of the San Gorgonio Wilderness, and they spent almost a decade working tirelessly to defeat developers' plans to bring skiing and development into the wilderness. The name of the organization changed first to the San Gorgonio Volunteer Association, then to the San

An equestrian group supports and is supported by the SGWA. These are also volunteers, who patrol the trails of the wilderness and along the Santa Ana River, interacting with visitors, packing in survey teams, and maintaining the trails.

A two-person Forest Service trail crew, augmented by volunteers from the SGWA is funded by proceeds from sales of the Adventure Pass (USDA Forest Service, 2004). The trail crew spends its weekends on various trails within the wilderness, cutting and moving trees and vegetation, repairing trails damaged by overuse and erosion, repairing and restoring wilderness campsites, removing avalanche debris, and other maintenance tasks. The trail crew’s work is made more difficult by the restrictions on mechanized equipment—no motorized saws are allowed, so everything is done by hand. Each summer, the first Saturday in June is designated as National Trails Day. Sponsored by the American Hiking Society, the day is set aside for organizations to plan and hold events such as hikes, bike or OHV rides, trail maintenance or restoration projects, children’s programs, or other trail-related activities. The SGWA and the SBNF organize a trail maintenance and
restoration activity on one of the trails in the San Gorgonio Wilderness. Following a major avalanche in the winter of 2005, the June National Trails Day was spent removing the debris from the Johns Meadow Trail.

Recent and Current Mitigation

In March 1998, the San Bernardino National Forest began an Environmental Assessment for Wilderness Management (EAWM). Over a 10-year period, an interdisciplinary team developed recommendations to enhance the wilderness experience and improve wilderness resources for the Cucamonga, San Gorgonio, San Jacinto, and Santa Rosa Wilderness areas. In the fall of 1998, San Bernardino National Forest Supervisor Gene Zimmerman announced changes to wilderness management practices, following the recommendations of the EAWM. Maximum group size was reduced to 12, day and overnight use quotas were slightly reduced, packstock group size was reduced to 8, and all grazing by packstock was forbidden. Packstock food would have to be packed in. Since a Desert Bighorn Sheep herd lived in the southeastern portion of the San Gorgonio Wilderness, goats were banned. Due to the loss of fuel and damage to trees surrounding wilderness campsites, open campfires were banned, and campstoves were required that
met stringent fire-prevention guidelines (San Gorgonio Wilderness Association, 1996-2006a).

At the beginning of March 2005, the Forest Service decided to close the Big Falls Recreation Area and the Vivian Creek and Momyer Creek trailheads in Forest Falls in order to clear out some of the dead trees. Throughout much of April, helicopters flew in and out of the canyon, carrying dead trees off the steep canyon walls. With the trailheads in Forest Falls closed, along with a short closure of the San Bernardino Peak trailhead in March 2005, many of the Wilderness trails received much less hiking pressure for approximately three months. Most spring hikers accessed the Wilderness via the Forsee Creek trail, as the South Fork and Fish Creek gateways were still covered with snow. (Snowshoers continued to use all the trails throughout the winter and spring of 2004-2005).

Since the early 1900s, various citizen groups and organizations have recognized that increased visitation and usage of the San Gorgonio Wilderness required intervention. Mitigation of that damage has fallen on the United States Forest Service, the San Bernardino National Forest Association and the San Gorgonio Wilderness Association. The three organizations impart and enforce regulations to protect the wilderness, educate the public,
provide physical resources to repair and maintain trails and campsites, and prevent catastrophic damage by wildfires.
CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS FOR THE FUTURE OF THE SAN GORGONIO WILDERNESS

Something will have gone out of us as a people if we ever let the remaining wilderness be destroyed; if we permit the last virgin forests to be turned into comic books and plastic cigarette cases; if we drive the few remaining members of the wild species into...extinction; if we pollute the last clean air and dirty the last clean streams and push our paved roads through the last of the silence, so that never again will Americans be free in their own country from the noise, the exhausts, the stinks of human and automotive waste. (Stegner, 1962, §3)

Introduction

What does the future hold for the San Gorgonio Wilderness? As the population of the surrounding cities continues to increase, as Banning, Beaumont, Yucaipa, Oak Glen, Forest Falls, and Angelus Oaks continue to spread their boundaries closer and closer to the edge of the wilderness, what can be done to ensure that the wilderness remains unspoiled? Huge challenges face the Forest Service
and the volunteers who work with it, challenges that include maintaining the support of the American citizens. The American people must constantly be reminded of the importance of wilderness; of the consequences of its degradation and elimination; of what a future without wilderness could be like.

