

# CHAPTER 3

## AFFECTED ENVIRONMENT

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### **3.A. Introduction**

This section of the Proposed National Monument Management Plan/FEIS provides a summary of the existing environment and existing management of the BLM-managed and National Forest lands within the boundary of the National Monument. Some description of non-Federal land is included in this section in order to provide a more complete summary of the environment.

This chapter begins with a description of the setting of the National Monument followed by a summary of the existing management of the resources that the National Monument was established to protect. Subsequent sections outline existing land use designations and additional management guidance.

### **3.B. History and Setting**

#### **3.B.1. History of Activities to Protect Land within Santa Rosa and San Jacinto Mountains**

The Santa Rosa and San Jacinto Mountains have a long history of Federal, Tribal, State, County, local and community supported protection and preservation of resources. Multiple past actions leading up to the designation of the National Monument provide a picture of the regional support that has been attributed to the area.

- The San Bernardino Forest Reserve was established in 1893, the San Jacinto Forest Reserve was established in 1897, and in 1925 the San Bernardino National Forest was created.
- The Southern Pacific Land Company, the Forest Service and Riverside County worked together to establish protection for the San Jacinto Mountains. The idea for a State Park evolved in 1927, and the San Jacinto Mountain State Park Association was incorporated in 1928 with the goal of preserving a portion of the San Jacinto Mountains. In 1928, a bond was passed to acquire lands for Mount San Jacinto State Park. Current acreage of Mount San Jacinto State Park within the National Monument is 8,614 acres with 5,785 acres being Wilderness (Figure 4).
- In 1917, the State legislature established a game refuge on the eastern slope of the Santa Rosa Mountains. An additional State game refuge was established on the San Jacinto Mountains in 1927. Current State Game Refuge 4D acreage within the National Monument is 96,915 acres. Of that, 20,588 acres are managed by the Forest Service, and 31,899 acres are managed by BLM. State Game Refuge 4G current acreage within the National Monument is 28,144 acres. Of that, 18,894 acres are managed by Forest Service, and 33 acres are managed by BLM.
- In 1921, the first County-run public park was established by Riverside County in Idyllwild, just outside the boundary of the National Monument.
- CDFG began focusing land acquisition for wildlife values in the 1960s. Hidden Palms Ecological Reserve, Carrizo Canyon Ecological Reserve, and Magnesia Falls Ecological Reserve were all established by CDFG in order to protect species and habitats. Current CDFG acreage within the National Monument totals 28,900 acres.
- In 1970, the Philip L. Boyd Deep Canyon Desert Research Center was dedicated as part of the University of California's Natural Reserve System.

Current acreage for the research center within the National Monument is 8,600 acres.

- The San Jacinto Wilderness was established in 1964, with additional acres added in 1984 by the California Wilderness Act. This act also set aside the Santa Rosa Wilderness on National Forest lands. Congress added the Santa Rosa Wilderness additions in 1994 under the CDPA (Figure 4).
- BLM lands in the Santa Rosa Mountains were designated as a National Scenic Area in 1990.
- The Coachella Valley Mountains Conservancy, a state agency, has a mission to acquire and protect mountainous lands surrounding the Coachella Valley. Current Conservancy acreage within the National Monument is 1,200 acres.
- The ACBCI has an existing Tribal Conservation Program that was recently supplemented by the completion of a Habitat Conservation Plan (2002). Current ACBCI acreage within the National Monument is 19,800 acres (Figure 4).
- Coachella Valley cities are involved in a habitat conservation planning effort (CVMSHCP), which will identify lands for conservation purposes.
- Private conservation organizations, such as The Nature Conservancy, American Land Conservancy, and Friends of the Desert Mountains, have contributed to the protection of the mountains through acquisition.

### **History Prior to 1890**

The Cahuilla Indians were first to establish a living in the Santa Rosa and San Jacinto Mountains. Much of Tribal life centered around the lush vegetation and abundant water in the area known as Indian Canyons, site of North America's largest natural fan palm oases. Juan Bautista de Anza led a famous inland expedition through the mountains in 1774 and again a year later. Rancho San Jacinto, an outlying cattle ranch of Mission San Luis Rey, was founded sometime after 1816 and gave its name to the mountains. Rancho San Jacinto Viejo was granted by the Mexican government to Jose Antonio Estudillo in 1842. Estudillo and his Mexican and Indian vaqueros tended large herds of cattle in the valley and depended on water that flowed from the mountains.

In 1853, a government survey party mapped Palm Springs and its natural hot springs mineral pool – now the site of the Spa Hotel and Casino – and established the first wagon route through the San Gorgonio Pass (now Interstate 10). In 1877, as an incentive to complete a railroad to the Pacific, the U.S. government gave Southern Pacific Railroad title to the odd-numbered parcels of land for 10 miles on either side of the tracks running through the Southern California desert around Palm Springs. The even-numbered parcels of land were given to the Agua Caliente, but Federal law prohibited them from leasing or selling the land to derive income from it.

Cattlemen soon rode into the mountains upon American occupation of California. What is now Garner Valley, just outside the National Monument boundary, provided high meadows for cattle raising for Charles Thomas, as well as other cattle raising families – Hamiltons, Tripps, Reeds, Arnaizes and Wellmans. A drought from 1862 to 1865 drove cattlemen into the mountains in search of water for thirsty cattle.

### **Early Valley and Mountain Development**

Palm Springs was founded in 1876 and became incorporated as a city in 1938. At that time, there were only a couple hundred people living in Palm Springs. It had one cafe,

one grocery, one drug store and a small branch bank. In 1884, Judge John Guthrie McCallum of San Francisco arrived in Palm Springs with his family, seeking a healthful climate for his tubercular son. The first permanent, non-Indian settler, McCallum purchased land from Southern Pacific and built an elaborate aqueduct. Dr. Welwood Murray built the first hotel, The Palm Springs Hotel, in 1886. The mountain areas near present-day Idyllwild were also destinations for recreation and solitude. The first mountain resort community was established in Strawberry Valley in 1890. Camp Idyllwild and John and Mary Keen's Keen House and the Idyllwild Sanitorium catered to summer visitors. The Idyllwild Inn was constructed in 1905 and served as a center for social activities in Strawberry Valley. During the early 20<sup>th</sup> century, John Muir visited both the San Jacinto Mountains and the Coachella Valley.

The Palm Springs area continued to attract more visitors and non-Indian residents, but it was not until President Eisenhower signed the Equalization Law in 1959 that Tribes could realize profits from their lands. During these years, Palm Springs grew rapidly. In 1909 Nellie Coffman's Desert Inn opened, as did a garage for servicing the vehicles that brought visitors from the East Coast and Los Angeles, and a school for the children of the handful of year-round residents. By the time it was incorporated in 1938, the village of Palm Springs had become world famous as a winter playground for Hollywood stars, European royalty and business tycoons, all who came to enjoy the endless sunshine and serenity of the desert. Rapid growth and increasing numbers of visitors and year-round residents put increasing pressure on the recreational resources of the surrounding foothills and mountains. One local group, the Desert Riders, found that if they were to continue to ride their horses in the Palm Springs area, they must do something to protect the trails. As early as 1932, the Desert Rider's original Trails Boss maintained and encouraged use of these trails, particularly trails that explored the canyons and those that reached high into the mountains.

During World War II, the desert became the training grounds for General George S. Patton's troops as they prepared to invade North Africa. El Mirador Hotel, second home to the stars and the site of today's Desert Regional Medical Center, served as Torney General Hospital, treating U.S. wounded. Italian prisoners of war, housed at the adjoining detention camp, labored at the hospital. The post-war period also saw a rise in mountain residents, which had begun in 1920 with the increase in mountain home development. In 1945, there were fewer than 450 residents living in Idyllwild, Pine Cove, and Mountain Center. But by 1950, the Idyllwild School of Music and the Arts had held its first summer session, and by the end of the 1950s, the mountain population had risen to 2,500.

During the 1960s, the southern California population boom continued and was coupled with a boom in affordable vehicles and motorcycles. The mountain communities continued to provide recreation destinations for southern Californians. The western desert became a very popular place to escape the urban routine, driving desert and cross country roads, camping, hunting, sightseeing and motorized-vehicle racing. Along with the social benefits provided by these land uses came increases in access routes, surface disturbances, and impacts to natural and cultural resources. But with visitation also came an increased public awareness and concern for the desert and mountain environments.

The post-war era ushered in tremendous growth as Palm Springs' natural environment was no longer a secret of just the wealthy. With the growth of tourism, attractions and

resorts flourished. Development spread "down valley," and with the advent of air-conditioning, visitors and residents stayed year-round.

On October 12, 1963, the Palm Springs Aerial Tramway was officially opened. Credit for conceiving the Tramway project goes to Francis Crocker, manager of the California Electric Power Company, who came to Palm Springs in 1932. There was no air conditioning in those days, and Crocker thought it would be wonderful to travel quickly up to the mountain where it was cool. Crocker spent 30 years planning, financing, and building the tramway. Before it was over, approximately 600 tons of steel were used in the fabrication of the tramway cables and towers using more than 27 miles of locked-coil cable, wire rope and strand.

#### **Activities from 1970 to Present.**

Between 1970 and 2003, the greater Coachella Valley and mountain communities have continued to grow. Tourism promotion has spurred the development of over 100 golf courses, and promotion of the area as a resort destination continues to add to the increase in population. Tourism has been a driving economic force for all of the Coachella Valley cities that border the National Monument. Year-round living within the Coachella Valley has increased exponentially within the last 20 years. Increasing population pressures are also being felt in mountain communities, the lack of sufficient water sources, increasing fire danger, managing drought conditions, and mountain lifestyles being affected by increasing recreation seekers have developed as issues of concern for residents.

BLM and National Forest lands are becoming increasingly important to the public as a source of recreational opportunities, open space, community infrastructure and wildlife. Southern California and the southwest urban populations are continuing to grow, placing pressure on the open spaces that remain.

The recent completion and continued involvement in bio-regional planning efforts for the southern California region address the pressures that are facing sustainable living in the future.

The CDCA Plan Amendment for the Coachella Valley established deliberate steps for the management of threatened and endangered species, air quality and open spaces while also addressing other important quality-of-life issues, such as recreational opportunities and necessary infrastructure support for communities within the Plan Area. The Forest Plan Revision process is currently tackling similar issues throughout the four southern California National Forests. The decisions proposed through the National Monument Management Plan provide specific methods for working with partner agencies to ensure that the resources that exist within the National Monument are identified, protected, and preserved for current and future public enjoyment.

The ACBCI recently completed a Habitat Conservation Plan (2002). Mt. San Jacinto State Park recently completed a General Plan for the park, and Anza Borrego Desert State Park is currently completing a General Plan. As more and more private land is dedicated to support housing and urban development, decisions must be made concerning habitats to conserve in order to avoid more species listings under the ESA. Decisions are also necessary concerning management of native habitats and open spaces to ensure they are delivering the natural, social, economic and cultural values intended.

### **3.B.2. Setting**

The 271,400-acre Santa Rosa and San Jacinto National Monument encompasses 89,500 acres of BLM lands, 65,000 acres of National Forest lands, 19,800 acres of ACBCI lands, 12,900 acres of California Department of Parks and Recreation lands, 36,400 acres of other State of California agencies lands, and 38,500 acres of private lands. The National Monument is located in southern California, approximately 100 miles east of Los Angeles. The National Monument has a dramatic landscape rising abruptly from below sea level in the valley to the snow-capped San Jacinto Peak at 10,834 feet.

The National Monument ranges from Sonoran Desert to Arctic Alpine, providing exceptionally diverse biological resources. This area provides habitat for the Federal and State listed Peninsular Ranges bighorn sheep (*Ovis Canadensis nelsoni*), desert slender salamander (*Batrachoseps aridus*), and migratory birds. The National Monument runs northwest to southeast along the edge of the Coachella Valley, a broad, low elevation valley comprising the westernmost limits of the Sonoran Desert. Nine cities, including the city of Palm Springs, lie within this valley, an area of rapid growth and increasing urbanization. As noted in the National Monument Act of 2000, the National Monument provides both a “picturesque backdrop” and an abundance of recreational opportunities that are an important regional economic resource for Coachella Valley communities. Several mountain communities, including Idyllwild, provide high elevation access into the National Monument.

The BLM portion of the National Monument occurs at low-lying elevations from below sea level to roughly 2,500 feet. Vegetation ranges from creosote and desert flora to chaparral. This portion of the National Monument interfaces with several communities in the Coachella Valley, including Palm Springs, Cathedral City, Rancho Mirage, Palm Desert, Indian Wells, and La Quinta.

The National Forest lands within the National Monument are primarily at elevations ranging from 2,000 feet to 7,500 feet. Vegetation ranges from chaparral to a mixed conifer, with moderate to steep slope and deeply dissected canyons. Access to National Forest lands can be obtained via State Highway 243 and State Highway 74 from Hemet and Palm Desert. National Forest lands interface with the communities of Pinyon, Pine Cove, Idyllwild and Mountain Center.

The total Plan Area encompasses approximately 271,400 acres. However, the National Monument Management Plan will only affect Federal lands as described above. This will be a cooperative planning effort and will encourage collaboration between the BLM, Forest Service, other Federal agencies, State, Tribal and local municipalities.

The intensity and variety of multiple uses requested by the public requires a high level of coordination and collaboration with interested constituents and communities. This helps to ensure that both the needs of the public, the multiple use mandate of the BLM and Forest Service, and conservation needs are considered when making decisions about public land management. This planning process is an excellent opportunity to coordinate with all interested constituents and to minimize land use conflicts on BLM-managed and National Forest public lands.

The National Monument is a part of the BLM's National Landscape Conservation System (NLCS), established in 2000 to help protect some of the nation's most remarkable and rugged landscapes. The system, which includes all of the agency's National Conservation Areas, National Monuments, Wilderness areas, Wilderness Study Areas, Wild and Scenic Rivers, and National Scenic and Historic Trails, will ensure that future generations will be able to enjoy some of the United States' last, great open spaces. NLCS lands will enable the public to experience the solitude and splendor of these undeveloped landscapes by providing numerous opportunities for exploration and discovery.

### **3.C. Biological Resources**

The elevation of the National Monument ranges from just above sea level up to 10,834 feet. This range of elevations and accompanying differences in temperature, precipitation and other environmental variables are significant factors contributing to the area's remarkable variety of plant and animal species.

Many canyons in the mountains support riparian areas not typical of a desert environment. Streams and seeps also support many palm oases, especially in the Santa Rosa Mountains. Where the water drains into the washes, desert dry wash woodlands result. The alluvial fans associated with the canyon mouths provide still another major land form and distinctive biological community. Another feature contributing to the biological diversity are the strong winds that funnel through the San Gorgonio Pass from the west through areas of sand deposition from the San Gorgonio and Whitewater rivers and create an aeolian dune system. Historically, this dune system occupied much of the center of the valley.

The San Jacinto Mountains are part of the Peninsular Range Province, one of the largest geological units in North America. The Peninsular Range Province begins in Mexico at the terminus of the Baja Peninsula, and runs northwest for approximately 900 miles, ending in the San Jacinto Mountains of Riverside County, California. Within the San Jacinto Mountains is San Jacinto Peak, world-renowned as the steepest escarpment in North America. The peak rises from 800 to 10,834 feet in less than seven horizontal miles. San Jacinto Peak is not the only peak within the San Jacinto Mountains that exceeds 10,000 feet in elevation. Thirteen other peaks rise above the 10,000-foot level including Jean Peak (10,570 feet), Miller Peak (10,400 feet), and Marion Mountain (10,362 feet). This dramatic change in elevation results in diverse and unique vegetation zones through the mountain range.

The elevation profile of the San Jacinto Mountains consists of six vegetation zones that are based primarily on temperature and precipitation, which are in turn regulated by elevation and latitudinal location. Due to effects from the Pacific Ocean, the western slopes of the San Jacinto Mountains are cooler and receive significantly more moisture, while the eastern side is hotter and drier. Below 4,000 feet on the western side, coastal sage scrub and valley grassland dominate. This zone, however, is outside of the National Monument. Also on the western slopes, between 4,000 and 6,000 feet, chaparral is the dominant vegetation. Common chaparral species include chamise, manzanita, and ribbonwood. On both sides of the mountains, montane coniferous forest occurs from roughly 5,500 to 9,000 feet in elevation. Vegetation in this area includes Jeffery pine, ponderosa pine, incense cedar, and sugar pine. At the uppermost 2,000 feet of the San Jacinto Mountains, limber and lodgepole pine dominate, and together is



known as the subalpine forest zone. On the eastern side of the San Jacinto Mountains, creosote shrub is the main vegetation type up to 3,500 feet. Species include: creosote bush, brittlebush, and barrel cactus. And from 3,500 to 7,000 feet, chaparral and pinyon-juniper woodland reign. Vegetation includes ribbonwood, pinyon pine, manzanita, *Nolina*, and California juniper. Above 7,000 feet on the eastern slopes, montane coniferous and subalpine forest occur as they do on the western side.

One unique aspect of the San Jacinto Mountains is its isolation of both the mountain and the province from other mountainous regions. On the western side of the Peninsular Range Province is the Pacific Ocean. Only in southern California does a part of the province have terrestrial connections to other parts of the North American continent. However, the Pacific Ocean acts as a barrier for plants and animal distribution to the west. On the eastern and southern side of the province is the Salton Trough, which includes the Salton Sea and incorporates the largest area of land below sea level on the Western Hemisphere. This area is also one of the hottest and most arid areas in North America, effectively reducing plant and animal distribution to the east. To the north, the San Jacinto Mountains are separated from the Transverse Ranges by the San Gorgonio Pass. The result of this “island” isolation is an assemblage of species unique to this region.

Several species of plant and wildlife are restricted in distribution and/or are endemic to the San Jacinto Mountains and/or the Peninsular Range Province. However, there are no vertebrate animal species that are found only in the San Jacinto Mountains. There are species such as the granite night lizard (*Xantusia henshawi*) that occur only in the Peninsular Range Province and in the San Jacinto Mountains. The isolation of the San Jacinto Mountains has also led to the evolution of “subspecies” of animals with slightly different characteristics. For example, within the San Jacinto Mountains, the San Diego mountain kingsnake (*Lampropeltis zonata pulchra*) can be found, while on the San Bernardino Mountains (Transverse Range), one may find the San Bernardino mountain kingsnake (*Lampropeltis zonata parvirubra*). This subspecies reflects the separation of a once-continuous population of species by geologic land movement during the Pleistocene era (circa 10,000 years ago, or Before Present (BP)).

Although, non-native to the area, black bears (*Ursus americanus*) do disperse through the San Jacinto Mountains. Black bears were introduced to the San Bernardino Mountains in 1933 by CDFG. The introduction was successful and the population has increased, pushing some individual bears into the surrounding mountains. Black bears have been known to use the San Gorgonio Pass and Interstate 10 to move southward into the San Jacinto Mountains.

According to Peter Raven, writing in *Terrestrial Vegetation of California*, “California contains the most remarkable assemblage of native plant species in all of temperate and northern North America.” One of the two highest centers of endemism in California for “relict species,” (i.e. those that have persisted from earlier geologic periods in California) is in the northern and western margin of the Colorado Desert, from the Little San Bernardino Mountains, along the east slope of the San Jacinto and Santa Rosa Mountains, the Borrego Valley area, and southward into Baja California.

For a number of reasons, many of these species have been identified by State and Federal agencies as needing additional protection to ensure their continued survival. These Special Status Species include 14 Federal listed endangered species, species

designated as sensitive by the BLM and Forest Service in California, as candidate species by the USFWS, and as species of special concern by the USFWS and the CDFG. A complete list of threatened and endangered species within the National Monument is provided in Table 3-3. In addition, species common to the National Monument are described in Appendix G. BLM and Forest Service strive to ensure that sensitive species do not become candidates for listing in the future. The agencies use recommendations from available recovery plans, research information and data, and other documents on Special Status Species, to establish management prescriptions and guidelines that will facilitate recovery of these species and prevent additional listings.

BLM and Forest Service manage biological resources within the National Monument in conformance with applicable laws, regulations and policies, including the CDCA Plan (1980, as amended) and the SBNF LRMP (1989, as amended). The CDCA Plan provides the following objectives for wildlife management:

- (1) Avoid, mitigate, or compensate for impacts of conflicting uses on wildlife populations and habitats. Promote wildlife populations through habitat enhancement projects so that balanced ecosystems are maintained and wildlife abundance provides for human enjoyment.
- (2) Develop and implement detailed plans to provide special management for (a) areas which contain rare or unique habitat, (b) areas with habitat which is sensitive to conflicting uses, (c) areas with habitat which is especially rich in wildlife abundance or diversity, and (d) areas which are good representatives of common habitat types.
- (3) Manage wildlife species on the Federal and State lists of threatened and endangered species and their habitats so that the continued existence of each is not jeopardized. Stabilize, and where possible, improve populations through management and recovery plans developed and implemented cooperatively with the USFWS and the CDFG.
- (4) Manage wildlife species officially designated as sensitive by the BLM California State Director and their habitats so that the potential for Federal or State listing is minimized.
- (5) Include consideration of crucial habitats of sensitive species in all decisions so that impacts are avoided, mitigated, or compensated.

In addition, Objectives (Appendix E), Land Health Standards, Standards and Guides, and BMP provide management direction for BLM and Forest Service, helping to ensure that Federal action within the National Monument is in conformance with land use plans, regulations and policy.

#### **Management of Drought- Related Vegetation Mortality**

Large stands of trees and brushland are dying in the San Bernardino and San Jacinto Mountains due to a four-year drought. The drought, the worst in recorded history, has significantly stressed the vegetation. As a result, populations of bark beetles have risen rapidly, killing large numbers of the drought-weakened trees. Pathogens such as root disease and dwarf mistletoe are also killing the weakened trees.

The area affected by the disaster is now 354,000 acres and is increasing daily. In pine and mixed conifer stands, it has grown from an estimated 66,000 acres in October 2002 to 151,000 acres in January 2003, to the most recent estimate of 175,000 acres in April 2003. The dead and dying trees pose a significant wildfire hazard and thousands of

homes are at risk. The removal of dead and dying trees is difficult and expensive, a problem complicated by the limited market for timber products in southern California.

The San Bernardino National Forest has led the effort in forming the Mountain Area Safety Task Forces (MAST) in Riverside and San Bernardino Counties to facilitate an interagency approach to resolving the public safety threat caused by the extreme amount of vegetation mortality. Participants include the Forest Service, USDA-Natural Resource Conservation Service (NRCS), CDF, Riverside County, San Bernardino County, local municipal fire departments, Caltrans, Southern California Edison (SCE), South Coast Air Quality Management District (SCAQMD), and local Fire Safe Councils. These MAST groups have developed common priorities in support of providing overall public safety, including securing protection of evacuation routes, communication sites and other public infrastructure, and reducing threat of hazardous fuels to wildland-urban interface communities. The MAST groups have facilitated a cooperative approach to achieving these objectives and working with affected publics.

**3.C.1. Natural Communities**

Natural communities within the National Monument have been placed in eight classifications, or types, from the valley – mountain interface to the coniferous forests of the higher elevations. These categories are: (1) sand dunes and sand fields, (2) desert scrub communities, (3) chaparral communities, (4) desert scrub communities, (5) marsh communities, (6) dry wash woodland and mesquite communities, (7) riparian communities, and (8) woodland and forest communities. This classification system was based on descriptions of natural communities in the CVMSHCP/NCCP (CVAG 2001), which followed *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) with the addition of five new natural community types developed by the CVMSHCP/NCCP to distinguish between the blowsand communities in that plan Area. These natural communities were then used as the basis for the Objectives (Appendix E) in the CDCA Plan Amendment. Table 3-1 and Figure 5 illustrate the natural communities and which Special Status Species are associated with each community type.

**Table 3-1. Community Types and Associated Special Status Species**

Community Type	Associated Special Status Species
Sand Dunes and Sand Fields	Coachella Valley fringe-toed lizard Coachella Valley giant sand treader cricket Coachella Valley Jerusalem cricket Coachella Valley milkvetch Coachella Valley round-tailed ground squirrel Casey's June beetle Le Conte's thrasher
Chaparral Communities	Gray vireo Peninsular Ranges bighorn sheep Desert tortoise Pratt's dark aurora blue butterfly

Community Type	Associated Special Status Species
Desert Scrub Communities	Coachella Valley round-tailed ground squirrel Peninsular Ranges bighorn sheep Desert tortoise Le Conte's thrasher Coachella Valley giant sand treader cricket Casey's June beetle Coachella Valley milkvetch
Dry Wash Woodland And Mesquite Communities	Coachella Valley round-tailed ground squirrel Desert tortoise Peninsular Ranges bighorn sheep Crissal thrasher Le Conte's thrasher Coachella Valley milkvetch Southwestern willow flycatcher Yellow warbler Yellow-breasted chat Least Bell's vireo
Pinyon/Juniper Vegetative Community	Peninsular Ranges bighorn sheep Gray vireo Pratt's aurora blue butterfly
Riparian and Desert Fan Palm Communities	Desert slender salamander Desert tortoise Least Bell's vireo Yellow warbler Yellow-breasted chat Southwestern willow flycatcher Summer tanager Crissal thrasher Southern yellow bat Peninsular Ranges bighorn sheep
Woodland and Forest Communities	Peninsular Ranges bighorn sheep Gray vireo Desert tortoise Pratt's aurora blue butterfly

**Descriptions of Natural Communities**

**Sand Dunes and Sand Fields**

This community type combines the following five natural communities into one based on similarities of community type. These natural communities are found along the northwestern edge of the National Monument in the vicinity of Snow Creek and Fingal's Finger. 1,324 acres of this natural community exists within the National Monument boundary (Figure 5).

Active Desert Dunes – These are essentially barren expanses of actively moving sand whose size and shape are determined by abiotic site factors rather than by stabilizing vegetation.

Active Desert Sand Fields – These are areas of active sand movement, with little or no vegetation where accumulated sand is not of sufficient depth to form classic formations that characterize dune systems.

Active Shielded Desert Dunes - Desert Sand Fields – These are desert sand accumulations lacking dune formations and characterized by irregular deposition of sand materials such that sand accumulations are regularly blown off the habitat area.

Stabilized and Partially Stabilized Desert Dunes – These are dune sand accumulations that are stabilized or partially stabilized by evergreen and/or deciduous shrubs, scattered low annuals and perennial grasses.

Stabilized Shielded Desert Sand Fields – These are similar to stabilized and partially stabilized desert sand fields except that sand source and sand transport systems, which would supply sand to the sand fields, have been interrupted or shielded.

### **Chaparral Communities**

There are four chaparral natural communities that occur within the National Monument. These natural communities cover 46,124 acres within the National Monument (Figure 5).

Chamise Chaparral – This is one of the most common chaparral natural communities in California and is overwhelmingly dominated by chamise (*Adenostoma fasciculatum*). It is adapted to repeated fires as it sprouts readily from burned stumps. Mature stands are densely interwoven with very little herbaceous understory or litter. This is a common natural community on the western slopes of the San Jacinto and Santa Rosa Mountains.

Redshank Chaparral – Similar to chamise chaparral, this natural community is typically taller and somewhat more open, often forming nearly pure strands of redshank (*Adenostoma sparsifolium*). Redshank chaparral is found in the San Jacinto and Santa Rosa Mountains. In a gap analysis of the vegetation of the Peninsular Ranges, California, Davis et al. (1995) listed redshank chaparral as a natural community considered to be at risk; this ranking may be because the community is not widely distributed in California and occurs in areas of increasing pressure from urbanization.

Interior Live Oak Chaparral – This natural community occurs as a dense, tall chaparral dominated by interior live oak (*Quercus wislizenii*) and scrub oak (*Quercus berberidifolia*). Other associated species include chaparral whitethorn (*Ceanothus leucodermis*), birchleaf mountain mohogany (*Cercocarpus betuloides*), coffeeberry (*Rhamnus californica*), and hollyleaf redberry (*Rhamnus ilicifolia*). This chaparral is fairly mesic and is found within the National Monument.

Semi-desert Chaparral – This natural community consists mainly of woody evergreen shrubs and is more open than other chaparrals. Some of the dominant plant species include California juniper (*Juniperus californica*), California buckwheat (*Eriogonum fasciculatum*), and *Opuntia* cactus species. Other associated species include manzanita (*Arctostaphylos* spp.), *Ceanothus* spp., sugar bush (*Rhus ovata*), and scrub oak (*Quercus*). This natural community tends to occur on rockier soils and recently burned sites. Semi-desert chaparral is distributed on the interior slopes of

the Peninsular Ranges and is most common between 2,000 and 5,000 feet elevation in the San Jacinto and Santa Rosa Mountains.

### **Desert Scrub Communities**

This community type combines two natural communities into a single, broad category. The combination is based on similarities of community type. Desert scrub communities cover 164,041 acres of the National Monument (Figure 5).

Sonoran Creosote Bush Scrub – Sonoran creosote bush scrub is the most widespread natural community in the Colorado Desert. It is dominated by creosote bush (*Larrea tridentate*). It characterizes the vast intermountain bajadas, reaching greatest development on coarse, well-drained soils. The co-dominant species in the community is burrobrush (*Ambrosia dumosa*), a much shorter shrub.

Sonoran Mixed Woody and Succulent Scrub – This natural community is similar to creosote bush scrub but includes a dominance of cacti and other stem succulents and is more varied and usually with a higher plant density. It is found on the alluvial fans of the Santa Rosa Mountains.

### **Desert Dry Wash Woodland and Mesquite Communities**

There are two general natural communities included in this description. This community type covers 2,235 acres in the National Monument (Figure 5).

Mesquite Bosque – This natural community is an open to fairly dense, drought-deciduous thorn forest dominated by screwbean mesquite (*Prosopis pubescens*) with open, park-like interiors maintained by frequent floods and/or fire. It occurs in dry washes. The understory is sparse but may include various species of salt bush (*Atriplex* spp.). It is unlikely that this natural community occurs within the National Monument.

Desert Dry Wash Woodland – This natural community is an open to dense, drought-deciduous, microphyllous thorn scrub woodland dominated by any of several members of the bean family including palo verde (*Cercidium floridum*), ironwood (*Olneya tesota*), and smoke tree (*Psoralea arguta*). Associated species include desert lavender (*Hyptis emoryi*), cheesebush (*Hymenoclea salsola*), catclaw acacia (*Acacia greggii*), and desert willow (*Chilopsis linearis*). Desert dry wash woodland occurs in washes subject to intermittent flooding, but without perennial water. These washes are associated with canyon mouths and alluvial fans in the Santa Rosa Mountains.

### **Pinyon/Juniper Vegetative Community**

This is somewhat dense woodland dominated by California juniper, (*Juniperus californica*) rather than pinyon pine. Both singleleaf pinyon (*Pinus monophylla*) and Parry pinyon (*P. quadrifolia*) occur along with California juniper as subdominants in the National Monument. Other community components include Mojave yucca (*Yucca schidigera*), manzanita (*Arctostaphylos* sp.), Nolina (*Nolina parryi*) and desert scrub oak (*Quercus turbinella*). This community occurs on the desert slopes of the San Jacinto and Santa Rosa Mountains from 3500 to 5500 feet.

### **Riparian and Desert Fan Palm Communities**

There are three riparian natural communities and a desert fan palm oasis community that occur within the National Monument. Riparian areas are considered to be at risk throughout southern California and cover 2,327 acres within the National Monument (Figure 5).

Southern Arroyo Willow Riparian Forest – This natural community consists of streamside vegetation dominated by arroyo willow (*Salix lasiolepis*), often forming dense thickets. Southern arroyo willow riparian forest is characterized by a continuous canopy with typically sparse to non-existent shrub and herb layer (Sawyer and Keeler-Wolf 1995). These riparian forests are seasonally flooded, but water is present year round. This natural community occurs within the National Monument near Snow Creek and Fingal's Finger.

Southern Sycamore-Alder Riparian Woodland – This natural community consists of a tall, open, broad-leaved, winter deciduous streamside woodland with sycamore (*Platanus racemosa*) and white alder (*Alnus rhombifolia*) as the dominant trees. Stands seldom form closed canopies. Southern sycamore-alder riparian woodland occurs along rocky streambeds subject to occasional high intensity flooding. White alder is restricted to perennial streams, sycamore can occur in intermittent streams. This natural community type occurs within the National Monument in Snow Creek, Blaisdell Canyon, and the west fork of Palm Canyon. It also occurs in Tahquitz Canyon, Andreas Canyon, Murray Canyon, and Tachevah Canyon.

Sonoran Cottonwood-Willow Riparian Forest – This natural community consists of a winter-deciduous, broad-leaved streamside forest dominated by Fremont cottonwood (*Populus fremontii*), with a dense understory of willow species (*Salix exigua* and *Salix lasiolepis*). Sonoran cottonwood-willow riparian forest is associated with deep, well-watered loamy alluvial soils along the near-channel floodplains of perennial desert rivers. Within the National Monument, this natural community type occurs in Chino Canyon.

Desert Fan Palm Oasis Woodland – This natural community is composed of open to dense groves dominated by native desert fan palms (*Washingtonia filifera*). The understory is sparse in dense groves where the ground is mulched by fallen fronds. Associated species include honey mesquite (*Prosopis glandulosa*), arrowweed (*Pluchea sericea*), and perennial grasses such as deer grass (*Muhlenbergia rigens*). *Washingtonia* is a relict species, and this community is restricted to areas of available water in and around the Salton Basin. Desert fan palm oasis woodland occurs within the National Monument on the west side of the Santa Rosa and San Jacinto Mountain.

### **Woodland and Forest Communities**

The woodland and forest community type covers 54,808 acres within the National Monument and includes redshank chaparral, peninsular juniper woodland and scrub, black oak forest, Coulter pine forest, westside ponderosa pine forest, Sierran mixed coniferous forest, Jeffery pine and Jeffery pine-fir forest, and southern California subalpine forest (Figure 5).

Redshank Chaparral – This natural community consists of redshank (*Adenostoma sparsifolium*), an open shrub or small tree with multiple branches from the base

covered with rust-red, shaggy bark. This is found in four areas of southern California and ranges in elevation from 2,000 to 6,000 feet.

Peninsular Juniper Woodland and Scrub – This is somewhat dense woodland dominated by California juniper (*Juniperus californiaca*) rather than pinyon pine (*Pinus edulis*). This natural community occurs on the desert slopes of the San Jacinto and Santa Rosa Mountains at elevations between 3,500 and 5,500 feet.

Black Oak Forest – This is a persistent climax forest dominated by black oak (*Quercus kelloggii*), with scattered emergent ponderosa pine (*Pinus ponderosa*) or Jeffrey pine (*Pinus jeffreyi*). Most stands are even-aged, reflecting past disturbances.

Coutler Pine Forest – This is an open forest of scattered Coulter pines (*Pinus coulteri*) and black oak (*Quercus kelloggii*) with an understory of shrubs typically associated with upper Sonoran mixed chaparral. Some stands are dense enough to suppress the shrubby layer.

Westside Ponderosa Pine Forest – This is an open, park-like forest of coniferous evergreens to 70 meters tall, dominated by ponderosa pine (*Pinus ponderosa*). The understory is typically sparse, consisting of scattered chaparral shrubs and young trees.

Sierran Mixed Coniferous Forest – This is similar to westside ponderosa pine forest, but denser, with the crowns often touching, and often slightly taller (to 75 meters). Dominant species include white fir (*Abies concolor*), ponderosa pine (*Pinus ponderosa*), Jeffrey pine (*Pinus jeffreyi*), and sugar pine (*Pinus lambertiana*).

Jeffrey Pine Forest – This natural community is a tall, open forest dominated by Jeffrey pine (*Pinus jeffreyi*), with a sparse understory of species from the mixed montane chaparral or sagebrush scrub communities. It is similar in some aspects to the westside ponderosa pine forest and is found in the San Jacinto Wilderness.

Jeffrey Pine-Fir Forest – This is similar to Sierran mixed coniferous forest, but not quite so tall (up to 60 meters). The understory is open, primarily of scattered mixed montane chaparral and small trees, and it occurs in the Santa Rosa Mountains. Dominant species are white fir (*Abies concolor*) and Jeffrey pine (*Pinus jeffreyi*).

Southern California Subalpine Forest – This is an open or clumped timberline forest at San Jacinto Peak dominated by lodgepole pine (*Pinus contorta murrayana*) and limber pine (*Pinus flexilis*). The understory is typically very sparse.

### **Invasive Weeds and Pests**

Noxious weeds are a serious problem in the western United States. Estimates of the rapid spread of weeds in the west include 2,300 acres per day on BLM-managed lands and 4,600 on all western public lands. For example, many weed species like perennial pepperweed (tall whitetop (*Lepidium latifolium*)), purple loosestrife (*Lythrum salicaria*), yellow star thistle (*Centaurea solstitialis*), hoary cress (short whitetop (*Cardaria draba*)), leafy spurge (*Euphorbia esula*), spotted knapweed (*Centaurea maculosa* (or *Centaurea biebersteinii*)), diffuse knapweed (*Centaurea diffusa*), and many others are non-native to California and the United States and have no natural enemies to keep their



populations in balance. As a result, these undesirable weeds rapidly invade healthy ecosystems, displace native vegetation, reduce species diversity, and degrade wildlife habitat and special areas such as Wilderness, Wilderness Study Areas, Areas of Critical Environmental Concern (ACECs), National Conservation Areas, and National Monuments. Noxious weed invasions reduce rehabilitation and landscape restoration successes, reduce domestic and wildlife grazing capacity, increase soil erosion and stream sedimentation, and threaten Federally protected plants and animals.

Exotic pests, such as brown-headed cowbirds (*Molothrus ater*), European starlings (*Sturnus vulgaris*), non-native ants, African frogs, tilapia, bullfrogs, and crayfish, all contribute to the decline of native wildlife species. These species tend to out-compete the native fauna for scarce resources and are often aggressive predators of the native wildlife species. The red imported fire ant (*Solenopsis invicta*) is an invasive species that has caused millions of dollars of damage throughout the southern United States since it arrived in the 1960s. This invasive ant has been found in the Coachella Valley and is a threat to native populations of ants. Domesticated animals, such as cats and dogs, can also be very destructive to the native fauna. Studies have shown that natural areas along urban interfaces where cats and dogs are allowed to run wild experience wildlife sinks (high mortality areas for native wildlife).

In Palm Canyon, the Forest Service is attempting to minimize the growth of the feral dog population. Feral and wild dogs pose a threat to the residents of the nearby community of Pinyon and to visitors of Palm Canyon. Additionally, the feral population may be a potential predation threat to Peninsular Ranges bighorn sheep that inhabit the area. The Forest Service is attempting to control the release of feral animals within Palm Canyon through a series of educational actions. Currently, the Forest Service is installing signs indicating the penalties of dumping domesticated dogs or cats in the area. The next step, as called for in this National Monument Management Plan, is to install interpretive signs that explain the reasons why release of unwanted animals is so destructive to wildlife resources, recreation and forest health.

The BLM and Forest Service currently have invasive weed programs underway within the National Monument. BLM and Forest Service work with local cities and state agencies on tamarisk eradication projects to increase efficiency of eradication efforts. The NEPA process allows Federal agencies to evaluate the degree of threat from noxious weeds as well as evaluate the treatment options available. The Forest Service Management Strategy is guided by the Noxious Weed Management Strategy, Pacific Southwest Region and The Guide to Noxious Weed Prevention Practices, July 5, 2001, which encourages coordination and collaboration between the Forest Service, other Federal agencies, State, local, and Tribal governments, and the research community to promote increased effectiveness of noxious weed management. Forest Service goals for management of noxious weeds in recreational, Wilderness and special management areas are to: (1) prevent new weed infestations and the spread of existing weeds, avoid or remove sources of weed seed and propagules; and (2) improve the effectiveness of prevention practices through weed awareness and education. The BLM National Office is currently preparing a national programmatic EIS to update and replace analyses contained in four existing EISs completed by the agency from 1986–1992 for 13 western states and to analyze vegetation treatments in four additional western states and Alaska. Under the proposed action, up to 6 million acres would be treated annually using a variety of methods, including prescribed fire, herbicides and biological control agents, and mechanical and manual extraction. Pending completion of this Proposed National

Monument Management Plan/FEIS, BLM will continue tamarisk eradication projects within the National Monument under an existing tamarisk eradication programmatic environmental assessment (EA). The National Monument Management Plan will supplement and streamline the NEPA process but will replace local NEPA analyses and Section 7 ESA consultation.

### **Wildlife Management**

#### **Cooperative Management with California Department of Fish and Game**

Both the BLM and Forest Service have entered into a MOU with the CDFG to strengthen, at all levels of the two agencies, the cooperative approach to management of fish, wildlife, plants, and their habitats, on National Forest lands. These MOUs acknowledge that conservation of these resources requires close cooperation and coordination between the two agencies, each having specified rights and responsibilities, and it is the intent of the parties to use their knowledge and resources towards conservation of fish, wildlife, plants, and their habitats.

#### **Management of Wildlife Water Sources**

BLM and Forest Service manage wildlife water sources to help ensure water availability for animals within the National Monument. A number of tools are used to assess condition of riparian areas, including PFC assessment and BMP. When necessary, BLM and Forest Service repair guzzlers, remove tamarisk from areas with natural tinajas, and may provide water on an emergency basis when needed.

### **Special Status Species**

Special Status Species include those endemic to the National Monument Management Plan Area, Federal and State species of special concern, and State and Federal listed threatened and endangered species. Habitat models developed for the CVMSHCP/NCCP are referenced where available. A list of species known to occur within the National Monument and species accounts are provided in Appendix G.

#### **Endemic Species**

There are nineteen species endemic to the Plan Area. Endemic species are those that are restricted to a small geographic area (50,000 km<sup>2</sup> is a commonly used cutoff (Noss et al. 1997)), often with very few occurrences within that range. For this reason, these species depend entirely on a single area for survival and are, therefore, often more vulnerable. These species are not listed as threatened or endangered but are species of concern. The following species were identified as endemic to the Plan Area, and species accounts are provided in Appendix G.

Johnston's rockcress (*Arabis johnstonii*)  
Casey's June beetle (*Dinacoma caseyi*)  
Coachella Valley giant sand treader cricket (*Macrobaenetes valgum*)  
Coachella Valley Jerusalem cricket (*Stenopelmatus cahuiensis*)  
Coachella Valley round-tailed ground squirrel (*Spermophilus tereticaudus chlorus*)  
Hidden Lake bluecurls, (*Trichostema austromontanum* ssp. *compactum*)  
Munz's mariposa lily (*Calochortus palmeri* var. *munzii*)  
Pratt's dark aurora blue butterfly (*Euphilotes enoptes cryptorufes*)  
Rock draba (*Draba corrugata* var. *saxosa*)  
San Jacinto bedstraw (*Galium angustifolium* subsp. *Jacinticum*)  
San Jacinto bush snapdragon (*Keckiella rothrockii* var. *jacintensis*)

San Jacinto prickly phlox (*Leptodactylon jaegeri*)  
Santa Rosa Mountain linanthus (*Linanthus floribus* ssp. *hallii*)  
Shaggy-haired alumroot, (*Heuchera hirsutissima*)  
Straw var. jacintensis (*Keckiella rothrockii* ssp. *jacintensis*)  
Tahquitz ivesia (*Ivesia callida*)  
Triple-ribbed milkvetch (*Astragalus tricarinatus*)  
White-margined oxytheca (*Oxytheca emarginata*)  
Ziegler's aster (*Machaeranthera canescens* var. *ziegleri*)

### Species of Special Concern

In addition to endemic species, there are 30 Federal and State species of special concern, including BLM sensitive species that occur within the National Monument. BLM and Forest Service guidance directs the agencies to manage these species to help ensure that they are not listed in the future. Species accounts for the following species are provided in Appendix G.

Black swift (*Cypseloides nigma*)  
Black-tailed gnatcatcher (*Polioptila melanura*)  
Burrowing owl (*Speotyto cunicularia*)  
California spotted owl (*Strix occidentalis occidentalis*)  
Cooper's hawk (*Accipiter cooperii*)  
Coastal rosy boa (*Lichanura trivirgata rosafusca*)  
Crissal thrasher (*Toxostoma crissali*)  
Gray vireo (*Vireo vicinior*)  
Hammond's two-striped garter snake (*Thamnophis hammondi hammondi*)  
Large-blotched ensatina (*Ensatina eschscholtzii klauberi*)  
Lemon lily (*Lilium parryi*)  
Le Conte's thrasher (*Toxostoma lecontei*)  
Lewis' woodpecker (*Melanerpes lewis*)  
Long-eared owl (*Asio otus*)  
Mountain lion (*Puma concolor*)  
Northern goshawk (*Accipiter gentiles*)  
Palm Springs pocket mouse (*Perognathus longimembris bangsi*)  
Prairie falcon (*Falco mexicanus*)  
Purple martin (*Progne subis*)  
San Bernardino mountain kingsnake (*Lampropeltis zonata pulchra*)  
San Bernardino northern flying squirrel (*Glaucomys sabrinus californicus*)  
San Diego horned lizard (*Phrynosoma coronatum blainvillii*)  
San Diego mountain kingsnake (*Lampropeltis zonata parviruvra*)  
San Diego ringneck snake (*Diadophis punctatus similes*)  
Silvery legless lizard (*Aniella pulchra pulchra*)  
Sharp-shinned hawk (*Accipiter striatus*)  
Southern yellow bat (*Lasiurus ega (xanthinus)*)  
Summer tanager (*Piranga rubra cooperi*)  
Swainson's thrush (*Catharus ustulatus*)  
Turkey vulture (*Cathartes aura*)  
White-tailed kite (*Elanus leucurus*)  
Wilson's warbler (*Wilsonia pusilla*)  
Yellow-breasted chat (*Icteria virens*)  
Yellow warbler (*Dendroica petechia brewsteri*)

**California State Fully Protected Species**

The state of California created the fully protected species classification under California Fish and Game Code 4700 (CDFG 2003) to offer further protection to the State’s rare and threatened species. Fully protected species may not be taken at any time. There are no permits or licenses available for their take except for capture necessary for research and/or protection purposes. There are four fully protected species within the National Monument (see Table 3-2).

**Table 3-2. California State Fully Protected Species within the Santa Rosa and San Jacinto Mountains National Monument**

Common Name	Scientific Name
Golden eagle	<i>Aquila chrysaetos</i>
Peninsular Ranges bighorn sheep	<i>Ovis canadensis nelsoni</i>
Ring-tailed cat	<i>Bassariscus</i>
Southern bald eagle	<i>Haliaeetus leucocephalus</i>
White-tailed kite	<i>Elanus leucurus</i>

**Federal and State Listed Threatened and Endangered Species**

There are 14 Federal and State listed threatened and endangered species within the National Monument (see Table 3-3). These species occupy all types of habitat from blowsand in the Windy Point area to the mixed conifer forest of the higher elevations.

**Table 3-3. Federal and State Listed Threatened and Endangered Species within the Santa Rosa and San Jacinto Mountains National Monument**

Common Name	Scientific Name	Status
Coachella Valley fringe-toed lizard	<i>Uma inornata</i>	FT, SE
Coachella Valley milkvetch	<i>Astragalus lentiginosus coachellae</i>	FE
Cuyamaca larkspur	<i>Delphinium hesperium</i> ssp. <i>cyamacae</i>	SR
Desert slender salamander	<i>Batrachoseps aridus</i>	FE, SE
Desert tortoise	<i>Xerobates (or Gopherus) agassizii</i>	FT, ST
Hidden Lake bluecurls	<i>Trichostema austromontanum</i>	FT
Least Bell’s vireo	<i>Vireo bellii pusillus</i>	FE, SE
Mojave tarplant	<i>Deinandra mohavensis</i>	SE
Mountain yellow-legged frog	<i>Rana muscosa</i>	FE, SSC
Peninsular Ranges bighorn sheep	<i>Ovis canadensis nelsoni</i>	FE, ST
Southern rubber boa	<i>Charina bottae umbratica</i>	ST
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	FE, SE
Tahquitz ivesia	<i>Ivesia callida</i>	SR
Triple-ribbed Milkvetch	<i>Astragalus tricarinatus</i>	FE

**FE** = Federal Endangered Species  
**FT** = Federal Threatened Species  
**SSC** = Species of Special Concern

**ST** = State Threatened  
**SE** = State Endangered Species  
**SR** = State Listed Rare

### **Species Accounts – Federal and State Threatened and Endangered**

Species accounts for the 14 Federal and State listed threatened and endangered species are provided below. Species accounts for endemic species, sensitive species, and those proposed for listing under the State or Federal ESA are provided in Appendix G.

Coachella Valley Fringe-toed Lizard (*Uma inornata*) – Federal Threatened, State Endangered. The Coachella Valley fringe-toed lizard is restricted to the Coachella Valley and is limited to the area between Fingal's Finger and Windy Point at the northwest end of the San Jacinto Mountains. It is associated with Aeolian sand deposits and has adapted morphologically and behaviorally (Heifetz 1941, Stebbins 1944, Norris 1958). It occurs wherever there are large patches of Aeolian sand (England and Nelson 1976, LaPre and Cornett 1981, Turner et al. 1981, England 1983, Barrows 1997). The Coachella Valley fringe-toed lizard was listed as threatened, and critical habitat was designated on September 25, 1980. The majority of designated critical habitat and preserves for this species occur outside the boundaries of the National Monument. However, the area between Fingal's Finger and Windy Point provides important habitat. Management for this species is focused on maintaining sand dune systems in the Coachella Valley, habitat restoration, eliminating perches for avian predators, and reducing threats.

Coachella Valley Milkvetch (*Astragalus lentiginosus* var. *coachellae*) – Federal Endangered. The Coachella Valley milkvetch occurs in dunes and sandy flats, along the disturbed margins of sandy washes, and in sandy soils along roadsides adjacent to existing sand dunes. Within the sand dunes and sand fields, this milkvetch tends to occur in the coarser sands at the margins of dunes, not in the most active blow-sand areas. As this species is strongly affiliated with sandy substrates, it may occur in localized pockets where sand has been deposited by wind or by active washes. It may also occur in sandy substrates in creosote bush scrub not directly associated with sand dune habitats. In the Plan Area, populations are known from the Snow Creek area (in the sandy areas on either side of Snow Creek Road) east toward Windy Point. Extensive dune systems, now much reduced from what once occurred, at the base of the Santa Rosa Mountains in what are now the cities of Palm Springs, Cathedral City, Rancho Mirage, Palm Desert, Indian Wells, and La Quinta, provide suitable habitat for the Coachella Valley milkvetch. This Federal listed endangered species is an erect winter annual, or short-lived perennial, which blooms from February to May, producing pink to deep-magenta-colored flowers. It is distinguished in part from other milkvetches by its strongly inflated, two-chambered, mottled pods. These pods, when dried, fall to the ground and are blown along the dunes. In good years, hundreds to thousands of individuals have been described in a population, but often reports are of less than 20 plants. Specific data on population size and dynamics are not available for this species. The factors controlling population size through effects on seed germination, seedling establishment, and plant longevity have not been studied, but presumably involve moisture availability and soil and air temperatures (Sanders 1995).

Cuyamaca Larkspur (*Delphinium hesperium* ssp. *cyamaca*) – State Listed Rare. Cuyamaca larkspur is a herbaceous perennial in the buttercup family (Ranunculaceae) with erect leafy stems that produce dense blue-violet blooms. This larkspur usually grows in low, moist areas within the grassy meadows bordering Cuyamaca Lake and nearby areas in eastern San Diego County. Approximately 20 occurrences of Cuyamaca larkspur are known, and nearly 70 percent of these are found within the

boundaries of Cuyamaca Rancho State Park. Grazing by cattle on private ranch lands, highway maintenance activities, and recreational and trail development are threats to Cuyamaca larkspur.

Desert Slender Salamander (*Batrachoseps aridus*) – Federal and State Endangered. *B. aridus* is known from only two canyons in the Santa Rosa Mountains, the entire habitat comprising perhaps several acres. In addition to the population at Hidden Palms Oasis, a population of slender salamanders was found in the vicinity of Guadalupe Creek, in a canyon separated from Hidden Palms by 4.5 miles of continuous desert (Duncan and Esque 1986). Comparative genetic analysis of the two populations has not been completed, but preliminary results have confirmed that Guadalupe Creek is a disjunct population of *B. aridus* (K. Nicol, pers. comm.).

There is no indication that the geographic range of the species has declined historically. The current range has probably changed little since shortly after the last pluvial period, about 10 million years ago. The habitat of *B. aridus* is a steep-walled desert canyon with permanent water seeping from fractured bedrock. The species uses cracks in the bedrock and sheet-like limestone deposits for shelter from desiccation and temperature extremes. The combination of permanent water, shade, and availability of retreat sites appears important to the distribution of the species. The area receives only 8 inches of rainfall annually (M. Fisher, pers. comm.), and the dry hillsides adjacent to the seeps are uninhabitable by the salamander.