Societal Values

Hendee and Dawson (2002) insisted that environmental and sociopolitical conditions in the United States have driven how wilderness is defined and managed. It is unclear what those conditions will be in the future, and therefore, it is “the concern of many for designating as much wilderness as possible now for tomorrow” (p. 505). The values of society are constantly in conflict as well as in flux, and often decisions about the environment are made from the standpoint of only one of the competing values. It is crucial to attempt some rational balance between these values.

It is clear that wilderness not only remains important to the public, but continues to increase in value. Since 1964, 133 pieces of legislation to strengthen and expand the United States wilderness system have been passed, the most recently being the addition of the Cedar
Mountain Wilderness Area in Utah in January 2006 (Wilderness Society, 2006). In addition, the number of wilderness visitors continues to grow, as does the size of the industry supporting the wilderness experience. Companies such as Recreational Equipment Incorporated (REI), Trails.com, and Rodale, Inc. (publisher of Backpacker magazine) have seen their profits explode over the last decade, and wilderness-related websites have proliferated on the World Wide Web.

While the San Gorgonio Wilderness is a mecca for hikers and climbers who want to get away from the hustle and bustle of southern California and its 10 million people, it has other qualities that make it important to society. In 2000, researchers Ken Cordell and Jerry Stokes reported that in national surveys the top five values of wilderness were protection for water quality, wildlife habitat, air quality, endangered species, and future generations (Cordell & Stokes, 2000). Indeed, water quality is a priority in southern California, and the San Gorgonio Wilderness is the headwaters of several creeks and rivers which provide water to southern California residents. It would be a significant problem if those water sources were degraded in any way.
Wilderness Management

Many wilderness managers have responded to increased visitation by rationing the numbers of hikers, the numbers of campsites, the sizes of parties, the numbers of days and nights. These measures will continue to be necessary, and it is hoped that further restrictions will not make it next-to-impossible to experience the wilderness. The proposed expansion to the San Gorgonio Wilderness will bring the boundary right down to the highway, and it is entirely possible that new trails will take off into the wilderness from there. An existing trail to Mountain Home Bench will be enfolded into the Wilderness, and will receive more maintenance and patrol, thus providing one more trail and wilderness camp for hikers and backpackers.

The recent addition of the acreage to the south, while currently receiving very little visitation, will provide more opportunities for trails and camps. It is hoped that some day the restrictions on camping in South Fork Meadows will be lifted, though that date is many years away. As mentioned in Chapter Four, the acquisition of land adjacent to the Wilderness for the rerouting of the Pacific Crest Trail may result in the shifting of hiking pressure away from the South Fork Trail corridor. Managers of the San Gorgonio Wilderness must seed to provide more
hiking and camping opportunities at the edge of the Wilderness and draw some of the crowds away from the more heavily-used center.

Hiking and camping will continue, however, to impact the San Gorgonio Wilderness. These impacts will come mostly in the form of trampling. Trampling’s effects include abrasion of vegetation, abrasion of surface soil organic layers, and compaction of soils. In addition to groundcover, large shrubs and trees are negatively affected by wilderness visitation. Some trees are cut for tent poles, hitch rails, or other structures, and some are deliberately defaced by ax scars or the carving of initials. Soil compaction is a concern since it affects aboveground vegetation, prevents penetration of the soil by earthworms (which help to rejuvenate soil), and drastically reduces the rate at which water filters into the soil. Water that does not filter into the soil runs off across the surface, leading to greater erosion and loss of the supply of groundwater. The San Gorgonio Wilderness has numerous campsites in which the trampling damage is clearly evident. In addition to limiting the numbers of people in parties, as well as the numbers of nights of stay, it would be beneficial if wilderness managers considered rotating the use of the wilderness
campsites. Alternately, some campsites could be closed to all use for a period of rejuvenation. This strategy is currently in effect at South Fork Meadows, as described in Chapter Three. Managers would have to weigh the cost of restricting and shifting campsite use to other locations against the benefits of restoration of heavily-impacted sites. Dispersal has been found to disperse campsite impacts as well as use, so it is a much less common strategy that it was in the past (Hendee & Dawson, 2002).

Water pollution and disposal of human waste is a significant problem in the San Gorgonio Wilderness; it was the reason for the closure of South Fork Meadows. When they receive their permits, campers are reminded of the regulation that requires that they carry a small camp shovel. They are directed to bury human waste at least six to eight inches deep, and to pack out their toilet paper. It is a violation of Federal Code to bury toilet paper, yet SGWA volunteer rangers carry out pounds of used toilet paper every weekend from the wilderness. Human waste is the primary cause of the spread of Giardia, a nasty parasite which causes severe intestinal distress.

A management strategy that might be effective in the San Gorgonio Wilderness is called site hardening. Site hardening is the increasing of a site’s durability through
manipulation, such as planting hardy grasses and building fireplaces, tent pads, shelters, toilets, and trash cans. While some will argue that site hardening is counter to the wilderness experience, it is an effective strategy in some of the heaviest-used wildernesses in the United States. The backcountry of Great Smoky Mountains National Park, for example, has shelters which are used by hikers. They receive 37% of the backcountry use, but they account for only 10% of the disturbed campsite areas since they concentrate the impact (Hendee & Dawson, 2002). The addition of toilets might prove to be necessary in the San Gorgonio Wilderness. These can come in the form of wooden boxes, such as the ones in the Selway-Bitterroot Wilderness and the Boundary Waters Canoe Area. Wilderness toilets can solve the problem of human waste disposal by concentrating human waste and reducing the chance of human contact with it (Hendee & Dawson, 2002).

Howard Zahniser, architect of the Wilderness Act and a former head of the Wilderness Society, reminded us, "we must not only protect the wilderness from exploitation. We must also see that we do not ourselves destroy its wilderness character in our own management programs. We must remember that the essential quality of the wilderness is its wildness" (Zahniser, 1992, p. 52). It is vital that
in managing the San Gorgonio Wilderness by providing more opportunities and dispersing the visitation impact, that the other qualities of wilderness, such as solitude, naturalness, wildness, and minimum of management restrictions, be maintained as well.

The Role of Environmental Education

Wilderness management has two main objectives: maintaining the natural setting and providing outstanding opportunities for solitude or a primitive and unconfined type of recreation. These two objectives must be met without diminishing the wilderness character of the area (Hendee & Dawson, 2002). The Wilderness Act, as well as the general spirit of wilderness, restricts the development of facilities, such as paving trails and providing campsite facilities. Efforts to provide visitors with opportunities for quality wilderness experiences and at the same time limit impacts on the wilderness by visitor use must take into consideration those restrictions.

The strong alliance between the Forest Service and the San Gorgonio Wilderness must endure, and the Adventure Pass program must continue. Government financial constraints will always be there. No one can reasonably
foresee a huge increase in the Forest Service budget, and the Wilderness will forever be in need of protection. Many of the management jobs—trail, campsite, and trailhead construction and maintenance, ranger talks and other forms of public education, and trail patrol—have been possible because of the partnership between the Forest Service and the Association. While those jobs must continue, some changes should be made in the delivery of information to the public. Many visitors come to the San Bernardino National Forest and the San Gorgonio Wilderness because they already have an interest in what those areas have to offer. They should be a receptive audience to various forms of education.

Hendee and Dawson (2002, p. 481) stated, “providing wilderness visitors and prospective visitors with information and education is a highly acceptable indirect management action—maybe the most important of all wilderness management techniques.” They also stated that the effectiveness of visitor education programs is a concern, and that more research is needed on the effectiveness of wilderness education on wilderness behavior. They provided 11 guidelines for the effective use of information and education programs in recreation management, that can be applicable to wilderness visitor
education. These were compiled by researchers Manning and Lime in 2000 from a review of published literature. The first guideline recommends personal contact by wilderness field staff (as cited in Hendee & Dawson, 2002). This guideline has been adopted as practice by both the Forest Service and the SGWA. If not for the volunteers from the SGWA, Wilderness Ranger Sharon Barfknecht, a Forest Service employee, would be the only ranger patrolling the entire San Gorgonio Wilderness. Each weekend during the summer, Barfknecht and volunteers in Forest Service uniforms hike the wilderness trails and camp in the campgrounds, making contact with as many visitors as possible. In their contacts, they not only enforce regulations such as dog leash requirements and campfire restrictions, but use the face-to-face meetings as opportunities to educate people about the wilderness.