Desert Tortoise (*Gopherus agassizii*) – Federal Threatened, State Endangered. The desert tortoise is widely distributed through an exceptionally broad array of habitats that span 1,100 kilometers from northern Sinaloa State, Mexico where it occupies deciduous forest, across the Sonoran (including the Colorado Desert Subdivision in California) and Mojave Deserts, to the edge of the Colorado Plateau in arid southwestern Utah (Ernst et al. 1994, Germano 1994). Populations north and west of the Colorado River were listed as threatened in April 1990 under the Federal ESA. The species is listed by California as a threatened species, and it is the official State reptile. In California, the tortoise is naturally absent from most areas west of the Salton Sea (Luckenbach 1982). Within the Santa Rosa and San Jacinto Mountains, desert tortoise may be found below 4000 feet elevation in desert alluvial fans, washes, canyon bottoms, rocky hillsides and other steep terrain up to 60 degrees in slope. Populations north and west of the Colorado River were listed as threatened in April of 1990 by the USFWS and the state of California.

Hidden Lake Bluecurls (*Trichostema austromontanum ssp. Compactum*) – Federal Threatened. Hidden Lake bluecurls has potential habitat in the San Bernardino National Forest (USFWS 1998a); no critical habitat has been designated for this species. It is known only from a single vernal pool known as Hidden Lake in the Mount San Jacinto State Wilderness. Potential habitat or a potential location for reintroduction may occur in the San Geronio Wilderness (Dollar and Dry Lakes) in the San Bernardino Mountains. It occurs in seasonally submerged lake bottoms in closed cone coniferous and upper montane coniferous forests (CNPS 1994). Plants flower from July through September (CNPS 1994) or from July through August (USFWS 1998a). *Trichostema austromontanum ssp. compactum* is a compact, soft villous annual approximately 10 cm (4 inches) tall. The blue, five-lobed flowers are less than 7 mm long with two blue stamens (USFWS 1998a). This species differs from *Trichostema austromontanum ssp. austromontanum* by being shorter and having shorter internodes.

The population size at the Hidden Lake occurrence fluctuates during periods of either above or below normal precipitation because of its position along the perimeter of pool habitat. Trampling by horses, cattle or from hikers can crush plants and create depressions that retain water, causing plants to drown (USFWS 1998a).

Least Bell's Vireo (*Vireo bellii pusillus*) – Federal and State Endangered. The least Bell's vireo is a small, gray, migratory songbird that inhabits structurally diverse riparian woodlands and riverine systems. This species was once considered one of the most abundant birds in the state of California. In the last several decades, it has undergone a precipitous decline in numbers, a decline attributed to the loss and degradation of riparian habitat throughout its range as well as to the expansion in range of the brown-headed cowbird (*Molothrus ater*), a nest parasite. Within California, least Bell's vireos are currently restricted in their distribution to eight southern counties, with a majority occurring in San Diego County. Several observations of nesting pairs of least Bell's vireo have been documented in the willow riparian habitats of several canyons in the Santa Rosa Mountains. Preserving riparian habitats within the Santa Rosa Mountains is an important component in the reestablishment of this species into its historic range.

Mojave Tarplant (*Deinandra mohavensi*)- State Listed. Mojave tarplant is a sparsely branched, aromatic, sticky, annual herb of the sunflower family (Asteraceae) with yellow flower heads arranged in compact clusters. Despite early flora that described the species as growing to 18 inches in height, it actually can be up to four feet in height in good conditions. This plant was rediscovered in 1994 at several localized sites within the Peninsular Ranges. It had not been seen since 1933 at the type locality on the Mojave River. Today Mojave tarplant is known from more than 10 highly localized populations in Riverside and San Diego counties. Eight populations occur on the north slope of the San Jacinto Mountains in Riverside County in grassy swales and seeps along low stretched of intermittent streams in mountainous terrain. It typically occurs in clay, silty, or gravelly seasonally saturated soils. The Riverside County occurrences are on the Morongo Indian Reservation and the San Bernardino National Forest. The Mohave tarplant was listed as state endangered in 1981.

Mountain Yellow-legged Frog (*Rana muscosa*) – Federal Endangered. A truly mountain species, the mountain yellow-legged frog occurs primarily at elevations above 1,800 meters (5,940 feet). Within the National Monument, isolated populations exist in the San Jacinto Mountains. In southern California, populations are restricted to streams in ponderosa pine, montane hardwood-conifer, and montane riparian types. Mountain yellow-legged frogs feed primarily on aquatic and terrestrial invertebrates and favor terrestrial insects. Tadpoles graze on algae and diatoms along rocky bottoms in shallow water of streams. Frogs usually crouch on rocks or clumps of grass within a few jumps of water. When disturbed, they dive into the water, taking refuge under rocks or resting exposed on the bottom. Frogs may bury themselves in bottom sediments and during dry conditions, many enter rodent burrows near water. Reproduction does not take place until streams are clear of ice. This highly aquatic species is always found within a few feet of water. Tadpoles may require two over-wintering periods to complete their aquatic development. Terrestrial individuals are primarily diurnal. During winter, adults apparently hibernate beneath ice-covered streams. Terrestrial hibernation has not been reported. In southern California habitats, some individuals aestivate during especially dry periods of late summer (Mullally 1959). Typical home ranges for this species are thought to be less than 10 meters in the longest dimension. Occasional movements up to 50 meters may be associated with habitat deterioration, especially drying. Breeding

and egg-laying at higher elevations usually occurs from March to May, depending on local conditions. Round clusters of up to 500 eggs are deposited in shallow water and attached to gravel or submerged rocks. Adults and tadpoles are commonly preyed upon by garter snakes.

Peninsular Range Bighorn Sheep (*Ovis canadensis nelsoni*) – Federal Endangered, State Threatened. The Peninsular Ranges population of desert bighorn sheep is a distinct population isolated from adjacent populations by urbanization and interstate highways. In 1971, this species was listed as rare and then as threatened in 1984. Peninsular Ranges bighorn sheep are also listed as California state fully protected. Peninsular Ranges bighorn sheep are a metapopulation of *Ovis canadensis nelsoni*, and no permits or licenses are issued to take them as there are for Nelson bighorn sheep (as seen in Title 14, Code 362, CDFG 2001). It was listed as an endangered distinct vertebrate population segment by the USFWS on March 18, 1998. During the past 26 years, the population has declined dramatically from about 1,100 animals to as few as 300 sheep. Overall, during 1984–1990, bighorn sheep populations in the Santa Rosa and San Jacinto Mountains declined 69% (Bighorn Institute 2000). This decline has been attributed to a variety of causes, including disease, automobile collisions, mountain lion predation, exotic plant invasion, toxic plant ingestion, competition with cattle, habitat loss, degradation and fragmentation, and recreational disturbance. During 1992-1998, mountain lion predation accounted for 69% of bighorn mortality in the Peninsular Ranges, accounting for 50-100% of all mortality annually (Hayes et al. 2000). Preliminary results from an on-going lamb mortality study reveal that 56% of lamb mortality is attributed to predation and 89% of all mortality occurred within 300 meters of the urban-wildland interface. Disease is thought to have played a pivotal role in the decline of bighorn sheep during 1983-1994. However, the cause-effect relationship relative to disease in the Peninsular Ranges has not been clearly established (USFWS 2000). Global climate change may also play a role in the decline of bighorn sheep populations, range-wide. Researchers in Wyoming are investigating the interactions of drought and micronutrients such as selenium, on reproductive success of bighorn sheep. Preliminary results indicate that global warming may be influencing reproductive success of bighorn sheep in Wyoming. There may be implications for other bighorn sheep ranges, such as the Peninsular Ranges, which are in the path of air pollution coming from San Diego and the greater Los Angeles area. In recent years, the bighorn population in the Peninsular Ranges has stabilized and appears to be increasing. From 1990 to 1995, the population was stable, but in 1996, ewe survival was low and the population declined again (Bighorn Institute 2000). During 1997–2001, bighorn sheep populations in the Santa Rosa Mountains increased an average of 15.3%.

Current management activities by both BLM and Forest Service have resulted in reduced human disturbance (see Section 3.E. of this chapter), reduced harassment and impacts from domestic dogs by closing all public lands east of Palm Canyon to dogs (except for three specific areas), and disclosure of the impacts of research and monitoring on bighorn sheep (programmatic EA - October 2001, which examined the effects of research and monitoring and provided a mechanism for issuing research permits). During Winter 2003, Forest Service installed a permanent protective barrier (fence) along National Forest lands that prevent cattle from entering Peninsular Ranges bighorn sheep critical habitat within Palm Canyon. Forest Service and BLM are committed to continuing efforts to reduce all human impacts on bighorn sheep, including research and monitoring. Current research techniques, including GPS collars, remote data collection, and monitoring, enable researchers to collect data while minimizing



impacts on bighorn sheep. Forest Service and BLM continue to work with State and Federal agencies, universities, and private researchers to seek alternative, non-invasive research and monitoring techniques. Research and monitoring permit requests are evaluated using the existing Decision Record for the abovementioned EA, with attention to research implications that promote recovery for bighorn sheep. In addition, under the National Monument Act of 2000, BLM-managed public lands in the Santa Rosa and San Jacinto Mountains National Monument are withdrawn from mineral entry. The need for utility corridors or communication sites will be set forth in the National Monument Management Plan. The BLM and Forest Service continue to coordinate with neighboring jurisdictions regarding bighorn sheep management and to work cooperatively on projects such as the Rancho Mirage protective barrier (fence) and domestic pet dumping along Palm Canyon.

Through the BLM's CDCA Plan Amendment, long-term management direction for protection and recovery of Peninsular Ranges bighorn sheep has been established (Appendix F). The Recovery Plan for Bighorn Sheep in the Peninsular Ranges, completed in October 2000, provides recommendations for developing and assessing conservation and management activities in order to achieve recovery of the bighorn sheep. Total acres of essential habitat for the Peninsular Ranges bighorn sheep are 782,049 acres. Of that, 187,685 acres occur within the National Monument (Figure 6).

Southern Rubber Boa (*Charina bottae umbratica*) – State Threatened. The southern rubber boa is uncommon to common in suitable habitats. This species occurs within the National Monument in montane, coniferous habitats above 6,000 feet elevation. This subspecies of rubber boa is geographically isolated in the San Jacinto and San Bernardino Mountains (Erwin 1974). Food consists primarily of small mammals and lizards (Stebbins 1954), and this species may occasionally take smaller snakes (Linder 1963) and *Ensatina* (Macey 1983). The southern rubber boa is an extremely secretive snake and seeks cover in rotting logs, pieces of bark, boards, rocks and other surface debris. It burrows through loose soil or decaying vegetation. It is known to occasionally climb. Young are born in loose, well-aerated soils, under surface objects or within rotting logs. This species is primarily crepuscular during warmer periods of spring, summer, and fall but is occasionally nocturnal and diurnal. They are inactive during cooler periods. Breeding occurs from April to June, and young are born alive from late summer (Erwin 1964) to late November (Hudson 1957). The number of young born ranges from two to eight (Stebbins 1972). Because of its secretive behavior, this snake is probably not subject to heavy predation. Adults and young may occasionally be taken by hawks and owls or by predatory mammals such as skunks and raccoons. The southern rubber boa potentially competes for food resources with the California mountain kingsnake where their ranges overlap.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*) – Federal and State Endangered. The southwestern willow flycatcher is a small brownish-olive-colored bird with a triangular head and orange lower mandible. This bird is restricted to dense riparian woodlands and forests along the river and stream systems of southern California. This flycatcher can be found at sites where a dense growth of willows (*Salix* sp.), *Baccharis*, arrowweed (*Pluchea* sp.), or other plants occur in thickets. These thickets are often associated with a scattered overstory of cottonwood (*Populus fremontii*) and other riparian trees. This species has also been found nesting in southern California in relatively narrow bands of riparian habitat and can utilize extremely small remnant riparian areas (one medium size willow tree) during migration (Theresa

Newkirk, pers. comm.). Southwestern willow flycatchers have been observed breeding on National Forest lands within the National Monument. Suitable breeding habitat is present in a number of locations where riparian habitat exists, such as in Chino, Andreas, Murray, and Palm Canyons and other riparian areas within the National Monument. Southwestern willow flycatchers also migrate through the Plan Area en route to other breeding areas. In migration, they may use desert fan palm oasis woodland, mesquite hummocks, mesquite bosque, arrowweed scrub, desert dry wash woodland, southern sycamore-alder riparian woodland, Sonoran cottonwood-willow riparian forest, and southern arroyo willow riparian forest and are believed to use stopover habitat in desert washes on BLM lands in the lower elevations of the National Monument.

Tahquitz Ivesia (*Ivesia callida*) – State Listed Rare. Tahquitz ivesia is endemic to the San Jacinto Mountains of southern California. This species is found growing in cracks and fractures of granitic rocks between 7,900 and 8,000 feet elevation (at approximately 2,450 meters) (Hickman 1993). It typically flowers between July and August (Munz 1974). The California Natural Diversity Database (CNNDDB) contains records for two occurrences, both located in the San Jacinto Wilderness Area of the San Bernardino National Forest (CNDDDB 1998). Both occurrences are located in relatively inaccessible rocky habitat within upper montane conifer forest. A 1994 revisit of an area where a botanical investigation was completed for this species in 1982 (Berg 1982) has lent evidence to the belief that populations are declining. Because plants grow in granitic rock crevices, they may be vulnerable to the activities of rock climbers.

Triple-Ribbed Milkvetch (*Astragalus tricarinatus*) – Federal Endangered. Triple-ribbed milkvetch is a short-lived perennial herb in the legume family. It grows from 1,400 to 4,000 feet in sandy or gravelly soils along desert washes. It was collected from Martinez Canyon in 1985, and given its habitat, more populations are likely to be discovered within the National Monument. It blooms from February to April with yellowish-white flowers and produces legume pods that are triangular in cross-section.

### **3.C.2. Collection of Biological Resources**

#### **Plant Collection**

Casual collecting of biological resources is allowed under current management plans for both BLM and the Forest Service. The CDCA Plan (1980, as amended) contains provisions for issuing permits for plant collecting, subject to case-by-case analysis of the impacts of such activities. Researchers must obtain a Scientific Collecting Permit from the CDFG in addition to permits required by BLM and Forest Service for any research involving the collection of plants or animals. Collectors will be required to obtain additional permits from the USFWS and/or the State of California to collect threatened or endangered species. Plant collection for commercial uses may require additional permitting or payment of a fee. Sensitive plant species may be collected, subject to completion of an EA of the impacts of such collections. The Forest Service policy states that forest products used for commercial purposes will be sold by permit at a District Ranger Office. The Forest Service issues free permits for plant collections for education, research, or personal use. Plant collections may be permitted for individuals or groups for all plants except for sensitive and Federal listed species. Requests for permits may be made by telephone, e-mail, or letter. Collection of Federal and State listed species require an additional permit from USFWS and CDFG. Sensitive plant species may be collected, subject to completion of an EA of the impacts of such

collections. This EA must be completed by the Forest Botanist and approved by the Regional Forester. Sensitive plant lists are updated every two years.

### **Animal Collection**

Collection of animals may be authorized by BLM and Forest Service under current management plans (CDCA Plan (1980, as amended) and SBNF LRMP (1989, as amended), respectively). Both agencies may issue letters of authorization for insect collection on Federal lands. The State of California does not require permits to collect insects. However, vertebrate species require additional permits from CDFG, and Federal listed vertebrate species require an additional permit from USFWS.

## **3.D. Cultural Resources and Native American Concerns**

### **3.D.1. Prehistoric and Historic Overview**

The Santa Rosa and San Jacinto Mountains are located in a region that was inhabited in late prehistoric and early historic times by the Cahuilla Indians, members of the Shoshonean linguistic family. Cahuilla villages were placed throughout the mountain and valley areas stretching across what are now the communities of Riverside, Banning, Palm Springs, Indio, Borrego Springs, Warner Hot Springs, Anza, San Jacinto, and Hemet (Bean 1972, 1978).

Much more is known about the archaeology of the Coachella Valley to the east of the National Monument and the cismontane valleys to the west than is known about the National Monument region itself. Extensive excavations for the Diamond Valley Lake Reservoir Project in the Domenigoni Valley southwest of Hemet have provided evidence of human occupation extending back beyond 7,000 years B.P.

Scattered throughout the Coachella Valley area are sites that document the existence of a large population whose subsistence activities were centered on Ancient Lake Cahuilla, a large freshwater lake formed by deltaic alterations in the course of the Colorado River. The majority of these sites date to the Late Prehistoric Period, roughly the past 1,000 years. There is some evidence to suggest earlier occupation of the region, including the National Monument. Recently excavated sites in the Coachella Valley have contained artifacts characteristic of earlier occupations. Other sites that provide evidence of Archaic Period occupation in the region include Indian Hill Rockshelter in Anza Borrego, and Tahquitz Canyon in Palm Springs.

Late Prehistoric sites typically contain ceramics and Desert Side-Notched or Cottonwood Triangular arrow points. Ceramics and the bow and arrow were introduced into the Lower Colorado River region approximately 1,500 years B.P. The last stands of Ancient Lake Cahuilla occurred between ca. A.D. 900 and A.D. 1500 (Wilke 1978), and perhaps as recently as A.D. 1650 (Schaefer 1994). The groups living along the shores of Lake Cahuilla were the ancestors of the present-day Cahuilla (Wilke 1978). The lake had a high water level at 42 feet (14 meters) above sea level and created an extensive resource-rich shoreline. Marshlands and embayments occurred along its northwestern and northeastern shores. Large sand dunes and bars formed and were used as occupation sites. The Cahuilla constructed stone weirs that served as fish traps in a variety of settings along the west and northwest shores of Lake Cahuilla. These features are still visible in a few locations where development along the shoreline has not destroyed them.

The final desiccation of the lake led to a change in settlement patterns, the extent and form of which is not fully understood (Wilke 1978, Weide 1974, Schaefer 1994). Some Cahuilla groups remained in the desert while others apparently shifted their base of occupation into the nearby Santa Rosa and San Jacinto Mountains.

Prior to historic contact, the Cahuilla were primarily hunters and gatherers of wild plant foods and lived in permanent villages with satellite camps spread throughout their territory (Kroeber 1925). Ethnographic literature indicates that the gathering of plants provided the Cahuilla with the bulk of their food resources (Barrows 1900, Bean and Saubel 1972). Hunting was probably most important during times when plant foods were scarce such as in winter. Food resources included acorns, agave, pinyon, greens, wild fruits and bulbs, mesquite pods, deer, small terrestrial mammals, birds and fish. Many of these food resources were widely dispersed, and, therefore, a large number of food collecting and processing stations were used throughout the course of the year both on the desert floor and in the higher elevations of the San Jacinto and Santa Rosa mountains. These daily subsistence activities were performed by individuals or small family groups based at a nearby village or seasonal camp.

Villages were linked by social and economic ties, and exchange of food and goods was common. By the late 18th century (the advent of the historic period in this region) the Cahuilla had developed a highly complex social organization based on clans and territories (Strong 1929). All Cahuilla had access to plants, animals, and other resources in the National Monument either directly or through trade. Pinyon Flat was within the territory of mountain Cahuilla groups, but was also used by members of desert villages located along the bases of the mountains in Coachella Valley during spring, summer and fall. Numerous economically important plants ripened during this period including agave and pinyon, and the higher elevations were somewhat of a relief from the high temperatures of the Colorado Desert.

During the late 18<sup>th</sup> and early 19<sup>th</sup> centuries, the coastal Indians, and to a far less extent the Cahuilla, fell under the influence of the Spanish mission system. At the missions, agricultural techniques and animal husbandry were introduced to the native peoples of southern California. Mission life proved destructive to the aboriginal lifestyle. Forced relocations, introduction of new diseases to which indigenous peoples had no immunity, and intermarriage all acted to hasten the demise of traditional subsistence and social patterns. Outbreaks of measles and smallpox in 1862 and 1863 drastically lowered the population of southern California Indians. Some groups of Cahuilla took refuge in the remote canyons of the National Monument during this time.

Reservations were set aside for the Cahuilla beginning in the 1870s. Today four Cahuilla Indian Reservations (Agua Caliente, Morongo, Torres-Martinez and Santa Rosa) have lands within or adjacent to the National Monument; several other reservations are located within a short distance to the west, east and south.

The first European to pass through or near the National Monument may have been Captain Pedro Fages. In 1772, Fages and a small party of soldiers left from San Diego in pursuit of deserters. After traveling east, they are believed to have turned northwest through the Borrego Valley and skirted or crossed through the San Jacinto Mountains. Fages and his party are believed to have passed through Garner Valley from Coyote Canyon, although some speculate that he may have traveled through Palm Canyon.

Captain Juan Bautista de Anza, guided by Father Francisco Garces, is considered to be the first European to pioneer a route through the region. Attempting to establish a route from Sonora, Mexico to the Missions of the California coast, the Anza party passed south and west of the National Monument, through Coyote Canyon, in 1774. In 1775-76, de Anza and Garces led a party of Spanish emigrants over this same route. The journals of Garces, and expedition member Diaz, document the journeys.

Following the Anza expeditions, the San Jacinto and Santa Rosa Mountains remained relatively isolated from European exploration and exploitation until the late 1800s. In 1862, William Bradshaw established a wagon road from the gold mines of La Paz west to Los Angeles. Bradshaw's road passed through San Gorgonio Pass along the northern boundary of the National Monument.

Ranchers, loggers, and miners entered the San Jacinto and Santa Rosa Mountains in the 1860s and 1870s. The first white settler to inhabit the general region was Charles Thomas. Thomas befriended Cahuilla living in Hemet Valley (which would later become Garner Valley) in the early 1860s. Thomas began running cattle and eventually homesteaded the area. Other names associated with the early ranching history of the National Monument include Arnaiz, Flores, Omstott, and Wellman. Their ranching operations soon extended to include Pinyon Flat, Little Pinyon Flat, and surrounding canyons. Many Cahuilla Indians served as ranch hands overseeing the day-to-day work, and some tended to their own herds of cattle.

The history of mining in the National Monument also began in the late 1800s and includes the tale of gold "salting" at Kenworthy and the more typical stories of small, short-lived production mines. Asbestos, beryllium, gold, limestone, tungsten, garnet and tourmaline have been extracted from mines within the boundaries of the National Monument. In the 1930s, Jack Miller constructed and occupied a small cabin while he conducted small scale prospecting and mining efforts in Martinez Canyon. The cabin consists of concrete walls that have been faced with local river rock. This vernacular style structure is one of few rock cabins still standing in the Colorado Desert and was listed in the NRHP in 1999.

The early miners and ranchers living in Garner Valley and the Pinyon Flat area established wagon roads and cattle driveways along trails long-used by the Cahuilla and their ancestors. Turn of the century maps record a road from Garner Valley to Vandeventer Flat that continued east as far as the Asbestos Mine on the south slope of Asbestos Mountain. In 1919, A.C. Lovekin conceived of an idea for a road that would connect Pinyon Flat with the desert. Lovekin felt the road should follow the old Rincon Trail from Palm Springs up through Palm Canyon. This route was surveyed in 1920. However, an alternate route was proposed that would run from Pinyon Flat down along Deep Canyon and into what would eventually become Palm Desert. In July of 1932, this road, the Palms to Pines Highway, was opened.

In 1876, the Federal government allotted the Southern Pacific railway the odd-numbered sections of land on either side of the proposed railroad. This was common practice throughout the west and was meant to compensate the railroad companies for the costs of establishing rail service. This practice accounts for the "checkerboard" land ownership pattern that still exists in parts of the National Monument. Even-numbered sections were retained in Federal ownership and some were incorporated into the lands

held in trust as reservations for the Cahuilla Indians. The Southern Pacific line from Yuma through the Salton Sink and San Gorgonio Pass was completed in 1877.

The San Jacinto Mountains were designated a Forest Reserve in 1897 under the Forest Reserve Act of 1891. Administration of the Forest Reserve went to the Forest Service in 1905. Also during this period, the Forest Reserve went from being its own unit to inclusion in the Cleveland National Forest in 1908 and was eventually attached to the San Bernardino National Forest in 1925. In 1908 San Jacinto forest supervisor, Harold Marshall, forwarded a proposal to Washington for the creation of the Tahquitz Peak and Palm Canyon National Monument. In 1917 Raymond Cree developed the concept of a National Park that would encompass land from San Jacinto Peak to the Salton Sea. Neither of these proposals was enacted.

In 1920 Arthur Lovekin and Frank Miller initiated efforts to establish a monument that would include only lower Palm Canyon. The Palms National Monument Act, encompassing 1,600 acres at the mouths of Andreas, Murray, and Palm Canyons, was signed in 1922. This effort to establish a National Monument failed when the ACBCI opposed the sale of their land in the canyon.

The Southern Pacific Land Company, Forest Service, and Riverside County also worked together to establish protection for the San Jacinto Mountains. The idea for a state park evolved in 1927, and the San Jacinto Mountain State Park Association was incorporated in 1928 with the goal of preserving a portion of the San Jacinto Mountains. In 1928, a bond was passed to acquire lands for Mount San Jacinto State Park. With the passage of the FLPMA in 1976, portions of the Santa Rosa and San Jacinto Mountains were included in the CDCA. In 1990, the Santa Rosa Mountains National Scenic Area was designated by the Secretary of the Interior.

### **3.D.2. Cultural Resources**

A cultural resource is defined as a definite location of human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence. The term includes archaeological, historic, or architectural sites, structures, or places with important public and scientific uses, and may include definite locations (sites or places) of traditional cultural or religious importance to specified social and/or cultural groups. Cultural resources are concrete, material places and things that are located, classified, ranked, and managed through the system of identifying, protecting, and utilizing for public benefit described in the BLM 8100 Manual series and Forest Service Manual Section 2360.

Historic properties are defined as those cultural resources found to be eligible for listing in the NRHP. The National Register Criteria for Evaluation can be found at 36 CFR 60.4. The quality of significance in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association, and:

- (a) Are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) Are associated with the lives of persons significant in our past; or
- (c) Embody the distinctive characteristics of a type, period or method of construction, that represent the work of a master, that possess high artistic values, or that represent a significant and distinguishable entity

- whose components may lack individual distinction; or  
 (d) Have yielded or may be likely to yield information important in prehistory or history.

Section 106 of the NHPA of 1966 directed Federal agencies to take into account the effects of their undertakings on historic properties - those archaeological and historic resources already listed in the National Register of Historic Places. EO 11593 (1979) instructed Federal agencies to identify resources, determine if they were eligible for the National Register, and evaluate the potential effects from proposed undertakings. As a result of EO 11593, eligible resources were to be afforded the same protection as resources already listed in the National Register.

Section 110 of the NHPA calls for Federal agencies to identify and preserve cultural resources under their jurisdiction. Cultural resources inventories not driven by proposed projects or undertakings are typically referred to as “110 surveys.” Records on file at the BLM Palm Springs-South Coast Field Office indicate that very little inventory, whether driven by Section 106 or Section 110, has occurred on Federally-managed lands in the Plan Area; approximately 9,850 acres of inventory has been completed. This amounts to less than 7% of the total acreage managed by the BLM and Forest Service.

Approximately 208 cultural resources have been recorded on Federal lands within the National Monument. The majority of these are prehistoric sites containing artifacts and features such as lithics, ceramics, bone, bedrock mortars, hearths, rock walls or alignments, agave roasting pits, and cairns. Historic sites include can and bottle concentrations, Jack Miller’s cabin, mining prospects, quarry sites, water improvements associated with springs, and corrals. In addition, there are nine linear sites. Eight of these are trails and trail segments generally interpreted as prehistoric in origin since prehistoric artifacts are commonly found along them. This conclusion is also supported by ethnographic and historic information. One linear site consists of roads and trails constructed in the 1930’s as part of the Civilian Conservation Corps program.

**Table 3-4. Cultural Resources Located on Federally-managed Lands within the National Monument**

	<b>Prehistoric Sites</b>	<b>Multi-component or Historic Sites</b>	<b>Linear Sites</b>
<b>Sites Located on BLM-managed Lands</b>	104	11	7
<b>Sites located on National Forest Lands</b>	83	10	2

Few sites in the Plan Area have been formally evaluated for their eligibility to be listed in the National Register. Two districts, Rockhouse Canyon and Martinez Canyon, have been determined eligible for NRHP listing. Currently, the Martinez Canyon Rockhouse (Jack Miller’s Cabin) is the only individually listed NRHP property on BLM-managed lands. Andreas and Tahquitz Canyons are National Register listed properties located on

lands managed by the ACBCI. One additional National Register listed site, the Coachella Valley Fish Traps, occurs just outside the National Monument boundary on County lands.

Existing site forms generally provide too little information to make decisions regarding the potential for a site to yield significant prehistoric or historic information. It is also difficult to assess the integrity of sites from existing records. For the purposes of this analysis, sites that contain a number of diverse artifacts and features, especially those with midden soils, are considered to have the potential to be eligible for listing in the National Register. Those consisting of surface concentrations of a single artifact or feature type are considered to have little potential to meet the National Register criteria and are categorized as “Considered Not Eligible.” Many site forms are incomplete or outdated, and a preliminary estimate of significance could not be made from the information these site forms provide. These are considered “Unevaluated.” Please see Table 3-5 below.

**Table 3-5. Eligibility Status of Recorded Sites**

	<b>Unevaluated - Insufficient Information</b>	<b>Considered Not Eligible</b>	<b>Potential for Eligibility - Additional Study Needed</b>
<b>Recorded Sites</b>	63	112	33

Inventory of an additional 8,000 acres of Federal and Tribal land was conducted in support of the current planning effort. This inventory resulted in the documentation of an additional 107 archaeological sites: 78 prehistoric sites, 28 multi-component or historic sites, and one site of indeterminate age were recorded. Preliminary review of the site forms indicates that 22 of these sites have characteristics that could make them eligible for nomination to the National Register; 61 sites appear ineligible. There is insufficient information to make an estimation of significance for the remaining sites. The majority of these sites consist of prehistoric period bedrock milling features. Ceramic and lithic artifact scatters and temporary camps also occur frequently. Historic sites include mining prospects, foundations, and other structural remains.

**3.D.3. Native American Concerns**

In May 2002, government-to-government consultation was initiated by letter with the Cahuilla Tribes and with Tribes whose reservations are adjacent to the National Monument. Subsequent contacts included both government-to-government level meetings and less formal staff level interactions. Members and staff of several Tribes also participated in the Monument Advisory Council’s Cultural Resources Working Group. As a result of this consultation, a number of Native American concerns were identified.

The need for protection and preservation of cultural resources was the most commonly voiced concern. The National Monument falls within the traditional use area of the Cahuilla Indians and contains sites of ancestral and ceremonial significance. There is a concern that increased and unregulated visitation of the National Monument could have



a negative impact on these sites. Tribal members reported that some sites have already suffered from looting and vandalism. Several Tribal members also stated that the locations of sites should not be shared with the general public.

Tribal members also expressed a concern for the contents of interpretive materials that will present their culture and heritage to the public. They desire to be involved in the development of interpretive materials and in the overall interpretive effort.

Many traditional practitioners look to the National Monument area as a source for basketry materials, foods, and medicines. Tribal members asked for clarification of existing BLM and Forest Service policies for collecting and gathering of plant materials. They expressed interest in the development of a consistent and streamlined policy that would apply both to BLM-managed and National Forest lands. Tribal members also expressed concern as to whether the status of the area as a National Monument would limit their access to ancestral and ceremonial sites.

During consultation, the potential for trespass from the National Monument onto reservation lands was discussed. Suggestions to address this issue included rerouting trails away from reservation lands, posting boundary signs, and including a warning in National Monument interpretive materials.

### **3.E. Recreational Resources**

Among the Coachella Valley's most valuable assets are its unique and impressive scenic and ecological resources, which attract thousands of visitors each year. An extrapolation of data from various access points in the Santa Rosa and San Jacinto Mountains provide an estimate of approximately 2.3 million visitors and pass-through commuters annually (BLM 1999).

Much of the Coachella Valley's recreational appeal is due to a combination of distinctive topography, temperate climate, desert wildlife and vegetation, and proximity to vast public parks and recreation lands. The following section describes recreational opportunities, as well as management parameters where applicable, on BLM and National Forest lands in the National Monument.

#### **3.E.1. Information Centers**

##### **Santa Rosa and San Jacinto Mountains National Monument Visitor Center**

Generous contributions from local communities and private interest groups provided land and funds for the Santa Rosa Visitor Center. BLM oversaw construction of the facility, which was dedicated in March 1996. The Visitor Center, located at 51-500 Highway 74, approximately four miles south of Highway 111, provides information to visitors about the natural history, cultural resources and recreational opportunities in the Santa Rosa and San Jacinto Mountains. The Friends of the Desert Mountains, a nonprofit organization, operates a bookstore on site. The facility is open seven days a week, and staffing is maintained by BLM and Forest Service staff. The Visitor Center's hours of operation may be reduced during the summer season.

##### **San Jacinto Ranger Station**

The San Jacinto Ranger Station maintains a Visitor Center and an office for staff. Just off Highway 243 in the town of Idyllwild this location offers a northern portal to the National Monument and provides an opportunity to take advantage of local commercial

services. While not within the boundary of the National Monument, many recreational trails leading into the National Monument begin in or near the town of Idyllwild. Plans are underway for renovations to the current building.

**Palm Springs – South Coast Visitor Center**

Located on 690 West Garnet Road in North Palm Springs, this building is the headquarters for the BLM. Staff within this office have management responsibility for over 2 million acres of public land in eastern Riverside County. The National Monument Manager and several additional staff work out of this location.

**Non-BLM and Forest Service Information Centers**

Several other locations occur within the Coachella Valley where information about the National Monument is currently distributed or may be distributed in the future. These include the Palm Springs Aerial Tramway, San Jacinto Mountains State Park, Tahquitz Visitor Center, current and future city visitor centers, and additional partner agencies informational centers.

**3.E.2. Hiking, Biking and Equestrian Trails**

Many miles of multi-purpose trails are found in the Santa Rosa and San Jacinto Mountains, providing beautiful scenic vistas and access to natural treasures to be enjoyed by hikers, bikers, and equestrians (see Tables 3-6 and 3-7). Of national significance is the PCT, which traverses the western part of the National Monument. This trail, designated as one of the nation’s first National Scenic Trails through the National Trails System Act (Public Law 90-543; October 2, 1968), is managed in accordance with a comprehensive plan developed by the Forest Service (1982), and subsequent MOU with the BLM.

**Table 3-6. Trail Inventory for the San Jacinto Ranger District 2002**

Trail Number	Trail Name	Trail Location	Length (Miles)
<b>Pacific Crest National Scenic Trail (PCT)</b>			
2000.25	PCT	Snow Creek to Black Mountain Road	16.00
2000.26	PCT	Black Mountain Road to State Park boundary	1.50
2000.28	PCT	Deer Springs to State Park boundary	1.90
2000.29	PCT	State Park boundary to Saddle Junction	1.90
2000.30	PCT	Saddle Junction to Chinquapin Flats	1.40
2000.31	PCT	Chinquapin Flats to Little Tahquitz Valley	0.80
2000.32	PCT	Little Tahquitz Valley to Antsell Rock	4.90
2000.33	PCT	Antsell Rock to Apache Peak	3.20
2000.34	PCT	Apache Peak to Fobes Saddle	2.60
2000.35	PCT	Fobes Saddle to East Canyon	3.70
2000.36	PCT	East Canyon to Live Oak Spring Trail	4.30
2000.37	PCT	Live Oak Spring Trail to Highway 74	6.50
		<b>Subtotal</b>	<b>48.70</b>
<b>San Jacinto Wilderness, excluding Pacific Crest National Scenic Trail</b>			
3E04	Caramba	San Jacinto Wilderness	3.70

Trail Number	Trail Name	Trail Location	Length (Miles)
3E16	Cedar	San Jacinto Wilderness	1.00
3E41	Little Tahquitz Valley	San Jacinto Wilderness	0.80
3E42	Skunk Cabbage	San Jacinto Wilderness	0.60
3E02	Willow Creek	San Jacinto Wilderness	2.00
		<b>Subtotal</b>	<b>8.10</b>
<b>Desert View Area</b>			
4E01	Palm Canyon	Highway 74 to Forest boundary	9.00
4E03	Live Oak Spring	4E01 to PCT	5.20
4E17	Cedar Spring	PCT to Forest boundary	1.75
		<b>Subtotal</b>	<b>15.95</b>
<b>Pinyon Area</b>			
5E01	Cactus Spring	Santa Rosa Wilderness - Trailhead to BLM	9.30
5E02	Pinyon Flat	Palm Canyon Drive to Palm Canyon Trail	4.00
5E03	Sawmill	Sawmill Road to Santa Rosa Road	3.50
		<b>Subtotal</b>	<b>16.80</b>
<b>Total</b>			<b>89.55</b>

**Table 3-7. Trails Traversing BLM Lands (2002)**

Trail Name	Trail Location	Total Length (Miles)*	Length on BLM Lands (Miles)**
<b>San Jacinto Mountains</b>			
PCT	NM boundary to FS boundary	3.0	0.5
North Lykken	Ramon Rd to northern terminus	4.5	0.1
Skyline	DR Park to State Park boundary	6.0	0.9
Jo Pond	FS boundary to West Fork Trail	4.1	1.7
	<b>Subtotal</b>	<b>17.6</b>	<b>3.2</b>
<b>West of Dunn Road to Palm Canyon</b>			
Shannon	Palm Cyn Wash to Berns Trail	1.0	0.9
Garstin	Palm Cyn Wash to Berns Trail	1.5	0.7
Berns	Garstin Trail To Araby Trail	1.0	0.9
Araby	Palm Cyn Wash to Berns Trail	1.6	0.3
Wild Horse	Garstin Trail to Fern Cyn Trail	3.5	2.0
Clara Burgess	Wild Horse Trail to Goat Trail	3.5	2.9
Vandeventer	Palm Canyon to Dunn Rd	4.0	2.0
Fern Canyon	Palm Cyn to Fern Cyn Trail	4.0	1.2
Hahn Buena Vista	Vandeventer Trail to Dunn Rd	3.0	1.7
Dry Wash	Palm Canyon to Dunn Road	3.0	2.1
Palm Canyon	Vandeventer Tr to FS boundary	4.0	1.3
Indian Potrero	Dry Wash Trail to Palm Cyn Trail	2.2	0.9

Trail Name	Trail Location	Total Length (Miles)*	Length on BLM Lands (Miles)**
<b>Subtotal</b>		<b>32.3</b>	<b>16.9</b>
<b>Dunn Road to Highway 74</b>			
Dunn Road	Cat City Cove to FS boundary	12.3	6.6
Cathedral Canyon	Cathedral City Cove to Dunn Rd	1.5	0.7
Art Smith	Highway 74 to Dunn Road	8.0	3.5
Schey	Cahuilla Hills to Art Smith Trail	0.9	0.3
<b>Subtotal</b>		<b>22.7</b>	<b>11.1</b>
<b>East of Highway 74</b>			
Bear Creek Canyon	La Quinta Cove to Oasis Trail	1.5	0.6
Bear Creek Oasis	Bear Creek Cyn Trail to terminus	3.0	1.7
Guadalupe	Boo Hoff Trail to FS boundary	3.0	2.2
Boo Hoff	NM boundary to Morrow Trail	6.5	5.0
Morrow	NM boundary to Boo Hoff Trail	0.4	0.4
Martinez Canyon	NM boundary to J. Miller Cabin	6.9	3.9
Cactus Spring	Martinez Cyn Tr to FS boundary	2.5	0.6
<b>Subtotal</b>		<b>23.8</b>	<b>14.4</b>
<b>Total</b>		<b>96.4</b>	<b>45.6</b>

\* Based on Trails Map, Santa Rosa Mountains National Scenic Area (Coachella Valley Trails Council 1995), where numbers are available.

\*\* Approximate mileage. (The following trails located at lower elevations of the National Monument do not traverse BLM lands or National Forest lands: Museum, South Lykken, Henderson, Andreas, Murray Canyon, Maynard Mine, Pelton, Coffman, West Fork, Victor, Alexander, Eagle Canyon, and Goat Trails.)  
Key: NM = National Monument; FS = Forest Service; DR = Desert Riders

The BLM and Forest Service will be acquiring high-resolution aerial photography in 2003 covering the entire National Monument. Trail inventories will be revised based on this product. Except for the PCT, public easements for trails traversing non-Federal lands at the lower elevations of the Santa Rosa and San Jacinto Mountains have not been acquired.

Many of the lower elevation trails occur in essential habitat for the Peninsular Ranges bighorn sheep, a species determined to be endangered by USFWS (Figure 6). While public interest in maintaining year-round access to the trail system is widespread, there is a requirement to ensure that recreational activities do not hinder recovery of the bighorn sheep. The pending trails management plan will address continued recreational access in light of recovery needs.

BLM staff conducted trail use surveys from January through June 2001, and from January through June 2002 on eight trails in the Santa Rosa Mountains: (1) Art Smith Trail, (2) Bear Creek Canyon Trail, (3) Lower Dunn Road, (4) Upper Dunn Road, (5) Cathedral Canyon Trail, (6) Clara Burgess Trail, (7) Boo Hoff Trail, and (8) Morrow Trail. Staff was usually stationed at trailheads, though contacts with trail users were occasionally made while on these trails. Trail surveys focused on the morning hours when most individuals sought to use the trails. The primary function of staff conducting the survey was to inform individuals of the Voluntary Trail Avoidance Program (VTAP) whereby voluntary non-use of 10 trails from January 1 through June 30 was requested. The North Lykken, Guadalupe, and Skyline Trails (the latter having been added as the

tenth trail in 2003), although part of the VTAP, were not included in the 2001 and 2002 surveys.

A total of 4,421 trail users were identified during 6,428 hours of observation during the 2001 and 2002 seasons. Hikers accounted for 87%, mountain bikers for 11%, and equestrians for 2% of all trail users. Of the eight trails monitored, the Art Smith Trail received the most overall usage (87%). The Art Smith Trail also received the most use by hikers (59% of all observed hiking use on the eight trails); the Lower Dunn Road received the most use from mountain bikers (60% of all observed mountain biking use on the eight trails); and the Boo Hoff Trail received the most use from equestrians (63% of all observed equestrian use on the eight trails).

### **Mountain Biking**

#### **BLM**

Mountain biking is allowed on BLM roads and trails, except for the PCT and trails within designated Wilderness.

#### **Forest Service**

Mountain biking is allowed on National Forest roads and trails, except for the PCT and trails within or leading to designated Wilderness. Mountain biking off trails and roads is discouraged (SBNF LRMP Standards and Guidelines, SG-40: 1. Allow mountain bikes to use forest trails except for the Pacific Crest Trail and trails within Wilderness. a. Individual trails may be closed if safety or resource problems cannot be mitigated. Pursuant to Title 36 of the Code of Federal Regulations, Subpart 261.50 (a) and (b), Order No. 3, Wilderness Areas, San Bernardino National Forest: 10. Possession or use of any wheeled mechanical device on all trails leading in to Wilderness is prohibited. 261.57h).

A strategic plan for mountain biking on the San Jacinto Ranger District of the San Bernardino National Forest was developed in 1994 that describes the long-range vision and goals for the program and establishes a planning framework for project implementation team and partners (Mountain Biking Program, San Jacinto Ranger District, Strategic Plan 1994 -1998). The Ranger District applied for and received in 1993, an American Great Outdoors grant of \$150,000 to be used for planning (\$20,000), signing and interpretation (\$30,000), and construction of mountain bicycle routes (\$100,000).

#### **California Department of Fish and Game**

More than 35,000 acres within the National Monument boundary are managed by CDFG. Some of this acreage is designated as State ecological reserves: Carrizo Canyon Ecological Reserve, Magnesia Spring Ecological Reserve, and Hidden Palms Ecological Reserve. Within Carrizo Canyon and Magnesia Spring Ecological Reserves, bicycle use is prohibited. The general public is prohibited altogether from entering Hidden Palms Ecological Reserve.

#### **Temporary Management of Trails in Bighorn Sheep Habitat**

Within essential Peninsular Ranges bighorn sheep habitat, there are 153 miles of primary trails; other unnamed trails exist but have not been identified. Since 1998, trail users have been requested to voluntarily refrain from using certain trails in bighorn sheep habitat from January 1 to June 30 to minimize disturbance during the lambing season; additional trails were included in 2001. These trails total 33 miles in length and

include: (1) Art Smith Trail, (2) Bear Creek Canyon Trail, (3) Bear Creek Oasis Trail, (4) Dunn Road, (5) Cathedral Canyon Trail, (6) Clara Burgess Trail, (7) Boo Hoff Trail, (8) Morrow Trail, (9) Guadalupe Trail, and (10) North Lykken Trail. A portion of Dunn Road on private lands is currently posted as “no trespassing,” hence closing that part to use without landowner permission. Trail users are also requested to voluntarily refrain from using the Bear Creek Oasis Trail, Guadalupe Trail, and a portion of the Art Smith Trail from July 1 through September 30 to facilitate bighorn sheep access to water sources. In addition, dogs are prohibited on BLM lands within the National Monument east of Palm Canyon.

The voluntary trail avoidance programs, as well as the dog prohibition, are temporary pending approval of the trails management plan.

### **Activities in State Ecological Reserves**

Carrizo Canyon, Magnesia Spring, and Hidden Palms Ecological Reserves are closed to public entry from June 15 through September 30 in accordance with the California Code of Regulations. A portion of the Art Smith Trail traverses the Magnesia Spring Ecological Reserve; this segment of the trail is also subject to the seasonal closure.

#### **3.E.3. Wilderness Experiences**

The National Monument contains two designated Wilderness areas administered by the BLM and Forest Service: the Santa Rosa Wilderness (includes BLM's Santa Rosa Wilderness Additions) and the San Jacinto Wilderness. These areas afford outstanding opportunities for solitude and primitive types of recreation. Very few imprints of man will be apparent to visitors in these areas. Those seeking the ultimate escape from the human-dominated landscape will therein find solace. Travel in Wilderness areas is limited to foot or equestrian conveyance. Motorized vehicles, bicycles, or any other form of mechanized equipment is prohibited in these areas to protect the solitude and primitive nature of these special places.

#### **3.E.4. Wildlife Viewing**

The Watchable Wildlife partnership is a cooperative, nationwide effort to help maintain viable populations of all native animal species by building effective, well-informed public support for conservation. On December 3, 1990, representatives of 13 organizations, including the BLM and Forest Service, signed a MOU pledging to cooperate in carrying out a National Watchable Wildlife Program.

Wildlife viewing opportunities are publicized through production of State wildlife viewing guides. These are developed by State committees that select and described many of the best sites in the state, both public and private, for viewing wildlife. The sites are picked for their wildlife, safe access, and ability to accommodate visitors without disturbing animals or their environment. Brown highway signs with a binoculars logo indicate the location of these Watchable Wildlife sites.

Within the National Monument, two sites have been identified as wildlife viewing areas: Palms to Pines Scenic Byway and Mount San Jacinto State Park. Along the Scenic Byway, birds of prey, deer, small mammals, and predators can be seen year-round. In the State Park, small mammals and predators can be seen from spring through fall, while songbirds and birds of prey are viewed in spring and mid-fall.

### **3.E.5. Camping**

#### **BLM**

Camping is permitted on all BLM lands within the National Monument. There are no developed facilities for camping on BLM lands. Campers may occupy a single site for a maximum of 14 days, and then move to a new location at least 25 miles away. Campsites must be at least ¼ mile from wildlife water sources, whether natural or manmade. Vehicle camping is allowed within 100 feet from centerline of an approved route, except where the limit extends into designated Wilderness. Camping in previously disturbed sites is encouraged. Permits and fees are not required for camping on BLM lands.

Camping within essential habitat for Peninsular Ranges bighorn sheep will be addressed through the pending trails management plan (Figure 6).

In the interest of wildfire prevention and in compliance with Title 43 of the Code of Federal Regulations, Subpart 9212.2, which requires BLM actions to compliment and support State and local wildfire prevention, all State and local wildfire prevention laws and regulations apply to BLM lands within the California Desert District. During fire season, campfires and barbeques are allowed with a permit or prohibited subject to fire stage restrictions; outside fire season, campfires and barbeques are generally allowed without a permit.

#### **Forest Service**

A family campground with developed facilities (toilets, fire rings, tables, and parking spaces) is located at Pinyon Flat (Pinyon Flat Campground). A group campground for equestrian use is also located at Pinyon Flat (Ribbonwood Equestrian Campground). Fees are charged for use of these sites.

Dispersed area camping is permitted on National Forest lands within the National Monument, except where expressly prohibited, including picnic areas, trailheads, and day use areas. Dispersed area camping is generally allowed as long as the user is ¼ mile from State highways, private property, or campgrounds. Campers may occupy a single site for a maximum of 14 days, and then move to a new location. Campsites must be at least 200 feet from a body of water. Vehicles should not be operated off the designated roadway to access a camping spot. When camping within the San Jacinto Wilderness, an overnight permit is required.

The use of fire while camping varies within the San Bernardino National Forest. Within campgrounds and picnic areas, fires must be built within the facility provided. Fire use within Wilderness areas is allowed with a permit and within designated fire rings. There are no open fires allowed within the Santa Rosa Wilderness, and fire regulations within the San Jacinto Wilderness change during the year.

### **3.E.6. Hunting**

All hunting activity is regulated by CDFG. Hunters must possess a valid hunting license and obey all laws and regulations pertaining to the use of firearms in California. Hunting is generally allowed on BLM and National Forest lands, except in developed recreation sites (Title 43 of the Code of Federal Regulations, Subpart 8365.2-5) and within the Santa Rosa Mountain State Game Refuge (Figure 7).

### **3.E.7. Recreational Shooting**

Recreational shooting, or target shooting, is not synonymous with hunting, i.e., the discharge of firearms for target shooting purposes does not require a valid hunting license. However, the discharge of firearms for target shooting purposes is not allowed where hunting is prohibited. Where target shooting is allowed, it usually occurs within a short walking distance from a shooter's vehicle. As few open roads exist where shooting is legal (2 miles of open routes on BLM lands and 16 miles on National Forest lands), it is reasonable to conclude that recreational shooting does not occur in much of the National Monument.

#### **BLM**

Recreational shooting is allowed on BLM lands except within 150 yards of developed facilities and in the Santa Rosa Mountain State Game Refuge. The State Game Refuge encompasses much of the Santa Rosa Wilderness as well as other lands in the Santa Rosa Mountains (Figure 7).

#### **Forest Service**

Recreational shooting is not allowed on National Forest lands within the Santa Rosa and San Jacinto Wilderness areas.

### **3.E.8. Hang Gliding**

Over the last 30 years of its evolution as a modern sport, hand gliding has made substantial advances in both technological and participant safety. Through the auspices of the United States Hang Gliding Association (USHGA), modern gliders are required to pass an extensive series of structural and aerodynamic tests, which exceed Federal Aviation Administration (FAA) requirements for private aircraft. Hand gliders and sailplanes (full size gliders) were tied statistically in 1990 as the safest forms of sport aviation (Coachella Valley Hang Gliding Association 1999). In the desert, hang gliders regularly climb to 15,000 feet or higher on thermal air currents, and flying cross-country they have achieved distances of over 300 miles.

In 1990, the average hang glider pilot was 37 years old, with a family, a college education, and an annual income of approximately \$42,000 per year (Coachella Valley Hang Gliding Association 1999). The "daredevil" aspect of old has been replaced with a considered, responsible desire to experience life in a unique, spectacular and non-destructive way.

The only recognized hang glider launch site in the National Monument is located at Vista Point on Highway 74. Because of its convenience and proximity to a major tourist area (Coachella Valley), Vista Point became an established hang gliding site very early in the history of the sport—it was first flown in 1973—and has been an attraction for pilots internationally since then. It has been the site for many commercial advertisements incorporating hang gliding and the spectacular terrain. In 1979, the television series "*Eight is Enough*" filmed a special two-hour episode at Vista Point with hang gliding as the focus.

For many years, hang glider pilots landed in the area now adjacent to the Santa Rosa and San Jacinto Mountains National Monument Visitor Center after launching from Vista Point. In the late 1990s, concerns were raised regarding overflights of bighorn sheep pens at the Bighorn Institute as well as landings on the Bighorn Institute's property,



adjacent to the National Monument Visitor Center. These issues have not been resolved; hang gliding launches from Vista Point have ceased pending resolution.

### **3.E.9. Rockhounding, Geocaching and Other Casual Collecting**

Part 8365 of Title 43 of the Code of Federal Regulations provides for the collecting of “reasonable” quantities of rocks, minerals, semiprecious gemstones, and invertebrate and plant fossils of non-scientific purpose for personal use. However, regulations do not permit collecting on “developed recreation sites and areas,” or where otherwise prohibited or posted. Informal discussions with local gem and mineral clubs indicate that the Coachella Valley is not known to contain significant gem and/or mineral resources. Therefore, rockhounding activity in the Coachella Valley, including the National Monument, is considered very low.