Another guideline recommended by Manning and Lime (as cited in Hendee & Dawson, 2002) stated that information and education programs are more effective with younger, less experienced, and less knowledgeable visitors. The SGWA and the Forest Service work together to provide, in addition to the fully-staffed Barton Flats Visitor Center, two days for visitor education and recreation. The first, scheduled in August, is called the Forest Festival. Up to
1000 visitors stop by the Barton Flats Visitor Center to meet Forest Service mascot Smokey Bear and participate in various fun activities. Volunteers from the SGWA provide camping and fishing tips, puppet shows, and crafts. Numerous displays show information about the San Bernardino National Forest and the San Gorgonio Wilderness. This day provides an excellent opportunity for educating visitors about environmental issues and concerns related to the wilderness. The second activity is the Fishing Festival, which takes place each September at Jenks Lake. Hundreds of inner city children are brought bus for a day of fishing, educational programs, and activities. In partnership with the Forest Service and the California Department of Fish and Game, SGWA volunteers teach the children to bait a hook, make a cast, and bring in one of the many rainbow trout stocked in Jenks Lake. Many of the children have never been out of the city, so the opportunity for education about the environment is an excellent one (Gordon & Saffle, 1996).

Some research has shown the effectiveness of bulletin boards at trailheads. Most of the information presented on bulletin boards is related to low-impact travel practices, such as Leave No Trace (LNT) and Walking Softly in the Wilderness. Manning and Lime (as cited in Hendee & Dawson,
2002), however, pointed out that brochures, personal messages, and audiovisual programs are generally considered more effective than the same information on signs. One audiovisual form of visitor education currently in place in the San Bernardino National Forest is the Greyback Amphitheater Ranger Talk Program. These talks take place on Saturday nights during the summer in the Greyback Amphitheater about a mile and a half east of the Barton Flats Visitor Center on Highway 38. Guests at the programs are mostly families camping at nearby Forest Service campgrounds. The San Gorgonio Wilderness Association arranges, coordinates, and introduces the various programs, which are presented by SGWA volunteers and San Bernardino National Forest personnel. The local campground concessionaire, Alpine Camping Services, provides monetary support for interpretive training, as well as supplies, equipment and employees to set up and take down program equipment. Topics for the talks include local wildlife, astronomy, wilderness awareness and Forest Service history (San Gorgonio Wilderness Association, 1996-2006b).

I recommend that an additional topic be added to the programs: low-impact or no trace camping. The National Outdoor Leadership School, at the request of the U. S.
Forest Service, developed hands-on minimum impact training, which became a cornerstone of the Leave No Trace (LNT) educational program. This research-based program includes teaching materials, and traveling trainers, and can be adapted for use at the ranger talks (Marion & Reid, 2001). The SGWA already uses the basic LNT principles on its website and in some of its print materials.

Another relevant guideline from Manning and Lime (as cited in Hendee & Dawson, 2002) advised that computer-based dissemination can be an effective technique. The San Gorgonio Wilderness Association has a comprehensive website which includes a popular bulletin board for information about trails and camping conditions, a newsletter, a store with maps, books, shirts, and wilderness-related souvenirs, a photo gallery, and dozens of pages of reference material about the wilderness and the organizations responsible for its management.

The San Gorgonio Wilderness will remain long after the humans have left. Through careful management and education, its future is full of promise as a place where people can go to escape the pressures of urban life. People found the wilderness, explored and exploited it, and now are left with the responsibility to ensure its survival. Bob Marshall, founder of the Wilderness Society,
wrote over 75 years ago, "There is just one hope of repulsing the tyrannical ambition of civilization to conquer every niche on the whole earth. That hope is the organization of spirited people who will fight for the freedom of the wilderness" (1930, p. 148).
REFERENCES