#### **Geocaching**

Geocaching is an entertaining adventure game for geographic positioning system (GPS) users where individuals and organizations set up caches all over the world and share the locations of these caches on the Internet. GPS users can then use the location coordinates to find the caches. The finder is asked to leave something for the cache if they take something from it.

Typically, geocaching Internet sites include latitude/longitude and UTM coordinates, a general map of the geocache location, and a description of the cache contents. Geocachers are afforded an opportunity to include a narrative on the Internet site about their quests for the cache, as well as what they took and left behind. A search of such an Internet site in February 2003 yielded several cache locations in the National Monument. For example, the “Bear Creek Cache” includes such items as pens and pencils, bandanas, Tonka Hummer trucks, lint brush, beaded necklaces, key chains, and a golfer’s towel.

#### **Collection of Materials Within the Monument**

Guidance for the casual collecting of materials within the National Monument is provided under current Forest Service and BLM Policy and Regulation.

#### **Research**

Any collecting in support of research requires a research permit. BLM Palm Springs office staff and San Jacinto Ranger District staff respond to requests for research permits on a case-by-case basis.

#### **Commercial**

Any collecting of products for commercial use requires a commercial permit. BLM and Forest Service Commercial Use policies apply.

#### **Rocks and Minerals**

On BLM lands, casual use collection of rocks and minerals (i.e., when no or negligible disturbance to land or resources results from such collection) is allowed within the National Monument. Soil (non-cryptobiotic), rock or mineral collecting using hand tools, hand panning or non-motorized sluicing is generally allowed. Metal detector use is allowed; gold spears or other battery-operated devices to identify minerals are generally allowed. Casual use collection does not include the use of earth-moving machinery, truck mounted drilling equipment, chemicals or explosives. When cumulative effects of

any of the allowable casual uses result in more than negligible disturbance to land or resources, the use is not casual and is not permitted.

On National Forest lands, the removal of rocks and minerals from National Forest lands is not authorized under the mineral regulations at 36 CFR 228. Those regulations provide no exceptions for casual use or hobby collecting. Since the National Monument has been withdrawn from (1) all forms of entry, appropriation, or disposal under public land laws, (2) location, entry, and patent under the public land mining laws; and (3) operation of the mineral leasing and geothermal leasing laws and the mineral material laws, there is no authority for the public to collect rocks and minerals from National Forest lands within the National Monument.

### **Plants and Animals**

A Fishing license from CDFG is required for the collection of non-listed reptiles and amphibians, as per limits outlined in the California Code of Regulations, Title 14 5.05 and 5.60. Within the National Monument, collection of any plant material requires a permit from the BLM and Forest Service. This permit will contain details regarding the amount of plant material to be collected, prohibited areas or species of plants, and methods of collection. On BLM lands, certain plants, such as *Agave* and *Yucca* species, are not allowable for collection. In addition to permits from the BLM and Forest Service, the State of California passed the California Native Desert Plants Act, which restricts the numbers and types of plants (living and dead) that can be collected and provides for a permit system administered by the counties. If the plant or animal is State or Federal listed, additional permits are required per the Federal and State ESA. Additional information is provided in Section 3.C. of this chapter.

### **Firewood**

Forest Service issues permits for firewood collection in designated sites.

### **Cultural Resources**

Collection of cultural resources (i.e. Native American artifacts) within the National Monument is prohibited under the Archaeological Resources Preservation Act as well as other Federal regulations and law on both National Forest and BLM lands.

#### **3.E.10. Art Smith Trailhead**

BLM, in cooperation with CDFG, manages the Art Smith Trailhead, which is located near the National Monument Visitor Center on Highway 74, south of the City of Palm Desert. The trailhead provides direct access to Carrizo and Dead Indian Canyons, and serves as an important and often-used staging area for recreationists to access an extensive trails network via the Art Smith Trail. Trails in Carrizo Canyon Ecological Reserve, which includes Carrizo Canyon, are temporarily closed to all use from January 1 to June 14 by CDFG, and closed from June 15 through September 30 in accordance with the California Code of Regulations to protect bighorn sheep. Magnesia Spring Ecological Reserve is also closed to public entry from June 15 to September 30; the portion of the Art Smith Trail traversing this Reserve is subject to the seasonal closure.

#### **3.E.11. Pets**

##### **BLM**

Pets are generally allowed on BLM lands in the National Monument, except where specifically prohibited. Effective February 1, 2000, dogs were temporarily prohibited on BLM lands located east of Palm Canyon in the Santa Rosa Mountains (except in the

wash immediately west of Cathedral City Cove, and immediately south of La Quinta Cove), pending completion of a comprehensive trails management plan (Vol. 65, *Federal Register*, 3473-3474, January 21, 2000).

### **Forest Service**

Pets are generally allowed on National Forest lands in the National Monument, but they must be on a leash within the Santa Rosa and San Jacinto Wilderness areas.

### **California Department of Fish and Game**

More than 35,000 acres within the National Monument boundary are managed by CDFG. Some of this acreage is designated as State ecological reserves: Carrizo Canyon Ecological Reserve, Magnesia Spring Ecological Reserve, and Hidden Palms Ecological Reserve. Within Carrizo Canyon and Magnesia Spring Ecological Reserves, entry with dogs is prohibited. The general public is prohibited altogether from entering Hidden Palms Ecological Reserve.

#### **3.E.12. Forest Service Adventure Pass**

In 1996, the four southern California National Forests took advantage of the 1996 Recreation Fee Demonstration Authority and implemented a program designed to reduce recreation deferred maintenance and problems posed by increasing use. The Adventure Pass program began in June 1997. In FY2001, Congress approved a two-year extension of the fee program. Under the Adventure Pass program, visitors of National Forest lands buy either a daily pass for \$5 or an annual pass for \$30, unless they are using site-specific fee areas such as campgrounds or some picnic areas. The pass is displayed in the visitor's vehicle when parked on National Forest lands.

Within the San Jacinto Ranger District of the National Monument, passes are required on Santa Rosa Mountain, at Fuller Ridge and Sawmill Trailheads, and for parking on National Forest lands at non-designated sites for hiking and picnicking. A pass is not required to park at Cahuilla Tewanet Interpretive Site.

The San Jacinto Ranger District receives approximately \$182,000 annually from the Adventure Pass program. The estimated income that can be attributed to National Monument areas within the San Jacinto Ranger District from the Adventure Pass program is approximately \$5000.

Adventure Pass revenues are used to pay employees and service contracts, and to purchase materials to perform the following duties: pickup and remove litter and trash, clean sites, maintain facilities, patrol for resource protection, maintain trails, dispense visitor information, and enforce Federal regulations. Employees paid with Adventure Pass revenues maintain the National Monument areas, such as Cahuilla Tewanet Interpretive Site, Sawmill Trailhead, Pinyon Flat Trail, and the Yellow Post sites within the National Monument. Presently, during the summer season, there are four Forest Service employees whose salaries are covered by Adventure Pass funds.

#### **3.E.13. Off-Highway Vehicle Use**

### **BLM**

BLM-managed lands available for off-highway vehicle (OHV) use are designated as "open," "limited" or "closed." In "open" areas, vehicle travel is permitted anywhere if the vehicle is operated responsibly in accordance with regulations, and subject to permission of private landowners where applicable; there are no designated open areas

on BLM lands in the National Monument. In “limited” areas, vehicles are required to remain on approved routes of travel (i.e., designated “open” or “limited”); cross-country travel is prohibited. Most BLM lands in the National Monument are designated as “limited” for OHV use. The remaining BLM lands in the National Monument are designated “closed.” In “closed” areas, vehicle travel is prohibited, except for administrative or emergency use. A 357-acre area south of Highway 111 at Windy Point is designated “closed” to OHV use. OHV and other vehicle use are prohibited in all Wilderness areas, except to accommodate specific authorized activities as provided for by law (also see Section 3.O. in this chapter).

### **Forest Service**

OHV activities on National Forest lands in the National Monument are restricted to approved routes and registered, street-legal vehicles.

### **Regional OHV Opportunities**

The following sites offer OHV recreational opportunities within 100 miles of the Coachella Valley:

- Imperial Sand Dunes Recreation Area, 22,000 acres. BLM-managed OHV Open Area, 25 miles east of Brawley.
- Plaster City/Superstition Mountains, 54,000 acres. BLM-managed OHV Open Area, 15 miles northwest of El Centro.
- Ocotillo Wells/Arroyo Salado State Vehicle Recreation Area, 64,800 acres. Managed by California Department of Parks and Recreation, 60 miles south of Indio.
- Johnson Valley, 140,000 acres. BLM-managed OHV Open Area, 50 miles north of Palm Springs.
- Glen Helen OHV Park, 300 acres. Managed by San Bernardino County Parks, 60 miles west of Palm Springs.

#### **3.E.14. Facilities Maintenance**

BLM and Forest Service facilities in the National Monument (e.g., Visitor Center, Pinyon Flat and Ribbonwood Campgrounds, Sawmill Trailhead, and Cahuilla Tewanet Interpretive Site) are maintained on a scheduled basis. Unanticipated maintenance needs are addressed as needed. Maintenance needs for which funds are unavailable in a given fiscal year, including facility replacement, are identified in subsequent fiscal years as “deferred maintenance.”

#### **3.E.15. Recreation Opportunity Spectrum**

The San Bernardino National Forest has developed Recreation Opportunity Spectrum (ROS) classes for National Forest lands within the National Monument (Figure 9). These classes provide objectives for future management. The BLM lands within the National Monument do not have a classification system, so no equivalent classification has been applied. The following ROS classes and associated descriptions and management objectives exist within the National Monument:

##### **a. Primitive: 38,201 acres of National Forest lands within the National Monument**

Area is characterized by essentially unmodified natural environment of fairly large size. Interaction between users is very low, and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-

induced restrictions and controls. Motorized use within the area is not permitted. Extremely high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility and self-reliance through the application of woodsman and outdoor skills in an environment that offers a high degree of challenge and risk. Activity opportunities include viewing scenery, photography, hiking, horseback riding, camping, mountain climbing, nature study, hunting, fishing, snowshoeing, and snow play.

**b. Semi-primitive Non-motorized: 10,176 acres of National Forest lands within the National Monument**

Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. The presence of roads is tolerated, provided they are closed to public use; they are used infrequently for resource protection and management; and the road standards and locations are visually appropriate for the physical setting. High, but not extremely high, probability of experiencing isolation from the sights and sounds of humans, independence, tranquility and self-reliance through the application of woodsman and outdoor skills in an environment that offers challenge and risk. Activity opportunities include viewing scenery, photography, hiking, horseback riding, camping, mountain climbing, nature study, hunting, fishing, swimming, snow play, cross-country skiing and snowshoeing.

**c. Semi-primitive Motorized: 4,171 acres of National Forest lands within the National Monument**

Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is permitted. Moderate probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility and self-reliance through the application of woodsman and outdoor skills in an environment that offers challenge and risk. Opportunity to have a high degree of interaction with the natural environment and to use motorized equipment while in the area. Activity opportunities include viewing scenery, photography, hiking, horseback riding, OHV use (motorcycles, ATVs and 4-wheel drives), camping, picnicking, mountain climbing, nature study, hunting, fishing, swimming, snow play, cross-country skiing and snowshoeing.

**d. Roaded Natural: 3,578 acres of National Forest lands within the National Monument**

Area is characterized by predominantly natural-appearing environments with moderate evidences of the sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities. About equal probability to experience affiliation with other user groups and for isolation from sights and sounds of humans. Opportunity to have a high degree of interaction with the natural environment. Challenge and risk

opportunities associated with more primitive type of recreation are not very important. Practice and testing of outdoor skills might be important. Opportunities for both motorized and non-motorized forms of recreation are possible. Activity opportunities may include viewing scenery, photography, hiking, horseback riding, bicycling, automobile touring, OHV use (motorcycles, ATVs, and 4-wheel drives), camping, picnicking, organization camps, recreation residences, resorts, lodges, gathering forest products, nature study, interpretive services, hunting, fishing, swimming, canoeing, boating, snow play, downhill skiing, snowmobiling, cross-country skiing, snowshoeing and tobogganing.

**e. Rural: 624 acres of National Forest lands within the National Monument** Area is characterized by substantially modified natural environment. Resource modification and utilization practices are to enhance specific recreational activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate densities are provided far away from developed sites. Facilities for intensified motorized use and parking are available. Probability for experiencing affiliation with individuals and groups is prevalent, as is the convenience of sites and opportunities. These factors are generally more important than the setting of the physical environment. Opportunities for wildland challenge, risk-taking and testing of outdoor skills are generally unimportant except for specific activities like downhill skiing, for which challenge and risk-taking are important elements. Activity opportunities include viewing scenery, photography, hiking, horseback riding, bicycling, automobile touring, OHV's (motorcycles, ATV's, and 4-wheel drives), camping, picnicking, organization camps, recreation residences, resorts, lodges, gathering forest products, nature study, interpretive services, hunting, fishing, swimming, canoeing, sailing, power boating, snow play, downhill skiing, cross-country skiing, snowmobiling and snowshoeing.

**Table 3-8. Recreation Opportunity Spectrum (ROS) Acres for National Forest Lands within the National Monument**

ROS Classes	Acres
Primitive	38,201
Semi-primitive Non-motorized	10,176
Semi-primitive Motorized	4,171
Roaded Natural	3,578
Rural	624
<b>Total</b>	<b>56,750</b>

**3.F. Soils, Geology, Mineral and Energy Resources**

**3.F.1. Soils**

The National Monument contains soils that are generally associated with southern California mountains. Soils in this physiographic area consist mainly of large areas of

thin soils on granite and granodiorite, smaller areas of thin soils on metamorphic gneisses and mica schists, and deeper soils formed in small valley fills and alluvial fans.

Soil types include excessively drained to well-drained sands, gravelly sands, loamy sands that develop on rock outcrops, inter-mountain valleys and alluvial fans. Soils that develop on rock slopes occur on slopes ranging from 9-75%. These soils tend to be very shallow, generally less than 6 inches thick. They are slightly acid to mildly alkaline and noncalcareous. The organic matter content is very low and decreases rapidly with increasing depth. These soils are moderately permeable, mainly through cracks and fissures. Runoff is rapid. The erosion hazard is moderate to high.

Soils that develop on alluvial fans or in small valley fills consist of excessively drained to well-drained loamy sand to fine sandy loam. Slopes range from 2-25%. The thickness of these soils is up to 60 inches thick. Generally, the permeability of these soils is rapid. Runoff and the hazard of erosion are moderate.

### **3.F.2. Geology**

The National Monument is located in the northeast portion of the Peninsular Ranges Geomorphic Province. This is one of nine well-defined natural regions or provinces in California. Each of these provinces has certain broad and more or less characteristic features, such as relief, landforms, geology and landscapes, that distinguish it. The Peninsular Ranges Geomorphic Province includes the southwestern part of California and is characterized by steep, elongated mountain ranges and valleys that trend northwestward. On the north, the Peninsular Ranges are cut off sharply by the Transverse Ranges, located at the northern end of the Los Angeles Basin. The Peninsular Ranges extend about 140 miles in California and continue southward to form the backbone of Baja California, Mexico for another 750 miles. The width of the range is 50 to 140 miles.

Principal mountain ranges within the Peninsular Ranges Geomorphic Province, from north to south within California, are the Santa Ana Mountains, San Jacinto Mountains, Santa Rosa Mountains, Agua Tibia Mountains and Laguna Mountains. San Jacinto Peak (elevation 10,805 feet) is the highest peak in the Peninsular Ranges, and the highest peak in the Santa Rosa Mountains is 8,705 feet.

The eastern face of the Santa Rosa-San Jacinto Mountains, which drops off extremely steeply to the floor of the Coachella Valley, is reminiscent of the eastern face of the Sierra Nevada Mountains. Both ranges are northwestward trending mountain blocks. As with the Sierra Nevada Mountains, the topography of the western slopes of the Santa Rosa-San Jacinto Mountains is much less rugged than that of the eastern slopes, descending relatively gradually to the west. The similarity between the Sierra Nevada and the Santa Rosa-San Jacinto Mountains also extends to the rock formations and geologic history of the two ranges.

Rock types in the Santa Rosa-San Jacinto Mountains generally consist of pre-Cretaceous age (older than 135 million years) metasedimentary and metavolcanic rocks that were altered by the intrusion of late Cretaceous age (70 to 135 million years ago) plutonic igneous rocks of the Southern California Batholith. Much younger alluvial deposits (less than 1 million years old) exist in valleys and on the flanks of the mountains.

Large pendants of metasedimentary rocks contained in and adjacent to the granitic batholith are exposed extensively in the Santa Rosa and San Jacinto Mountains. The most extensive exposures of these metasedimentary rocks are on the east side of Palm Canyon and southeastward into the Santa Rosa Mountains, in the upper parts of the San Jacinto Mountains west of Palm Canyon, and in the vicinity of Chino Canyon northwest of Palm Springs. These metasedimentary rocks are primarily schist and gneiss. The schists are fine-grained, gray, homogenous, foliated, and composed mostly of mica, quartz, and feldspar. The schist grades into coarse-grained gneiss, which is finely layered and composed of dark micaceous laminae and light-colored quartz and feldspar rich laminae. Units of quartzite, a metamorphosed sandstone, are locally present in the metasedimentary series. The thickest unit of quartzite is exposed in the southern San Jacinto Mountains, where it has been mapped as the Ken Quartzite. The Ken Quartzite is as thick as 2,000 feet, and is traceable for about 11 miles. Metamorphosed carbonate rocks (marble) occur in the metasedimentary series as lenticular units as thick as 1,000 feet. They are composed of moderately bedded, fine to coarse crystalline, light gray to white marble. The marble is a metamorphosed limestone and exists as lenses or layers between the schist and gneiss in the northern San Jacinto Mountains and north and south of Highway 74 in the Pinyon Flat area. The metasedimentary rocks of the San Jacinto and Santa Rosa Mountains have not yielded any age-diagnostic fossils, however, some fossil fragments have been reported in the metamorphosed limestones. The age of these metamorphic rocks is unknown, however, they are older than the granitic rocks of Cretaceous age that intruded into them, and are probably Paleozoic in age (270 to 600 million years old).

The granitic rocks that form the major part of the Santa Rosa and San Jacinto Mountains are part of the Southern California Batholith. The batholith is a large mass of igneous rock that formed when magma was emplaced at depth, cooled, crystallized, and was subsequently exposed by erosion. This granitic batholith is 70 miles wide, extending westward from the San Jacinto Mountains to the Santa Ana Mountains, and continues southward into Baja California. The granitic rocks include many types and were intruded in a series of pulses as more or less discrete plutons. The granitic rock types range from light-colored granite, to intermediate-colored diorite and to darker-colored gabbro. Smaller amounts of igneous rocks that occur in the Santa Rosa and San Jacinto Mountains are fine-grained aplite and coarse-grained pegmatite dikes and veins. These dikes and veins are tabular shaped bodies that cut across the structure of adjacent granitic or metasedimentary rocks, and are derived from the leftovers of the magma intrusions. The igneous rocks in the Santa Rosa and San Jacinto Mountains have been radiometrically age dated at 90 to 110 million years old, or about mid-Cretaceous age, indicating an approximate age for crystallization of the igneous rock and emplacement of the plutons.

Valley sedimentary deposits of late Cenozoic age (11,000 to 3 million years ago) underlie the small valley areas within and adjacent to the Santa Rosa and San Jacinto Mountains. Nearly all of these deposits are stream-laid alluvial deposits and in places, include clays of possible lacustrine origin.

Structurally, the Santa Rosa and San Jacinto Mountains are an uplifted block of granitic and metasedimentary rock adjacent to the active, San Jacinto Fault Zone on the southwest and the San Andreas Fault Zone and the Salton Trough/Coachella Valley on the north and east. The Santa Rosa Shear Zone (also known as a mylonite zone), a structural feature that cuts across the range, was formed by a process in which rocks are



broken and granulated by stress during movement along faults. This movement or shearing causes the rock to be fractured and broken, and easily erodible. The upper drainage in Deep Canyon and much of the drainage in Palm Canyon is controlled by this shear zone. Several active and inactive faults are present in the National Monument. The active faults are associated with the San Jacinto Fault Zone located in the southwest corner of the National Monument, near Santa Rosa Mountain. This fault zone is considered to be one of the most active faults in southern California. Faulting and earthquakes may have been responsible for the development of the Martinez Mountain Landslide, the second largest feature of its kind in the United States.

### **3.F.3. Mineral Resources**

The National Monument has been withdrawn from mineral entry. Future mineral resource extraction would not be permitted within the National Monument, except where valid existing mining rights existed prior to creation of the National Monument.

Mineral resources in the National Monument are largely limited to undeveloped aggregate deposits (sand, gravel, and crushed stone), gold, copper, limestone, asbestos, beryllium, and tungsten. Except for the limestone deposits, these deposits are limited in nature and have not been extensively mined. There are no State of California classified or designated mineral resource zones within the National Monument. BLM mineral potential maps indicate that there are no prospectively valuable oil and gas resources, geothermal resources, or sodium, potassium and phosphate deposits.

There are currently 41 active, unpatented mining claims within the National Monument. None of these claims has approved Plans of Operations or Notices of Intent to Mine. Any claimants proposing to explore or mine minerals on their claims would be subject to a validity examination, surface management regulations, and NEPA requirements prior to commencement of any operations.

Locations of abandoned mined lands (AML) generally coincide with the locations of previous mining areas within the National Monument. A complete inventory of these AML would need to be prepared so as to mitigate any hazards associated with these AML.

### **3.F.4. Energy Resources**

#### **Electrical Power**

Southern California Edison (SCE) and the Imperial Irrigation District (IID) provide electric power services to the Coachella Valley. Both companies utilize a combination of hydroelectric, thermal, diesel, and geothermal power sources, most of which are located outside the Coachella Valley. Electricity is distributed to the Coachella Valley via high-voltage (up to 500 kilovolts (KV)) transmission lines, which cross the valley along an east-west trending utility corridor north of Interstate 10 and outside of the bounds of the National Monument. Electricity is distributed by Anza Electric to the community of Pinyon through a 33 KV powerline with GTE phone line distribution attached. This line crosses the National Monument via a Forest Service right-of-way grant.

#### **Natural Gas**

Natural gas is found in association with petroleum crude oil deposits and is generally considered a clean and efficient fuel. The Southern California Gas Company provides natural gas services to much of the Plan Area. The fuel is transported from Texas to the Coachella Valley through three east-west trending gas lines, which cross the valley just

north of Interstate 10 and continue west to Los Angeles. The pipelines include one 30-inch line and two 24-inch lines, with pressures of 2,000 pounds per square inch (psi).

### **Wind Energy**

The BLM Wind Energy Program in this area is managed under the CDCA Plan (1980, as amended). This plan allows for the consideration of wind energy proposals on all lands within the CDCA except those areas that are preliminarily recommended as suitable for Wilderness designations. All public lands within the San Geronio pass are available for wind energy proposals, however most of the available lands are developed.

A law suit brought by the City of Palm Springs against the BLM resulted in a settlement agreement, dated September 11, 1985, wherein the BLM agreed to, among other things, a setback of two-thirds of a mile from Highway 111 as the gateway to the City of Palm Springs.

The Riverside County Board of Supervisors recently created a 3,400-acre Scenic Resource Protection Area near the junction of Highway 111 and Interstate 10 inside the National Monument. Special permission from the Riverside County Board of Supervisors is now required prior to building any new wind turbines on private lands within this area.

Because of the topography of the area, the potential for wind resource is very high, as the area from the south of Highway 111 to the mountain slopes is located within the very best wind resource area. Due to the restrictions within the settlement agreement and the protection allowed by the Riverside County Board of Supervisors, there can be no wind energy projects allowed on any public lands located within these areas of the National Monument.

### **Solar Energy**

Solar energy systems are largely limited to private lands for heating domestic water and swimming pools.

### **Geothermal Energy**

Geothermal resources are plentiful in the northwestern portion of the Coachella Valley, outside the Plan Area. Geothermal hot springs in Desert Hot Springs are structurally controlled by faults and largely focused along the Mission Creek Fault. The geothermal energy produced in Desert Hot Springs, which is primarily used for commercial spas and therapeutic pools, is harnessed on private land and does not affect lands administered by BLM.

### **3.G. Educational Resources**

The high degree of public interest and support that led to the creation of the National Monument has also created an interest and demand for interpretation and education. The recognition that this area possesses “national significant biological, cultural, recreational, geological, educational, and scientific values” has increased the interest of both local residents and area visitors in the resources of this very special National Monument. It is the challenge of interpretation and education, regardless of the format or audience, to promote the protection and understanding of the National Monument’s values and resources through increased awareness, appreciation, and experience. The Interpretive Concept Plan (2002) provides guidelines for interpretation and educational

programs within the National Monument and is helping to create a cohesive approach to multi-agency interpretive efforts.

Due to a combination of the large population of the Coachella Valley and its strong reputation as a vacation destination, a large percentage of visitors to the National Monument enter its boundaries either directly through the urban interface that comprises a large area of the National Monument's northern boundaries, or while traveling to or from the Coachella Valley. Two major routes, California State Highways 74 and 243, either traverse or skirt the National Monument and together create a very popular scenic byway. Other major access points to the National Monument are the Palm Springs Aerial Tramway and Indian Canyons.

There is a long history of partner agencies providing educational programming within and about the Santa Rosa and San Jacinto Mountains. The National Monument Visitor Center is open and provides informational, interpretive, and educational materials, along with regularly scheduled public programs, to visitors regarding the National Monument. The Friends of the Desert Mountains provides volunteers and employees to help staff the center and operate the Bobcat Bookstore.

The Palm Springs Desert Museum organizes guided hikes and bus tours to places of interest in the National Monument and offers extensive natural science outreach in schools. The Living Desert in Palm Desert provides programs to enrich an understanding for all ages of global desert ecology, culture and geology. The San Jacinto Ranger District staff and the Forest Service Volunteer Association are active in outreach and fire prevention education. The Mt. San Jacinto State Park and the Mt. San Jacinto Natural History Association offer pre-visit packets to school groups and "ranger" talks and walks at the Palm Springs Aerial Tramway Mountain Station. The ACBCI offers programs on traditional lifestyles and archaeology and provides access to Indian Canyons, one of the most spectacular locations within the boundaries of the National Monument.

Signs and interpretive waysides are of critical importance to the overall feeling of the National Monument. Signs often provide the first and sometimes only information source for visitors in the National Monument. Currently a gateway sign is located on Highway 74 near the National Monument Visitor Center. There are plans in effect to place several more gateway signs at other locations around the National Monument boundary. In addition to interpretive signs located along Highways 74 and 243 and at some developed trailheads, informational signs are used to indicate Wilderness areas, prohibit vehicle access and disallow dogs in bighorn sheep habitat. National BLM and Forest Service policies provide guidance concerning the rationale, placement, and design of signs with a focus on communicating information to the user.

There are a variety of interpretive sites already in or along the boundaries of the National Monument. The existing interpretive sites, services and themes include the following:

**Forest Service, San Jacinto Ranger Station**

- San Jacinto Ranger District Office: Adventure Pass and permit sales, San Bernardino National Forest website, San Bernardino National Forest Visitor Guide, bookstore with maps and souvenirs, backcountry use publications, handouts, exhibits

- Allendale Fire Station, Hwy 243: Campground information, wildlife interpretive panels
- Indian Vista Interpretative Area: Cahuilla information, mountain vista
- Cahuilla Tewanet Overlook: natural and cultural history interpretive signs, viewing deck
- Pacific Crest Trail: Interpretive sign with map at Hwy 74

#### **BLM, Palm Springs-South Coast Field Office**

- Santa Rosa and San Jacinto Mountains National Monument Visitor Center: exhibits, bookstore, publications, handouts, maps, interpretative trail, kiosk
- Palm Springs-South Coast Field Office: general information, handouts, maps
- Vista Point Overlook: Interpretive trail signs, National Monument website, environmental education curriculum

#### **Jointly produced – Forest Service, BLM and Partners**

- Palms to Pines Recreation Guide
- Interpretive Concept Plan

The following are the current interpretive sites provided by partners in the National Monument:

#### **Mt. San Jacinto State Park**

- District Office: general information
- Idyllwild campground: interpretive panels, bookstore and mountain souvenirs, maps, amphitheater
- Mountain Station: wilderness signs, bookstore with maps, exhibits, guided nature walks
- Long Valley: Interpretive trail with signage about the natural history

#### **Agua Caliente Band of Cahuilla Indians**

- Tahquitz Canyon Visitor Center: guided walks, exhibits, video/theater, bookstore with desert souvenirs
- Indian Canyons: cultural and natural history, bookstore with desert souvenirs, trail maps, website

#### **Agua Caliente Cultural Museum**

- Indian culture signs, exhibits, artifacts

#### **Palm Springs Aerial Tramway, Valley and Mountain Stations**

- Interpretive signs on natural history topics, viewing scopes, nature trail, desert souvenirs

#### **Palm Springs Desert Museum**

- Permanent and seasonal exhibitions on desert flora, fauna, geology and cultural history, desert landscape gardens, theater and lecture hall

#### **The Living Desert**

- Wildlife zoo and botanical gardens from world's deserts, discovery center, lecture hall, native plant nursery

### **Coachella Valley Museum**

- Pioneer culture interpretive displays and artifacts

### **Riverside County Parks Nature Center**

- Natural and cultural history interpretive signs, bookstore and nature trail, publications

Interpretation in the National Monument would include educational activities that aim to reveal meanings about the cultural and natural resources found in the National Monument. Through various media such as talks, guided tours, publications and exhibits, education efforts would enhance the understanding, appreciation, and, therefore, protection of historic sites and natural features.

### **3.H. Scientific Resources**

The National Monument encompasses a large transect of habitats ranging from arid Colorado Desert through scrubland and pinyon-juniper woodlands to montane forests with a steep elevational gradient near the base of the north-facing escarpment of Mount San Jacinto. Biodiversity within the National Monument is correspondingly rich and contains spectacular topography and geological features. Numerous archaeological resources are also found within the National Monument boundary. Physiological ecology, environmental physiology, behavior, and conservation biology of desert and mountain organisms have been the predominant research themes of research activities. Some specific scientific projects include: health and demography of the Peninsular Ranges bighorn sheep (*Ovis canadensis nelsoni*), mountain lion ecology, rattlesnake ecology, physiology of succulents, and hybridization of quail species. Each of the values that the National Monument was established to protect (biological, cultural, recreational, geological, educational, scientific, and scenic) consist of a suite of disciplines for which the results of scientific study guide long-term understanding.

One of the earliest scientific visitors, Edmund Huller from the Museum of Chicago, trapped and observed mammals throughout the canyons in 1903, traversing land that was to become the National Monument. Joseph Grinnell and Harry Swarath from the Museum of Vertebrate Zoology at the University of California at Berkeley ventured into the area in 1908, describing a large population of bighorn sheep. Grinnell and Swarath reached the area that would become Boyd Deep Canyon Research Center, located within the National Monument. The area was used by field classes for desert studies when Philip L. Boyd offered approximately a 1,500-acre study site to the University of California in 1958. BLM assisted the land acquisition phase of the center's expansion. Past research facilitated through the research center has added to our understanding of the scientific resources of the area and has brought international recognition of the values that this protected desert canyon supports.

Current BLM and Forest Service scientific research management consists of providing permits for research when valid requests are received. Land use plan conformance (CDCA (1980, as amended) and SBNF LRMP (1989, as amended)), plan objectives, Land Health Standards, Forest Service Standards and Guidelines, as well as other applicable laws, policies and regulations, provide the framework under which research permits are awarded. Both basic research and applied research aiding in land management decisions are encouraged. Basic research that may have no apparent or

direct application to land management has not been excluded in the past. BLM and Forest Service recognize the need for research into basic ecosystem processes, structure, and function that natural and relatively intact systems can provide. BLM and Forest Service require approval of the authorized officer for research activities conducted on BLM and National Forest lands. Whenever required, all permits, authorizations, and/or licenses are issued at the discretion of the BLM and Forest Service authorized officer.

### **3.1. Scenic Resources**

The BLM and Forest Service both have existing systems for attributing classifications to areas of land based on scenic values.

#### **BLM**

The BLM has developed an analytical process that identifies, sets, and meets objectives for maintaining scenic values and visual quality. The Visual Resource Management (VRM) system functions in two ways. First, BLM conducts an inventory that evaluates visual resources on all lands under its jurisdiction (Inventory/Evaluation). Once inventoried and analyzed, lands are given relative visual ratings (Management Classifications). Class designations are derived from an analysis of Scenic Quality (rated by landform, vegetation, water, color, influence of adjacent scenery, scarcity, and cultural modification), a determination of Viewer Sensitivity Levels (sensitivity of people to changes in the landscape), and Distance Zones (visual quality of a landscape, as well as user reaction, may be magnified or diminished by the visibility of the landscape). Management Classes describe the different degrees of modification allowed to the basic elements of the landscape (form, line, color, texture).

Second, when a site-specific project is proposed, the degree of contrast between the proposed activity and the existing landscape is measured (Contrast Rating). The Contrast Rating process compares the proposed activity with existing conditions element-by-element (form, line, color, texture) and feature-by-feature (land/water surface, vegetation, structures). The Contrast Rating is compared to the appropriate Management Class to determine if contrasts are acceptable. If the proposed project exceeds the allowable contrast, a BLM decision is made to (1) redesign, (2) abandon or reject, or (3) proceed, but with mitigation measures stipulated to reduce critical impacts. The VRM Class Objectives are defined as follows:

**Class 1:** Natural ecological changes and very limited management activity are allowed. Any contrast created within the characteristic landscape must not attract attention. This classification is applied to Wilderness areas, Wild and Scenic Rivers, and other similar situations.

**Class 2:** Changes in any of the basic elements caused by management activity should not be evident in the characteristic landscape. Contrasts are visible, but must not attract attention.

**Class 3:** Changes to the basic elements caused by management activity may be evident, but should remain subordinate to existing landscape.

**Class 4:** Any contrast may attract attention and be a dominant feature of the landscape in terms of scale, but it should repeat the form, line, color, and texture of the characteristic landscape.

**Class 5:** This classification is applied to areas where natural character of the landscape has been disturbed to a point where rehabilitation is needed to bring it up to one of the four other classifications.

Through the CDCA Plan Amendment, non-Wilderness BLM lands within the National Monument were designated as VRM Class 2. BLM Wilderness lands within the National Monument were designated as VRM Class 1.

### **Forest Service**

The Forest Service Scenery Management System (SMS) presents a vocabulary for managing scenery and a systematic approach for determining the relative value and importance of scenery in a National Forest. The system is used in the context of ecosystem management to inventory and analyze scenery in a National Forest, to assist in establishment of overall resource goals and objectives, to monitor the scenic resource, and to ensure high-quality scenery for future generations. The SMS levels for National Forest lands within the National Monument are being addressed in the Forest Plan Revision (in progress) with the National Monument identified as a “place” to which these values will be applied.

The SMS identifies the following:

*Landscape Character* gives a geographic area its visual and cultural image and consists of the combination of physical, biological and cultural attributes that make each landscape identifiable or unique. The landscape character description establishes the current overall visual impression of a landscape, the physical appearance of the landscape that contributes to an identity and a “sense of place.” Scenic Attractiveness Classes determine the relative scenic value of lands within a particular Landscape Character. The three classes are: Class A: Distinctive; Class B: Typical; Class C: Indistinctive.

*Scenic Integrity* indicates the degree of intactness and wholeness of the Landscape Character. Human alterations can sometimes raise or maintain integrity. More often it is lowered depending on the degree of deviation from the character valued for its aesthetic appeal. Scenic integrity objectives establish limits of acceptable human alterations as the landscape moves toward a landscape character goal. The Scenic Integrity levels are defined as follows:

**VERY HIGH (Unaltered) - Preservation:** VERY HIGH Scenic Integrity refers to landscapes where the valued Landscape Character “is” intact with only minute, if any, deviations. The existing Landscape Character and sense of place is expressed at the highest possible level.

**HIGH (Appears Unaltered) - Retention:** HIGH Scenic Integrity refers to landscapes where the valued Landscape Character “appears” intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the Landscape Character so completely and at such scale that they are not evident.

**MODERATE (Slightly Altered) - Partial Modification:** MODERATE Scenic Integrity refers to landscapes where the valued Landscape Character “appears slightly altered.” Noticeable deviations must remain visually subordinate to the Landscape Character being viewed.

**LOW (Moderately Altered) - Modification:** LOW Scenic Integrity refers to landscapes where the valued Landscape Character “appears moderately altered.” Deviations begin to dominate the valued Landscape Character being viewed but they borrow valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles outside the landscape being viewed. They should not only appear as valued character outside the landscape being viewed but as compatible or complimentary to the character within.

**VERY LOW (Heavily Altered) - Maximum Modification:** VERY LOW Scenic Integrity refers to landscapes where the valued Landscape Character “appears heavily altered.” Deviations may strongly dominate the valued Landscape Character. They may not borrow from valued attributes, such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles within or outside the landscape being viewed. However, deviations must be shaped and blended with the natural terrain (landforms) so that elements such as unnatural edges, roads, landings, and structures do not dominate the composition.

**UNACCEPTABLY LOW (Extremely Altered) - Extreme Modification:** UNACCEPTABLY LOW Scenic Integrity refers to landscapes where the valued Landscape Character being viewed “appears extremely altered.” Deviations are extremely dominant and borrow little if any form, line, color, texture, pattern or scale from the Landscape Character. Landscapes at this level of integrity need rehabilitation. This level should only be used to inventory existing integrity. It must not be used as a management objective.

### **3.J. Existing Land Use Designations**

The BLM-managed and National Forest public lands within the planning boundary have existing land use designations intended to provide management guidance and to protect natural and cultural resources. Land use designations addressed in this section include (1) Wild and Scenic Rivers, (2) Multiple-Use Classes, (3) Wilderness and Wilderness Management, (4) Farmlands, and (4) Livestock Grazing.

#### **3.J.1. Wild and Scenic Rivers**

In accordance with the Wild and Scenic Rivers Act of 1968 (Public Law 90-542), the BLM and Forest Service shall identify and evaluate all rivers that have potential for Wild and Scenic River designation. To be eligible for designation, a river must be free-flowing and contain at least one Outstandingly Remarkable Value (ORV), i.e., scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar value. A “river” means a flowing body of water or estuary or a section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and small lakes. “Free-flowing” is defined as “existing or flowing in a natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway.” Rivers with intermittent or non-perennial flows may be eligible for designation.

Through the CDCA Plan Amendment, BLM analyzed the public land segment of Palm Canyon for eligibility as a Wild and Scenic River. It was determined that 1.2 miles of the river segment on public lands in Palm Canyon (T5S, R4E, Sec. 36, SBBM) are eligible



for Wild and Scenic River designation. This segment was given a tentative classification of “scenic.” The ORV’s of this segment are related to wildlife and cultural resources. BLM-managed segments of Palm Canyon provide habitat for Federal and State listed endangered species and State species of special concern, and contain several archaeological sites significant in Cahuilla oral history.

Once a river segment has been determined eligible and given a tentative classification as “wild,” “scenic,” and/or “recreational,” the land management agency is required to protect its free-flowing characteristics; protect, and to the degree practicable, enhance the ORV’s which contribute to its eligibility; and ensure that its eligibility or tentative classification will not be affected before a determination of its suitability or non-suitability as a Wild and Scenic River can be made. BLM determined through the CDCA Plan Amendment that such protective measures are in place, thereby meeting the requirement, and eligibility of the identified BLM-managed river segment in Palm Canyon would not be compromised prior to a determination of its suitability or non-suitability as a Wild and Scenic River.

The Forest Service is conducting an eligibility assessment for designation of Palm Canyon as a Wild and Scenic River as part of the process of updating the Land and Resource Management Plans for the Angeles, Cleveland, Los Padres, and San Bernardino Forests. The intermittent creek in Palm Canyon has many minor headwaters in the Vandeventer Flat area of the Santa Rosa Indian Reservation at 4,800 feet (T7S, R4E, Sec. 25, SBBM). The first approximately 4.0 miles of the creek flow north to northeast through the Reservation, crossing under State Highway 74. It then leaves Reservation lands, flowing through a parcel of private land for 1.3 miles. After that, it travels through National Forest lands within the National Monument for 7.8 miles, at which point it enters BLM lands at 2,000 feet (T6S, R4E, Sec. 1, SBBM).

### **3.J.2. Multiple-Use Classes**

All of the public lands in the CDCA under BLM management have been designated geographically into four Multiple-Use Classes . The classification is based on the sensitivity of resources and kinds of uses in each geographic area. Each Multiple-use Class describes a different type and level or degree of use that is permitted within a particular geographic area. Multiple-use Class “C” guidelines summarize the kinds of management likely to occur in Wilderness areas. Multiple-use Class “L” protects sensitive, natural, scenic, ecological, and cultural resource values. Public lands designated as Multiple-use Class “L” are managed to provide for generally lower-intensity, carefully controlled multiple-use of resources, while ensuring that sensitive values are not significantly diminished. Within the National Monument, the Santa Rosa Wilderness Additions are designated as Multiple-Use Class “C” (Controlled Use) and non-Wilderness BLM lands within the National Monument are classified as Multiple-Use Class “L” (Limited Use) in accordance with the CDCA Plan (1980, as amended).

### **3.J.3. Wilderness and Wilderness Management**

The National Monument contains two Wilderness areas, the Santa Rosa Wilderness and the San Jacinto Wilderness. The latter is administered by the Forest Service. A portion of the Santa Rosa Wilderness is managed by the Forest Service and the remaining portion is managed by the BLM. Like all other Federal Wilderness areas, these areas are managed in accordance with the Wilderness Act (Public Law 88-577; September 3, 1964), and the enabling legislation. Inventories and designations of Wilderness occurred under previous planning efforts and through legislation.

Forest Service planning regulations (36 CFR 219.17) state that: “Unless otherwise provided by law, roadless areas within the National Forest System shall be evaluated and considered for recommendation as potential Wilderness areas during the Forest Planning process.” Under Forest Service Handbook 1909.12.7.1, the Forest Service is directed to “identify and inventory all roadless, undeveloped areas that satisfy the definition of wilderness found in section 2 (c) of the 1964 Wilderness Act.” The handbook also details the means by which the capability, availability, and need for potential Wilderness areas are assessed. The Forest Service Roadless Area Conservation Rule can be found on the internet at <http://www.roadless.fs.fed.us/>.

FLPMA recognizes that public lands having Wilderness character possess unique resource values and will be managed within the BLM’s multiple-use mandate. As directed in Section 201 of FLPMA, if lands are found to have Wilderness characteristics through inventories, the BLM land use planning process (defined in Section 202 of FLPMA) is required to determine how it will manage those Wilderness characteristics in the context of all possible resource values and uses. Land is determined to have Wilderness character if it meets each of the following criteria (16 U.S.C. 1131):

- (1) Having been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable,
- (2) Having outstanding opportunities for solitude or a primitive and unconfined type of recreation,
- (3) Having at least five thousand acres of land or of sufficient size as to make practicable its preservation and use in unimpaired condition, and
- (4) Potentially containing ecological, geological, or other features of scientific, educational, scenic, or historical value.

The BLM and the Forest Service used these four criteria to determine if lands had Wilderness characteristics. National Forest System lands were inventoried for Wilderness characteristics under the Wilderness Act of 1964 and under the RARE and RARE II processes. The San Jacinto Wilderness was established under the Wilderness Act of 1964 and enlarged in the California Wilderness Act of 1984 (Public Law 98-425). The Santa Rosa Wilderness was established under the California Wilderness Act of 1984. BLM managed lands within the National Monument were inventoried as part of the initial Wilderness inventory required through Section 603 of FLPMA and during the development of the CDCA Plan (1980). The inventory resulted in over 68,000 acres of public land in the Santa Rosa Mountains being identified as a Wilderness Study Area in the CDCA Plan. No other lands were found to be of sufficient size, due to the checkerboard pattern of land ownership, to possess Wilderness characteristics. The BLM-administered portion of the Santa Rosa Wilderness was designated by Congress as part of the CDPA. Section 104 (a) of the CDPA directs that lands in the CDCA not designated as Wilderness or Wilderness Study Areas by the CDPA were released from further study under section 603 of FLPMA and no longer subject to section 603 (c) of FLPMA pertaining to management of Wilderness Study Areas.

**Table 3-9. Wilderness Areas within the National Monument**

<b>Wilderness Area</b>	<b>Agency</b>	<b>Acres (Within National Monument)</b>
San Jacinto Wilderness	Forest Service	19,470
Santa Rosa Wilderness	Forest Service	13,787
Santa Rosa Wilderness	BLM	47,794

San Jacinto Wilderness The 32,248-acre San Jacinto Wilderness was established under the Wilderness Act of 1964 and enlarged by 10,900 acres with the California Wilderness Act of 1984 . The San Jacinto Wilderness, partly located in the northern portion of the National Monument, offers opportunities for rock climbing, hiking, backpacking, and riding horses. The Wilderness is accessed primarily from Humber Park in Idyllwild and from the Palm Springs Aerial Tramway. Mount San Jacinto State Park is located in the heart of the area, separating this Wilderness into two distinct sections. The southern portion of the Wilderness is extremely popular with visitors, and overcrowding occurs in some areas. Opportunities for solitude are greater in the northern portion of the Wilderness where visitor use is lighter (Figure 4).

Santa Rosa Wilderness (FS) In the southern portion of the National Monument, the 13,787-acre portion of the Santa Rosa Wilderness managed by the Forest Service was established through the California Wilderness Act of 1984. Elevations rise from the desert floor to nearly 8,000 feet, with highly eroded canyons, valleys, cliffs, and washes, and vegetation ranging from desert agave to mountain pinyon and juniper. With only one trail, the Cactus Spring Trail, this Wilderness offers opportunities for solitude, as visitor use is light in this area (Figure 4).

Santa Rosa Wilderness (BLM) Located in the southern end of the Coachella Valley, the BLM managed portion of the Santa Rosa Wilderness (Figure 4) was established in 1994 under the CDPA, which designated 69 areas in the CDCA as Wilderness in furtherance of the purposes of the Wilderness Act and Sections 601 and 603 of FLPMA. This Wilderness exhibits very few imprints of man and affords outstanding opportunities for solitude and primitive recreation. Total BLM managed land equals 47,794 acres; however, the designated Wilderness boundary surrounds private and State lands, which with BLM public lands equals 71,425 acres (although within the Wilderness boundary, private and State lands are not managed as part of the Wilderness). Resource values include habitat for Peninsular Ranges bighorn sheep, mule deer, mountain lion, desert slender salamander, and many bat species. This steep, rugged Wilderness contains a diversity of natural communities, including Sonoran creosote bush scrub, desert dry wash woodland, semi-desert chaparral, and pinyon pine-juniper woodland.

**Wilderness Management**

As previously indicated, Federal lands within designated Wilderness are managed in accordance with the Wilderness Act of 1964, as well as the enabling legislation. The Wilderness Act mandated that Wilderness areas be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as Wilderness. Further, these areas are to be managed to retain their primeval character and influence, without permanent improvements or human habitation, so as to preserve natural conditions.

Both the BLM and the Forest Service have developed regulations governing management of Federal lands within designated Wilderness. BLM regulations for Wilderness management are found in Title 43 CFR part 6300. Forest Service regulations are found at 36 CFR 293 and in the Forest Service Manual 2320. Both agencies have also prepared guidance to managers (in the form of manuals) for making decisions when faced with various resource management challenges, e.g., installation of wildlife water guzzlers (permanent structures) to support an endemic wildlife species (a Wilderness value) that has been adversely affected by man's activities. A summary of some of the BLM and Forest Service manual guidance for certain relevant activities is described in Appendix H.

The following provisions under Title I, Section 103, and Title 7 of the CDPA are particularly relevant to the National Monument Management Plan for the BLM-managed portion of the Santa Rosa Wilderness:

- Subject to valid existing rights, each Wilderness area shall be administered in accordance with the provisions of the Wilderness Act of 1984.
- The Congress does not intend for the designation of Wilderness areas to lead to the creation of protective perimeters or buffer zones around any Wilderness area. The fact that non-Wilderness activities or uses can be seen or heard from areas within a Wilderness area shall not, of itself, preclude such activities or uses up to the boundary of the Wilderness area.
- As provided in Section 4(d)(7) of the Wilderness Act of 1984, nothing in the CDPA shall be construed as affecting the jurisdiction of the State of California with respect to wildlife and fish on public lands.
- Management activities to maintain or restore fish and wildlife populations and the habitats to support such populations may be carried out within Wilderness areas and may include the use of motorized vehicles by the appropriate State agencies.
- Nothing in the CDPA may be construed to preclude Federal, State, and local law enforcement agencies from conducting law enforcement operations as permitted before the date of enactment of the CDPA, including the use of motorized vehicles and aircraft, on any lands designated as Wilderness.
- In land tenure adjustment decisions in the CDCA, the BLM shall give priority to consolidating Federal ownership within the Wilderness area.
- None of the lands within the boundaries of the wilderness shall be granted to or otherwise made available for use pursuant to the Boulder Canyon Project Act.
- Any lands within the boundary of the Wilderness area that are acquired by the Federal Government shall become part of the Wilderness area.
- The BLM, upon the request for traditional cultural and religious purposes by an Indian tribe or Indian religious community, shall temporarily close to the general public use of one or more specific portions of the Wilderness area in order to protect the privacy of traditional cultural and religious activities in such areas by Indian people. Any such closure shall be made to affect the smallest practicable area for the minimum period necessary for such purposes.
- The CDPA reserves a quantity of water for the BLM portion of the Wilderness area sufficient to fulfill the purposes of the CDPA. The priority date of such reserved water rights shall be October 31, 1994.

- The CDPA provides that the Secretary shall provide adequate access to non-Federally owned land or interests in land within the boundaries of the conservation units and Wilderness areas designated by this act, which will provide the owner of such land or interest the reasonable use and enjoyment thereof (reiterated in the National Monument Act of 2000).
- Lands and interests in lands acquired pursuant to this Act shall be appraised without regard to the presence of a species listed as threatened or endangered pursuant to the ESA.

#### **3.J.4. Farmlands**

Although farming does occur extensively near the National Monument, these farms are all located on private lands rather than BLM-managed or National Forest public lands.

#### **3.J.5. Livestock Grazing**

No grazing allotments currently exist on BLM lands within the National Monument. Cattle grazing in what is now known as the San Bernardino National Forest has been practiced by many groups of people, including the native Cahuilla Indians. In 1891, President Benjamin Harrison signed the Forest Reserve Act, which led to the creation of the San Jacinto Forest Reserve on February 22, 1897. In 1905, President Theodore Roosevelt transferred the Bureau of Forestry from the U.S. Department of the Interior to the U.S. Department of Agriculture. Later that same year, the Bureau of Forestry was renamed the U.S. Forest Service. The Forest Service, under the direction of Gifford Pinchot, began aggressive management of the forest reserves. In 1906, the first grazing permit system was instituted. This was in sharp contrast to the complete ban on grazing several years earlier, but it was Pinchot's belief that forest reserves should be managed for public use. The first grazing permit, held in part by the Wellman family, was in 1907, shortly after the grazing permit system was initiated. This permit was issued for 80 head of cattle and 6 horses.

Before 1934, cattle were allowed to range over any and all portions of suitable lands. After enactment of the Taylor Grazing Act of 1934, "open range" grazing use became restricted to geographic areas allotted to livestock permittees based on historic or current grazing use. Currently, the Forest Service may issue term and/or temporary grazing permits to qualified permittees on a fee-for-use basis. Issuance of permits is based upon a series of requirements, including animal unit months (AUM), forage capacity and species composition, and conservation measures to ensure sustained use, while minimizing resource damage.

#### **Wellman Allotment**

The 15,000-acre Wellman Allotment is the only Forest Service grazing allotment within the Plan Area. Per Section 5(g) of the National Monument Act of 2000: "The Secretaries shall issue and administer any grazing leases or permits in the National Monument in accordance with the same laws (including regulations) and Executive orders followed by the Secretaries in issuing and administering grazing leases and permits on other land under the jurisdiction of the Secretaries. Nothing in this Act shall affect the grazing permit of the Wellman family (permittee # 12-55-03) on lands included in the National Monument." The Wellman Allotment covers approximately 10,333 acres of the National Monument. The Wellman Allotment encompasses most of the National Forest lands within the National Monument east of Palm View and Pyramid Peaks, west of Palm Canyon, and north of Highway 74. Elevations vary between 2,600 and 7,000 feet, providing both low elevation winter range and high elevation summer range.

The grazing allotment has a year-round season of use on perennial forage with additional grazing capacity on ephemeral forage when it is seasonally available above a pre-determined threshold of 300 - 400 pounds (dry weight) per acre in chaparral, pinyon-juniper, and hardwood vegetation. In conifer forests, the residual forage standard is 400 - 600 pounds (dry weight) per acre (SBNF LRMP S&G - 25,26,27). The allotment is divided into a series of pastures that are grazed at different times of the year depending on elevation and forage conditions. Water is available on the allotment in strategic locations where the cattle may still move between grazing areas. The allotment contains a number of range improvements, including wells, improved springs, fences and corrals.

The Forest Service grazing season starts on March 1 and concludes the last day of February of the following year. All grazing activities are to be carried out in conformance with the grazing regulations, standards for rangeland health, guidelines for grazing management, the allotment management plan, and direction provided within the SBNF LRMP (1989, as amended). Current grazing activities are further constrained by management directions for the endangered Peninsular Ranges bighorn sheep and their habitat as set forth in the Biological and Conference Opinions on the Continued Implementation of Land and Resource Management Plans for the Four Southern California National Forests completed in 2001. Approximately 3,176 acres, primarily in the Palm Canyon area, of the Wellman Allotment are within bighorn sheep critical habitat.

**Grazing Activities**

The area encompassed by the current Wellman Allotment has been grazed by Wellman-owned cattle since the 1860's. The first grazing permit held in part by the Wellman family was in 1907, shortly after the grazing permit system was initiated. Table 3-10 below summarizes the history of this allotment from 1980 to the present:

**Table 3-10. History of the Wellman Allotment**

Year	Season	Number of Head
1980	3/1-2/28	35
1981	3/1-2/28	50
1982	3/1-2/28	55
1983	3/15-2/29	62
1984	3/15-2/28	62
1985	3/15-2/28	68
1986	3/1-2/28	75
1987	3/1-2/29	75
1988	3/1-2/28	75
1989	3/1-2/28	75
1990	3/1-2/28	30
1991	3/1-2/29	30

Year	Season	Number of Head
1992	3/1-2/28	40
1993	3/1-2/28	40
1994	3/1-2/28	45
1995	3/1-2/29	45
1996	3/1-2/28	45
1997	3/1-2/28	45
1998	3/1-2/28	45
1999	3/1-2/29	45
2000	3/1-2/28	45
2001	3/1-2/28	45
2002	3/1-2/28	30

Most of the Wellman Allotment is characterized by rugged, remote terrain. Although there are several private in-holdings within the allotment boundaries, cattle have had access to these areas through various agreements between the Wellman family and adjacent private landowners. Riverside County is considered a “closed range” ordinance county. Under this ordinance, it is the livestock operator’s responsibility to keep livestock from entering adjacent Federal or private lands. In any case, when livestock enter adjacent lands from National Forest lands, the Forest Service is not liable for damages.

**Grazing Administration**

The Forest Service conducts a series of actions to authorize livestock grazing use. Depending on the type of lease, livestock producers apply to graze livestock annually or as a term permit. Grazing use is permitted with written authorization, and terms and conditions for grazing use are listed as necessary. The Forest Service conducts field visits throughout the grazing period to ensure grazing use is occurring as authorized. Range improvements are inspected as prescribed to determine condition and future utility.

On February 28, 2000, the permit for the Wellman Allotment reached its termination date. The annual allotment plan (1977) was out of date and the permit was scheduled for NEPA analysis prior to re-issuance. The Forest Service was unable to adhere to the 1996 NEPA schedule, where analysis was to be initiated in 2000, and revised the analysis calendar to start in 2004. On May 5, 2000, the permit held by the Wellman Family Trust was reissued under the Rescission Act of 1995. Under the act, the permit “shall be issued on the same terms and conditions and for the full term of the expired or waived permit. Upon completion of the scheduled NEPA analysis and decision for the allotment, the terms and conditions of [the existing permit] may be modified or re-issued, if necessary to conform to such NEPA analysis.”

In 2001, two BO's reorganized the way the Wellmans utilized the allotment. The Biological and Conference Opinions on the Continued Implementation of Land and Resource Management Plans for the Four Southern California Forests, as modified by New Interim Management Direction and Conservation Measures set management directions for bighorn sheep conservation. These directions included:

- 135<sub>MD</sub> Prohibit cattle grazing on NFS lands in key bighorn sheep habitat.
- 136<sub>MD</sub> Follow fence specifications in USDI – BLM (1989) when constructing livestock fences within or immediately adjacent to key Peninsular Ranges bighorn sheep habitat.

Additionally, the BO on Four Grazing Allotments on the San Bernardino National Forest directed changes to use of riparian areas on allotments in order to protect the southwestern willow flycatcher (*Empidonax trallii extimus*), a Federal listed endangered species. Several key riparian areas on the Wellman Allotment were precluded from cattle use. Fobes Canyon and Live Oak Canyon were identified as containing several acres of suitable riparian habitat. Exclosures of several acres (22 acres in total) were constructed around Fobes and Live Oak Creeks to prevent cattle access and use of these areas. Exclosures are monitored for changes in vegetation to assess the effects of grazing in the surrounding vegetation. The following direction guides grazing management on National Forest lands:

- Develop, maintain, and administer allotment management plans for all allotments in consultation, cooperation, and coordination with the grazing permittee and adjacent landowners and other agencies. Standard and Guideline: a. Use R-5 FSM 2209.2 guideline. Update annually with permittee consultation. b. Retain the following residual forage, well distributed throughout the grazed acres: 300 to 400 lbs/ac in chaparral, pinyon-juniper and hardwoods; 400 to 600 lbs/ac in conifer.#2. Maintain structural range improvements in serviceable, safe and attractive condition.
- Actively manage for proper livestock distribution via structural and nonstructural range improvements and with other proven management techniques.
- Utilize grazing as a vegetation management tool where compatible with other resources.
- Coordinate where needed with the USFWS and appropriate State and County wildlife and plant agencies for animal damage and plant control.

### **3.K. Air Quality**

#### **3.K.1. Background**

Under the Clean Air Act (1990, as amended), National Ambient Air Quality Standards (NAAQS) have been developed by the EPA. These standards are used to classify areas as to whether they are in attainment or non-attainment, or are unclassified for any of the air quality standards. Areas that are classified as non-attainment areas are required to prepare and implement a State Implementation Plan (SIP) that identifies and quantifies sources of emissions and provides a strategy to reduce emissions. Under the Clean Air Act conformity rules (CAA 176(c) and 40 CFR part 51 subpart W), activities on BLM-managed lands in a non-attainment area must conform to the applicable SIP.

The air quality of a particular locale is based on the amount of pollutants emitted and dispersed and climatic conditions that may reduce or enhance the formation of pollutants. In the Plan Area, the SCAQMD is the responsible agency for monitoring air quality and developing and enforcing regulations intended to achieve State and Federal air quality standards. California has also set statewide emission limitations for odor or



unhealthful emissions, visible emissions, open burning, sandblasting, gasoline vapors, and incineration of toxics.

Suspended particulate matter is the most serious air quality issue faced by the region, which occasionally exceeds both State ( $>50 \text{ g/m}^3$  or 50 micrograms per cubic meter) and Federal ( $>150 \text{ g/m}^3$ ) standards for PM<sub>10</sub>. PM<sub>10</sub> refers to small, suspended particulate matter, 10 microns or less in diameter, which can enter the lungs. These small particles can be directly emitted into the atmosphere as a by-product of fuel combustion; through abrasion, such as wear on tires or brake linings; or through wind erosion of soil. Mining operations, OHV use, and grazing all contribute to PM<sub>10</sub> levels. They can also be formed in the atmosphere through chemical reactions. Carcinogens and other toxic compounds can stick to the particle surfaces and enter the lung. PM<sub>10</sub> is reduced directly by controls on fugitive dust and indirectly by controls on all other pollutants that contribute to the formation of particles.

Another measurement of air quality is the level of ozone, which is formed by photochemical reactions between oxides of nitrogen and volatile organic compounds (VOC). VOC's are formed from the incomplete combustion of fuels and from evaporation of organic solvents. Elevated ozone levels in the air we breathe (as opposed to air in the upper atmosphere, which protects us from harmful radiation) result in reduced lung function, particularly during vigorous physical activity. Typical VOC controls include reducing the VOC content of paints and solvents and controlling fumes from gasoline pumping, auto body painting, furniture finishing, and other operations that involve organic chemicals and solvents.

The SCAQMD is under a legal obligation to make and enforce air pollution regulations. These regulations are primarily meant to ensure that the surrounding (or ambient) air will meet NAAQS and State air quality standards for concentration and duration for which air pollutants may negatively affect health. SCAQMD also has broad authority to regulate toxic and hazardous air emissions, and these regulations are enforced in the same manner as those that pertain to the NAAQS. In addition, SCAQMD must meet California standards for hydrogen, sulfide, sulfates, and vinyl chloride as well as State standards for visibility.

SCAQMD currently monitors ambient air quality, including PM<sub>10</sub> concentrations, at two air monitoring stations in the Coachella Valley (Palm Springs and Indio). These NAAQS are health-based and concern the following five air contaminants: ozone, nitrogen dioxide, carbon monoxide, and fine particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). These standards are designed to protect the most sensitive persons from illness or discomfort with a margin of safety. The Indio site has been operational since 1985, and the Palm Springs site has been operational since 1987. The particulate sampling frequency at both monitoring stations is once every three days.

Based on monitoring reported in the 1996 Coachella Valley SIP, approximately 53 tons of PM<sub>10</sub> were released into the atmosphere in Coachella Valley on an average day in 1995. Of these, 1% was caused by fuel combustion, waste burning and industrial processes. Man-made and natural dust-causing activities, such as agricultural tilling in fields, construction and demolition operations, or driving on paved or unpaved roads account for 96%. Less than 3% of Coachella Valley's emissions are caused by mobile source tailpipe and brake/tire wear emissions. Mountain communities would have a lower release due to a significantly lower population level because fewer roads exist

and, therefore, less fuel is consumed. In addition, the geographical difference between a valley and mountain setting causes less release.

### **3.K.2. Current Regulatory Status**

In November 1990, amendments to the Federal Clean Air Act were signed into law, setting into motion new statutory requirements for attaining NAAQS for PM<sub>10</sub>. All areas in the United States that were previously designated as Federal non-attainment areas for PM<sub>10</sub>, including the Coachella Valley, were initially designated as "moderate" PM<sub>10</sub> non-attainment areas. Under Section 189(a) of the Clean Air Act, revisions to the SSIP's for PM<sub>10</sub> were due by November 15, 1991, incorporating "reasonably available control measures" for PM<sub>10</sub> and indicating an attainment date. In response to these requirements, the SCAQMD adopted the "State Implementation Plan for PM<sub>10</sub> in the Coachella Valley" (1990 CVSIP) in November 1990. The CVSIP identified candidate control measures and demonstrated attainment of the NAAQS for PM<sub>10</sub> by the year 1995, one year after the statutory limit for moderate non-attainment areas. Section 188(b) of the Clean Air Act specifies that any area that cannot attain the standards by December 1994 would subsequently be re-designated as a "serious" non-attainment area.

In January 1993, the EPA completed its initial re-designation process, and included the Coachella Valley among five nationwide areas re-designated as "serious," effective February 8, 1993. The mountain communities were not included in this action. Section 189(b) of the Clean Air Act further specifies that a SIP Revision is due within 18 months of the re-designation (August 8, 1994). The revision must assure that "best available control measures" will be implemented and a demonstration of attainment will be submitted within four years of the re-designation date (February 8, 1997). In response to the Clean Air Act requirements for "serious areas," the SCAQMD prepared a SIP Revision (1994 CVSIP) that identified candidate "best available control measures" for implementation prior to February 8, 1997.

The Clean Air Act also allows an extension of the attainment date for up to five years provided that (1) all previous SIP commitments have been implemented; (2) a demonstration that attainment by 2001 is not practicable; (3) documentation that all feasible Most Stringent Measures (MSM) are being implemented; and (4) a demonstration that the expected attainment date is the most expeditious date practicable.

Section 107 (d)(3)(E) of the Clean Air Act states that an area can be re-designated to attainment if, among other requirements, the EPA determines that the NAAQS have been attained. The EPA guidance further states that a determination of compliance with the NAAQS must be based on three complete, consecutive calendar years of quality-assured air quality monitoring data. In applying the EPA's Natural Events Policy, the 1996 Coachella Valley SIP (1996 CVSIP) determined that the Coachella Valley had not violated either the 24-hour or annual average PM<sub>10</sub> standards during the three calendar years 1993 through 1995. Accordingly, the SCAQMD requested a re-designation of the Coachella Valley to attainment for PM<sub>10</sub>.

From 1999 through 2001, however, PM<sub>10</sub> dust levels rose sufficiently to exceed the annual average PM<sub>10</sub> standard of 50 g/m<sup>3</sup>, and standards for ozone. The Indio monitoring site exceeded the PM<sub>10</sub> annual average standard from 1999 to 2001. Palm Springs, on the other hand, is within both standards. Special monitoring at other sites

confirmed that PM10 standards are exceeded throughout Coachella Valley. The region continues to be designated a “serious” non-attainment area for PM10. Should the region continue to fall short of Federal PM10 standards, the EPA could impose more stringent regulations or sanctions on local jurisdictions.

In an effort to remedy this situation, the SCAQMD developed “Guidelines for Dust Control Plan Review in the Coachella Valley” (2001), which are intended to provide guidance for activities that are required to prepare a fugitive dust control plan. The 2002 Coachella Valley PM10 SIP (2002 CVSIP) has been prepared for the Plan Area and identifies sources of PM10 and control measures to reduce emissions. There also are a set of rules (400 series) designed to limit area and point source particulate emissions and fugitive dust in the Coachella Valley. In developing an air quality management Strategy to meet State and Federal standards on public lands, the BLM took into consideration guidelines, rules and SIP's prepared by the SCAQMD. A description of the BLM air quality management Strategy, and measures embodied in the 2002 CVSIP are provided in Appendix I.

### **3.L. Water Resources**

#### **Climate, Precipitation and Flooding Potential**

The San Bernardino, San Jacinto, and Santa Rosa Mountains effectively isolate the Coachella Valley from moist, cool maritime air masses coming on shore from the west. As a result, the desert portions of the National Monument are characterized by a subtropical desert climate with hot, dry summers and mild winters. Mean annual rainfall is very low on the valley floor, typically ranging from 3 to 6 inches per year. In some years, no measurable rainfall has been reported. Typically, there is little or no streamflow in regional drainages, as climatic and drainage conditions are not conducive to continuous runoff. However, runoff and occasional flooding do occur during and immediately following rainstorms.

The mean annual precipitation on the lower slopes of the San Jacinto Mountains and on the majority of the Santa Rosa Mountains is between 4 to 20 inches, with the majority from rain. The climate is hot and semi-arid to subhumid. Mean annual temperature is about 55° to 70°F, with the number of days of non-freezing weather being about 200 to 275 days. At the highest elevations in the National Monument, nearest to San Jacinto Peak, the climate is temperate to cold, and subhumid; it is affected by elevation much more than by marine influences. The mean annual precipitation is about 16 to 30 inches. It is mostly rain at lower and snow at higher elevations. Mean annual temperature is about 40° to 58°F with the number of non-freezing days ranging from 150 to 225 days. Runoff from the mountain slopes is rapid. The streams are dry through the summer. They drain to the Salton Trough or sink into the ground before reaching the Salton Trough. There are no lakes in the National Monument.

Precipitation generally occurs during winter months, from November through March. However, high-intensity thunderstorms can also occur from mid-summer through early fall. Such storms are capable of generating substantial quantities of rainfall in short periods of time, thereby increasing the risk for flash floods. Flash flooding is generally limited to washes extending from canyons, floodways and floodplains adjacent to rivers and streambeds, and low-lying drainages. However, flooding on alluvial fans can be particularly damaging because floodwaters move at high velocities and spread across wide, unchannelized areas.

Flooding can also result when unusually warm temperatures in early spring cause the snow pack on the San Jacinto Mountains to melt quickly. The water is usually absorbed by porous sands and gravels on the valley floor. However, if surface sediments are already saturated, additional runoff can remain on the surface and result in minor to major flooding.

Historic weather reports indicate that major storm events have occurred in the Coachella Valley. Benchmark storms recorded by the Army Corps of Engineers include the storm of September 24, 1939, which was centered over Indio and generated 6.45 inches of rain in a 6-hour period. Tropical storm Kathleen, which occurred on September 9–11, 1976, generated heavy rainfall in Riverside, San Bernardino, and Imperial Counties. Rain falling in the mountains and hillsides of the Coachella Valley has the potential to cause extensive flooding and property damage down slope.

### **Whitewater River Basin**

The fluvial system of the Coachella Valley consists largely of ephemeral stream channels or washes, which originate in the surrounding mountains and drain into large alluvial fans that spread onto the valley floor. Most runoff is generated within the San Bernardino, Little San Bernardino, and San Jacinto Mountains west and north of the Coachella Valley.

The Whitewater River is the primary drainage facility for the Coachella Valley. It emanates from the San Bernardino Mountains at the northwesterly edge of the Plan Area, flows southeast to La Quinta, northeast to Indio, and drains into the Salton Sea. It extends a total of 70 miles and drains an area containing roughly 400 square miles of valley land and 1,550 square miles of mountains ranges, including the San Bernardino, Little San Bernardino, San Jacinto, and Santa Rosa Mountains. Its tributaries are numerous and include the following: San Gorgonio River, Palm Canyon Creek, Deep Canyon Creek, Palm Valley Channel, Thousand Palms Canyon, West Wide Canyon, East Wide Canyon, Deception Canyon, Edom Hill Creek, Pushwalla Canyon, Snow Creek, Dead Indian Creek, Magnesia Springs, Cathedral Creek, Andreas Creek, Chino Creek, Tahquitz Creek, Bear Creek, and Mission Creek.

Roughly from Windy Point to Indian Avenue, the Whitewater River channel broadens into a low-lying floodplain that measures more than a mile in width. As it nears Cathedral City, the Whitewater River narrows and becomes a partially improved channel known as the Whitewater River Stormwater Channel, which protects urban development from potential flooding. East of Washington Street in La Quinta, the Whitewater River consists of a man-made channel known as the Coachella Valley Stormwater Channel.

### **FEMA Flood Hazard Areas**

The Federal Emergency Management Agency (FEMA) is responsible for the analysis and mapping of areas prone to major flooding in the United States. Within the Coachella Valley, the 100-year floodplain generally occurs on and at the base of washes and alluvial fans, such as Mission Creek and the Morongo Wash in Desert Hot Springs, the Magnesia Springs Canyon alluvial fan in Rancho Mirage, and along Little Morongo, Big Morongo, and Smith Canyon Creeks in the Morongo Valley portion of the Plan Area. It is also contained within man-made channels, such as the Whitewater River/Coachella Valley Stormwater Channel and the La Quinta Evacuation Channel. Areas of 500-year flood inundation typically occur adjacent to the outer edges of the 100-year floodplain.

Higher-elevation hills and mountain slopes are subject to only minimal flooding, as are those portions of the central valley floor, which occur at some distance from canyons and washes.

### **Stormwater Management Responsibilities**

Regional stormwater management in the Riverside County portion of the CDCA planning area is the responsibility of the Coachella Valley Water District (CVWD) and the Riverside County Flood Control and Water Conservation District. The CVWD encompasses nearly 640,000 acres primarily within eastern Riverside County, but also extending into Imperial and San Diego Counties. The Whitewater River/Coachella Valley Stormwater Channel is CVWD's principal stormwater management facility in the Coachella Valley. The Riverside County Flood Control and Water Conservation District has jurisdiction over approximately 2,700 square miles, primarily in western Riverside County, but including the westerly portion of the Coachella Valley and Anza-Borrego area near the Plan Area. It owns and operates 40 dams and several hundred miles of storm drains, channels and levees. Individual cities are responsible for smaller-scale, localized stormwater management issues within their boundaries, including the construction of storm drains on urban streets and site-specific detention/retention basins.

### **Flood Management Improvements**

A wide range of regional flood control improvements, including dams, debris basins, and concrete-lined channels, have been constructed throughout the Coachella Valley in an effort to protect life and property from flooding hazards, particularly the 100-year flood. Smaller-scale improvements have been constructed to protect specific neighborhoods and communities from flood flows and to convey mountain runoff to the Whitewater River.

### **Stormwater Runoff Pollution Control**

Runoff from developed land has the potential to contaminate and introduce pollutants to surface and ground waters. The Federal Clean Water Act of 1972 establishes a strategy to restore and maintain water quality by reducing "point source pollution," including pollutants from industry and sewage treatment facilities. Section 404 of the act grants the U.S. Army Corps of Engineers the authority to evaluate and approve development projects that could potentially impact waters of the United States.

In 1987, amendments to the Clean Water Act shifted the focus of polluted runoff and required states to reduce discharges to the waters of the United States. These amendments required the EPA to formally regulate polluted runoff utilizing a permit system under the National Pollutant Discharge Elimination System (NPDES). The NPDES requires communities to apply for municipal permits to eliminate or control "non-point source pollution." In California, the State is responsible for administering the NPDES permitting program. In the Plan Area, this task is the responsibility of the Colorado River Basin Regional Water Quality Control Board.

The environment of the National Monument is a result of a complex interplay between its geophysical and geographic location. The Coachella Valley portions of the National Monument are part of the Colorado Desert system, and receive between 3 and 6 inches of rainfall annually. At the same time, the Coachella Valley portions of the National Monument hold water captured by the Santa Rosa and San Jacinto mountain ranges. There are various challenges facing the National Monument with regard to water issues, including:

- availability of water sources for bighorn sheep during summer months and the need for artificial watering holes;
- extent and timing of noxious weed removal, especially tamarisk, to protect ground water supplies and bighorn sheep watering holes;
- availability of water sources for both facilities and visitor use within the National Monument as well as for residents within and near the National Monument
- initiating state approved non-point source management measures and helping to achieve Federal standards for water quality as established by the 1997 Clean Water Action Plan.

The venturi effect caused by the meeting of the San Geronio and San Jacinto mountain ranges, brings strong winds to the Coachella Valley. While key to the Coachella Valley's blowsand habitat and a source of renewable wind energy, these winds also bring air pollution from the Los Angeles Basin. Moreover, the blowsand raises particulate matter concerns.

### **Hydrologic Units**

The Plan Area is located within the Colorado River Basin Region. The basin is divided into planning regions. The Salton Sea Planning Area, the Anza-Borrego Planning Area, and the Coachella Valley Planning Area are all within the National Monument Plan Area. The planning areas contain subwatershed basins also called Hydrologic Units. The Salton Sea Planning Area and Hydrologic Units consist entirely of the Salton Sea, which is a saline body of water between the Imperial and Coachella Valleys. The climate is arid and the average precipitation is 2.6 inches. The replenishment is from farm drainage and seepage, as well as significant storm events. A small segment of the Anza-Borrego Planning Area and Hydrologic Units reside within the boundary of the National Monument Plan Area under consideration. The Coachella Valley Planning Area and Hydrologic Units encompass the Coachella Valley watershed proper.

Uses of water that support terrestrial ecosystems, including, but not limited to, the preservation and enhancement of terrestrial habitats, vegetation, wildlife water and food sources, are considered beneficial uses of water by the Water Quality Control Plan. This aspect of the National Monument Management Plan provides an important connection between State water goals and BLM goals for supporting plant and wildlife habitat.

### **Watersheds**

According to the most recent EPA's Index of Watershed Indicators (National Watershed Characterization 1999), the Salton Sea Watershed was rated as the following:

- (1) Watershed with More Serious Water Quality Problems. Watersheds with aquatic conditions well below State or Tribal water quality goals that have serious problems exposed by other indicators, and
- (2) Watershed with Lower Vulnerability to Stressors. Watersheds where data suggest pollutants or other stressors are low, and therefore, there exists a lower potential for future declines in aquatic health. Actions to prevent declines in aquatic conditions in these watersheds are appropriate but at a lower priority than in watersheds with higher vulnerability.

### **Springs**

Springs are also common in the Santa Rosa and San Jacinto Mountains area; some of these are seasonal springs. Springs are vital to wildlife seeking water in the hot summer months.

### **Surface Water**

Surface water is most abundant in rivers and snowmelt coming from the Santa Rosa and San Jacinto Mountains.

### **Groundwater**

Increased urbanization and accompanying recreational water usage in addition to desert agriculture has been reducing the level of the groundwater aquifer. Snowmelt from the San Jacinto Mountains adds to the groundwater.

### **Perennial and Intermittent Streams**

Visible only as dry desert washes for most of the year, “intermittent” streams provide habitat for a number of species. Streams also provide the means for seed dispersal of exotic plants such as tamarisk.

### **Best Management Practices (BPM)**

According to the BMP outlined by the Forest Service, existing and potential non-point potential water pollution sources will be identified and evaluated to determine the need for and type of treatments necessary to maintain water quality. Lands found to be in need of watershed improvement work will be scheduled for treatment as part of the ongoing work/planning/budgeting process.

BMP are designed to synthesize a number of directives into a process to be followed when addressing water quality of management areas. Each BMP consists of (1) objectives, (2) an explanation with general considerations, which are incorporated into the planning process of project design, and (3) implementation guidelines. For example, prior to initiation of road construction activities, a BMP concerning the timing of construction would be implemented to minimize erosion and sedimentation. An additional BMP to control traffic during wet periods would further aid in limiting the potential damage to water quality.

### **3.M. Noise**

Noise has long been accepted as a byproduct of urbanization, but only recently has it received much social attention as a potential environmental hazard. Excessive and/or sustained noise can contribute to both temporary and permanent physical impairments, such as hearing loss and increased fatigue, as well as stress, annoyance, anxiety, and other psychological reactions in humans.

The most common unit used to measure noise levels is the A-weighted decibel (dBA), which is a measurement of the noise energy emitted from a monitored noise source. The A-weighted frequency scale has been adjusted to correlate noise or sound to the hearing range of the human ear, and ranges from 1.0 dBA at the threshold of hearing, to 140 dBA at the threshold of pain.

The existing noise environment in the Plan Area varies depending upon location, but ranges from very quiet in remote, Wilderness areas to moderate on or adjacent to urban lands. The noise environment in the urban area of the Coachella Valley, is consistent with that of a low- to medium-density, suburban community.

### **Motor Vehicle Noise**

Noise monitoring and modeling data conducted within the Plan Area indicate that the primary noise source is motor vehicle traffic on highways and major arterials. The level of noise generated varies with traffic volume, vehicular speed, truck mix, and roadway cross-section and geometric design. Typically, the greater the vehicle speed and truck mix, the greater the level of noise.

Traffic along State Highway 74 and Highway 243, which pass through the Plan Area, generate moderate noise levels during daytime hours, but these levels are expected to drop considerably at night. Most BLM and National Forest lands are remote and distant from major highways and arterials. Occasional noise from motor vehicle traffic may be generated on access roads; however, noise levels are extremely limited due to very low traffic volumes and speeds.

### **Aircraft Noise**

Overflights associated with the Palm Springs Airport generate occasional, but intrusive noise impacts in the Plan Area. However, this facility is not located on or in close proximity to public BLM or National Forest lands, and noise associated with airport operations does not adversely affect BLM or National Forest lands.

### **Stationary Source Noise**

Stationary noise sources in the Plan Area include grading and construction activity, power tools, household appliances, high-level radio and/or television usage, and mechanical equipment, such as heating and air conditioning units. Noise from roof-mounted equipment, such as fans and compressors, which emit a constant hum, can penetrate adjacent property and adversely affect the quality of life in residential neighborhoods. Industrial noise generated at loading and transfer areas, outdoor warehousing operations, and unscreened commercial or industrial activities, can also result in objectionable noise levels.

Outlying, remote BLM and National Forest lands, including large-scale open space and Wilderness areas, is virtually free from stationary noise intrusion. Such areas include undeveloped land in the San Jacinto and Santa Rosa Mountains.

### **Wind Turbine Noise**

Wind Energy Conversion Systems (WECS) have been constructed on BLM-administered land in the western Coachella Valley. These lands are not in but near the National Monument boundary. Wind turbine noise varies based on the turbine model and design specifications, including the age, height, and tower damping features of each turbine. Environmental factors, including intervening terrain, vegetation, wind speed and direction, and distance and elevational offsets between the turbine and the noise receptor also affect ambient noise levels.

Riverside County has adopted a WECS Ordinance (County Municipal Code, Section 17.224.040L) that requires the projected wind turbine noise level at each nearby sensitive receptor (habitable dwelling, hospital, school, library, or nursing home) to be at



or below 55 dBA; this level shall be reduced by 5 dBA where it is projected that pure tone noise will be generated. BLM utilizes the same standard for WECS development occurring on BLM lands.

### **3.N. Fire Management**

Response to wildland fire is based on ecological, social and legal consequences of the fire. The circumstances under which a fire occurs, and the likely consequences on firefighter and public safety and welfare, natural and cultural resources, and other values to be protected dictate the appropriate management response to the fire by BLM and Forest Service.

Based on these factors, the following fire management categories are identified by BLM. Community types and natural communities mentioned are described in Section 3.C. of this chapter and are mapped in Figure 5.

Fire Management Category A. The following communities types are areas where fire would not be desired at all: sand dunes and sand fields. Immediate suppression is a critical element of fire management in these desert environments because fire historically has never played a large role in the development and maintenance of the ecosystem.

Fire Management Category B. The following vegetation communities are areas where wildfire is not desired: (1) desert scrub, (2) desert alkali scrub, (3) marsh, (4) desert dry wash woodland, pinyon-juniper woodland and mesquite, and (5) riparian areas. Immediate suppression is a critical element of fire management in these desert communities because fire historically has never played a large role in the development and maintenance of these communities. Prescribed fire may be utilized as a resource management tool in very select situations, for example to effectively manage exotic vegetation.

Fire Management Category C. The following community types are areas where wildfire may be allowed (including prescribed burning): (1) Oak woodlands and forest communities and (2) chaparral communities. The following constraints must be considered in determining the appropriate level of suppression: (1) emphasize protection of life and property, especially trail users and montane communities, (2) evaluate potential beneficial or adverse effects on threatened and endangered species habitat, especially endemic species, (3) evaluate potential for adverse effects to significant or sensitive cultural and other natural resources, (4) promote mosaic pattern of vegetation resulting from different fire histories within the larger landscape, (5) protect areas so that they do not burn at less than 15 year intervals.

Forest Service fire management guidance through the SBNF LRMP (1989, as amended) outlines the following guidance:

- (1) Implement and maintain a fire protection system that permits the attainment of management objectives.
- (2) Provide a trained fire management organization to implement Safety First standards in the mission of fire suppression.
  - a. Implement and maintain the National Interagency Incident Management System (NIIMS) for National Forest and regional fire

- support through training, physical fitness, and planned firefighting programs.
  - b. Plan and conduct specialized training to implement Regional Plan direction for structural fire protection.
  - c. Provide training for all engine crews to recognize and respond appropriately to the presence of hazardous materials in fire response situations.
- (3) Participate in community and development planning in interface areas to provide input into zoning, Greenbelt standards and fire prevention measures. Use “Foothill Community Protective Greenbelt Program” as a basis for input into development planning.
- (4) Develop and maintain cooperative agreements for fire protection and prevention.

Fuelbreaks are to be maintained only as long as they are needed to support the vegetation management program or to provide protection to natural communities. Fuelbreaks with diminished value to resource and fire management programs will be considered for abandonment. The prescribed fire program responds to multiple resource, fire management, and Wilderness objectives.

Current fire protection responsibility within the bounds of the National Monument is split between several agencies. BLM provides its own fire suppression services on BLM-administered lands and contracts with CDF for fire suppression in mountainous areas. The Riverside County Fire Department operates approximately 22 fire stations in the Coachella Valley and provides fire suppression and prevention, emergency medical response, hazardous materials response, fire investigations, and other related services to most communities in the valley, as well as to Anza-Borrego Desert State Park area, located south and west of the National Monument. The cities of Palm Springs and Cathedral City operate their own municipal fire departments. However, fires occurring within State Response Areas (SRA's), which include large vegetated areas, are the responsibility of the CDF, and fires occurring within the San Bernardino National Forest are the responsibility of the Forest Service.

### **Mountain Area Safety Task Force (MAST)**

Large stands of trees are dying in the San Bernardino and San Jacinto Mountains due to a four-year drought; the worst in recorded history. The drought has significantly stressed the trees, resulting in unusually high colonies of bark beetles and forest pathogens. Idyllwild is one of the communities in the National Forest which are impacted most dramatically. Thousands of homes are at risk to wildfire fueled by the increase in dead trees and dry vegetation. A MAST for Riverside County has been formed to address the issue on a multi-agency level. All public safety and land management agencies within the San Jacinto and San Bernardino Mountains are involved in managing this disaster. The MAST is now operating in an incident mode using the Incident Command System as an operating infrastructure.

## **3.O. Transportation and Motorized-Vehicle Access**

### **3.O.1. Transportation**

Many BLM and National Forest lands in the National Monument are remote, undeveloped, and inaccessible by motor vehicles. Other Federal lands are accessible to OHV and recreational vehicles; routes on these lands are designated through the BLM and Forest Service Motorized-Vehicle Route Designation processes (see Section 3.O. in

this chapter). Certain routes are available only to authorized users for specific activities (e.g., rights-of-way issued for development of communication sites or wind energy facilities).

Some BLM and National Forest lands in the National Monument are traversed or accessed via major highways that provide for the continuous transport of persons and goods. Caltrans has maintenance responsibility for the major roadways. The following briefly describes major roadways that pass through or near the National Monument:

Interstate Highway 10. The Coachella Valley is bisected by Interstate Highway 10 (I-10), which connects the valley with the Los Angeles, Riverside, and San Bernardino metropolitan areas to the west and the Phoenix region to the east. The I-10 is a critical component of the regional road network and provides intra-regional and inter-city access within the Coachella Valley. It consists of a divided freeway accessed from diamond-shaped interchanges spaced a minimum of one mile apart.

State Highway 111. State Highway 111 is an intra-valley roadway, which connects the Coachella Valley with communities of the Imperial Valley to the southeast. In the vicinity of its westerly terminus at I-10 in the San Geronio Pass, Highway 111 forms the boundary of the National Monument.

State Highway 74. State Highway 74 connects the Coachella Valley with communities in southwestern Riverside County and northern San Diego County. It extends south from State Highway 111 in the City of Palm Desert, into the rocky terrain of the Santa Rosa Mountains, through lands recently designated as critical habitat for the Peninsular Ranges bighorn sheep by the USFWS. It proceeds west, then northwest, into the San Bernardino National Forest, to the mountain community of Mountain Center and the Hemet Valley. BLM lands within the National Monument that are crossed or bordered by Highway 74 include holdings in Dead Indian, Grapevine and Carrizo Canyons, extending from the toe of the mountain into elevated terrain. Highway 74 from Palm Desert to Mountain Center, in conjunction with Highway 243 from Mountain Center to Banning, has been designated as the “Palms to Pines National Scenic Byway.”

State Highway 243. State Highway 243 connects the I-10 and State Highway 74, and extends from Banning to Mountain Center. This scenic highway passes through the communities of Idyllwild and Pine Cove. No part of the highway is located within the National Monument boundary, but it does pass through the San Bernardino National Forest.

State Highway 371. State Highway 371, in connecting State Highways 74 and 79, passes through the community of Anza. It comprises one of the primary routes for travelers to the Palm Desert area from San Diego. No part of the highway is located within the National Monument, but it does pass through the San Bernardino National Forest.

### **3.O.2. Route Designation**

BLM

BLM completed the route designation process for motorized-vehicle access through the CDCA Plan Amendment for the Coachella Valley in 2002. Route designations of “open” and “closed” apply only to BLM-managed lands; applicable routes are shown in Table 3-11 below. Routes available for general public use on BLM lands in the National Monument total about two miles; these are available for use by any motorized vehicle, whether licensed or not (though unlicensed vehicles require a State-issued “green sticker” permit). Maintenance levels have not been established for these routes. Closed routes may be used for administrative and emergency purposes only.

The CDCA defined route designations in the following manner:

Open Route. Access on the route by motorized vehicles is allowed.

Limited Route. Access on the route by motorized vehicles is limited in one or more of the following ways: (1) number of vehicles allowed, (2) types of vehicles allowed, (3) time or season of vehicle use, (4) permitted or licensed vehicle use only, and (5) establishment of speed limits. *The same exceptions to motorized-vehicle use of closed routes also apply to limited routes.*

Closed Route. Access on the route by motorized vehicles is prohibited except for: (1) fire, military, emergency or law enforcement vehicles when used for emergency purposes, (2) combat or combat support vehicles when used for national defense purposes, (3) vehicles whose use is expressly authorized by an agency head under a permit, lease, or contract, and (4) vehicles used for official purposes by employees, agents, or designated representatives of the Federal Government or one of its contractors.

Except in Congressionally-designated Wilderness areas, “open,” “limited,” and “closed” route designations may be made in each of the Multiple-Use Classes, in ACECs, and in unclassified lands. Designated Wilderness (wherein motorized-vehicle access is generally prohibited), mixed land ownership patterns, and rugged topography have limited the extent of vehicle routes on BLM lands. Lands suitable for the development of additional routes are limited. The designation of areas as “open,” “limited,” and “closed” for off-highway vehicle access was also addressed through the CDCA Plan Amendment for the Coachella Valley (2002). For a discussion of these designations, see Section 3.E.13. in this chapter.

**Table 3-11. Route Designations for Routes on BLM Lands in the National Monument**

Route Number	General Location	U.S.G.S. Quad Name	Miles on BLM Lands	Miles Designated as Open	Miles Designated as Closed
<b>Snow Creek/Windy Point Area</b>					
CV020	Snow Creek	White Water	<0.1	--	<0.1
CV021	Snow Creek	White Water	0.4	--	0.4
CV022	Snow Creek	White Water	0.3	0.3	--
CV023	Snow Creek	White Water	0.1	0.1	--
CV024	Snow Creek	White Water	0.4	--	0.4

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Route Number	General Location	U.S.G.S. Quad Name	Miles on BLM Lands	Miles Designated as Open	Miles Designated as Closed
CV025	Snow Creek	White Water	0.6	0.6	--
CV026	Snow Creek	White Water	1.0	--	1.0
CV027	Snow Creek	White Water	1.1	--	1.1
CV028	Snow Creek	White Water	0.6	--	0.6
Subtotal			4.6	1.0	3.6
<b>Dunn Road and Tributary Routes</b>					
CV055 Dunn Road	Cathedral City Cove	Cathedral City	1.1	--	1.1
CV055 Dunn Road	Haystack Mountain	Rancho Mirage	6.3	--	6.3
CV056	Cathedral City Cove	Cathedral City	1.0	--	1.0
CV077	Dry Wash	Palm View Peak	0.7	--	0.7
CV077	Dry Wash	Rancho Mirage	1.4	--	1.4
CV078	Palm Canyon	Palm View Peak	0.8	--	0.8
CV079	Palm Canyon	Palm View Peak	1.2	--	1.2
CV080	Dry Wash	Rancho Mirage	2.0	--	2.0
CV081	Dry Wash	Rancho Mirage	0.5	--	0.5
CV082	Potrero Spring	Rancho Mirage	1.0	--	1.0
Subtotal			16.0	0	16.0
<b>Other Routes</b>					
CV083	Highway 74	Rancho Mirage	0.1	--	0.1
CV084	Highway 74	Rancho Mirage	0.3	--	0.3
CV085	La Quinta Cove	La Quinta	0.3	--	0.3
CV086	Lake Cahuilla	La Quinta	0.3	--	0.3
CV088	Highway 74	Rancho Mirage	0.1	--	0.1
CV088	Highway 74	Toro Peak	0.2	--	0.2
CV089	Highway 74	Toro Peak	0.5	--	0.5
CV093	Martinez Canyon	Valerie	1.1	1.1	--
Subtotal			2.9	1.1	1.8
<b>Total</b>			<b>23.5</b>	<b>2.1</b>	<b>21.4</b>

**Forest Service**

Roads on National Forest lands may be recommended for designation as classified roads (added to the Transportation System) in the Forest Plan Revision process, or recommended for removal as a classified road. Both recommendations would be subject to a site-specific environmental analysis in the future. Site-specific road determinations will not be made in the Forest Plan Revision process.

The Forest Service Transportation Management System basically determines Operational and Management requirements based on protection of adjacent resources, user safety and comfort, acceptability or non-acceptability of dust, season of use, and volume of traffic. An interdisciplinary process is used to determine what level of road maintenance best meets the above criteria.

Level 1 roads are closed to all motorized traffic, receive custodial maintenance to perpetuate the road, and are subject to future use such as for periodic timber sales.

Level 2 roads generally have a native surface and are maintained for high clearance vehicles, such as pickups and sport utility vehicles. The operational strategy is to discourage travel by passenger cars. A Level 2 road may support 2-wheel drive or 4-wheel drive.

Level 3 roads are generally native surface, or surfaced with aggregate and are maintained for a prudent driver in a standard passenger car. The operational strategy is to encourage or accept passenger car traffic.

Level 4 roads are open for passenger cars and have dust abatement. The operational strategy for Level 4 roads is to encourage traffic.

Level 5 roads are generally double lane, paved roads. The operational strategy for Level 5 roads is to encourage traffic.

**Table 3-12. Forest Service Open Routes in the National Monument**

Road Number	Road Name	Maintenance Level	Overall Length	Length within National Monument
4S01	Black Mountain (partial)	2	9.7	3.0
4S01E	E Spur (partial)	2	0.4	0.3
7S02	Santa Rosa (partial)	2	12.9	3.5
7S02C	Stump Spring	2	0.4	0.4
7S05	Sawmill	2	5.3	5.3
7S05A	A Spur	2	0.4	0.4
7S05B	Cactus Spring	2	0.8	0.8
7S05C	Deep Canyon	2	0.4	0.4
7S05D	D Spur	2	0.6	0.6
7S08	Pinyon Flat Campground	3	0.7	0.7
7S11	Cahuilla Tewanet	5	0.2	0.2

Road Number	Road Name	Maintenance Level	Overall Length	Length within National Monument
7S14	Ribbonwood	3	0.3	0.3
7S14A	Ribbonwood Equestrian Campgrounds	3	0.2	0.2
7S15	Sawmill Trailhead	5	0.2	0.2
<b>Total</b>			<b>32.5</b>	<b>16.2</b>

Roads assigned maintenance Levels 3 through 5 are subject to the Highway Safety Act of 1966 (Public Law 89-564). Level 2 roads are generally maintained on a 3-year rotation, but maintenance schedules are determined by deterioration caused by weather and use. Level 3 roads are generally maintained on an annual basis, and again, are dependent upon deterioration caused by weather and use. Level 5 roads are maintained on an annual basis, as needed.

Because the four southern California forests are in the process of completing a Forest Plan Revision, decisions regarding roads are subject to a Road Analysis Process, to determine which Level 3 through 5 roads will be recommended for reconstruction or removal from the Transportation System, subject to a site-specific environmental analysis in the future. Level 2 roads will not be analyzed in the Forest Plan Revision process.

### **3.O.3. Dunn Road**

Dunn Road in the Santa Rosa Mountains was established by trespass in 1966. The status of the road was settled in 1975 in U.S. District Court by placing specific requirements on American Land Company (defendant) to limit and control access to the road. Use of the road has been controlled by a locked gate since that time. In 1997, BLM acquired the parcel in Cathedral City Cove, which includes the northern gate controlling access to Dunn Road. In August 2000, BLM completed a temporary closure on Dunn Road maintaining the controlled access provided by the locked gate pending a decision in the CDCA Plan Amendment; which in 2002, designated the route “closed.”. Dunn Road also crosses private land, and landowners have at times denied access across their property to permitted public land users. Vehicle use of public land portions of Dunn Road is also related to use of tributary routes such as the Dry Wash Route, an access route from Royal Carrizo, and short spur routes along the road.

Dunn Road is used for multiple purposes. It serves as an important fire control access for BLM, Forest Service, CDF, and the City of Palm Springs; law enforcement and land use compliance assessments by BLM, Forest Service, Riverside County, and the City of Palm Springs; search and rescue use by ACBCI, BLM, Forest Service, and Riverside County; and administrative use for land management projects such as tamarisk control, cultural survey or monitoring by ACBCI, BLM, Forest Service, CDFG, and private landowners. Although these administrative uses are very important, they result in fairly low vehicle use levels, historically averaging less than five visits per month, except when a project or fire is ongoing.

Recreation use has accounted for most of the historic use of Dunn Road. Commercial jeep touring was once a permitted use, allowing a public access option to the area for

those who did not hike, ride horses, or ride mountain bikes. Jeep tours were a permitted use from 1989 to June 2001 when lawsuit requirements and denial of access by a private landowner eliminated the use. Between September 1995 and June 1999, the permittee conducted tours for more than 42,000 customers. Most tours occurred from January to June (69%), no tours were conducted in July and August, and the remaining tours were from September to December (31%).

Currently, two right-of-way applications are in process for Dunn Road. Both are from public agencies for the purposes of obtaining legal access to support flood control and administrative uses of the road.

#### **3.O.4. Private Land Access**

Motorized-vehicle access to private lands across Federal lands is secured through rights-of-way grants. Temporary access may be provided on routes designated “closed” through authorizations on a case-by-case basis.

#### **3.O.5. Revised Statute 2477 Rights-of-Way**

##### **BLM**

Revised Statute 2477 (R.S. 2477) was passed by Congress as Section 8 of the Mining Act of 1866, which established the first system for patenting lode-mining claims and provided for access. R.S. 2477 stated “the right-of-way for the construction of highways over public lands, not reserved for public uses, is hereby granted.” It was repealed when the FLPMA was enacted on October 21, 1976. However, FLPMA did not terminate any existing rights-of-way granted under R.S. 2477.

There are often questions about what was offered under R.S. 2477, to whom, and how the rights-of-way were to be perfected. These questions have not been answered in a clear and consistent manner either locally or nationally. Many routes across public land came into existence with no documentation of the public land records. Routes across public land constructed after 1866, but before withdrawal, patent, mining claim, or reservation for a specific purpose, and before the passage of FLPMA may be R.S. 2477 rights-of-way.

In an attempt to clear up these ambiguities, Congress directed the Department of the Interior to study the history, impacts and status of, and alternatives to, R.S. 2477 rights-of-way and to make recommendations for processing claims (assertions). This process began in November 1992. Public meetings were held to assist in preparing a report that was submitted to Congress in May 1993. The report stated that, until completion of the report, the Department of the Interior “...deferred processing pending claims unless there is an immediate and compelling need to recognize or deny any claims.”

The BLM was directed to prepare regulations to guide the process of reviewing R.S. 2477 claims. Draft regulations were published in 1994. Three terms are important in determining which roads are R.S. 2477 rights-of-way: (1) “construction,” (2) “highways,” and (3) “not reserved for public uses.” The terms “construction” and “highways” are the most controversial provisions of R.S. 2477 and the regulations. On November 19, 1995, Congress approved a moratorium on the regulations. Because there are no final regulations that provide criteria for processing claims under R.S. 2477, the policy of deferring the processing of claims unless there is a compelling need remains in place.



The route network identified under the CDCA Plan Amendment was developed through a route designation process that considered resource management issues and regulatory and statutory closures (such as in designated Wilderness). This process did not make any determinations under R.S. 2477. Designations of “closed” do not constitute determinations that R.S. 2477 rights-of-way do not exist. Such closures do not extinguish any R.S. 2477 rights-of-way that may exist. Conversely, a route designated as “open” does not mean that the route has been determined to be an R.S. 2477 right-of-way.

### **Forest Service**

R.S. 2477 is only an issue on National Forest lands if (1) a public way was constructed across the public domain before the land was reserved as National Forest, which in the case of the San Bernardino National Forest was 1896; (2) some form of “construction” on the road has occurred; and (3) the way so constructed was used as a public highway.

### **3.P. Special Uses**

Special uses that require authorization through permits or grants include recreational uses, rights-of-way for utility and services development, leases, easements and other uses of BLM and National Forest lands that are not authorized through other means. The following describes the permit/grant process for some special uses; it is not meant to be a comprehensive listing.

#### **3.P.1. Special Use Permits for Recreation**

Special use permits are required for certain recreational activities in the National Monument. These are described below:

#### **BLM**

In accordance with Title 43 of the Code of Federal Regulations, Subpart 2932.11, Special Recreation Permits may be required for the following uses: (1) recreational use of special areas; (2) noncommercial, noncompetitive, organized group activities or events; or (3) academic, educational, scientific, or research uses that involve (a) means of access or activities normally associated with recreation; (b) use of areas where recreation use is allocated; or (c) use of special areas. Determinations regarding such requirements will be made through the pending trails management plan.

Organized group activity means a structured, ordered, consolidated, or scheduled event on, or occupation of, public lands for the purpose of recreational use that is not commercial or competitive. Special area means (a) an area officially designated by statute, or by Presidential or Secretarial order; (b) an area for which BLM determines that the resources require special management and control measures for their protection; or (c) an area covered by joint agreement between BLM and a State under Title II of the Sikes Act (16 U.S.C. 670(a) *et seq.*).

#### **Forest Service**

Currently, permits are not required for casual (noncommercial, noncompetitive) recreation on National Forest lands outside designated Wilderness, except for use of developed campgrounds (e.g., Pinyon Flat and Ribbonwood Equestrian Campgrounds) and parking where an Adventure Pass is required (see Section 3.E.12. in this chapter).

#### **Commercial and Competitive Recreational Activities**

Commercial and competitive recreational activities on Federal lands within the National Monument, including vending associated with such uses, require a permit. BLM and Forest Service have different application procedures addressing such uses. Processing of applications for these uses can take several months, depending on the proposed activity and potential impacts to resource values, e.g., impacts to Peninsular Ranges bighorn sheep from jeep tours.

Commercial use means recreational use of the public lands for business or financial gain. The activity, service, or use is commercial if (1) any person or organization makes or attempts to make a profit, receives money, amortizes equipment, or obtains foods or services, as compensation from participants in recreational activities occurring on public lands led, sponsored, or organized by that person, group, or organization; (2) anyone collects a fee or receives other compensation that is not strictly a sharing of actual expenses, or exceeds actual expenses, incurred for the purposes of the activity, service, or use; (3) there is paid public advertising to seek participants; or (4) participants pay for a duty of care or an expectation of safety. Profit-making organizations and organizations seeking to make a profit are automatically classified as commercial, even if that part of their activity covered by the permit is not profit-making or the business as a whole is not profitable. Use of the public lands by scientific, educational, and therapeutic institutions or nonprofit organizations is commercial and subject to a permit requirement when it meets any of the threshold criteria described above. The nonprofit status of any group or organization does not alone determine that an event or activity arranged by such a group or organization is noncommercial.

Vending means the sale of goods or services, not from a permanent structure, associated with recreation on the public lands such as food, beverages, clothing, firewood, souvenirs, photographs or film (video or still), or equipment repairs.

Competitive use means (a) any organized, sanctioned, or structured use, event, or activity on public land in which two or more contestants compete and either or both of the following elements apply: (i) participants register, enter, or complete an application for the event, or (ii) a predetermined course or area is designated; or (b) one or more individuals contesting an established record such as for speed or endurance.

### **3.P.2. Utilities and Rights-of-Way**

No utility corridors have been identified within the National Forest lands or BLM portions of the National Monument. Existing rights-of-way include a 500 KV electricity line with fiber optics attached within the San Jacinto Wilderness, a 33 KV powerline to the community of Pinyon with telephone line attached, several roads, including Highway 74, Desert Water Agency and Pinyon Water Agency storage tanks and development, Riverside County solid waste transfer site, and several weather-related sampling units.

Applications for new rights-of-way within the National Monument for the purposes of utility development and communication site development are addressed on a case-by-case basis. Impacts to the resources that the National Monument was established to protect are analyzed according to NEPA upon receipt of an application for a right-of-way. Impacts to visual resources are included in such analysis, with BLM's VRM Class Objectives and Forest Service's SMS levels providing guidance. Introduced changes to visual elements of the characteristic landscape of the National Monument are avoided when alternative areas exist.

### **3.Q. Land Ownership and Acquisition from Willing Sellers**

Any land or interest in lands within the boundaries of the National Monument that is acquired shall be added to and administered as part of the National Monument as provided in Section 3(b) of the National Monument Act of 2000.

While the BLM and Forest Service each have policy and guidance concerning acquisitions (listed below), the Conservancy, a State agency, has been instrumental in the acquisition of land within the National Monument. It was created by the State of California to acquire and protect lands in the Coachella Valley, including the National Monument. The Conservancy's Governing Board includes a representative of BLM, Forest Service, WCB, CDFG, ACBCI, the County of Riverside, and each of the cities with land under its jurisdiction in the National Monument. The Board's composition has enabled the Conservancy to facilitate and coordinate acquisitions by these various agencies. Each agency has its own funding sources and acquisition programs, but these have been effectively coordinated through the Conservancy, which does a significant amount of the initial landowner contacts that result in acquisitions by other agencies or nonprofit organizations. In the case of large acquisition projects, several agencies may each fund a portion of the acquisition.

#### **BLM and Forest Service Acquisition Policies**

The BLM and Forest Service each have existing acquisitions policies. These are described below:

It is the policy of the BLM to:

- A. Acquire land and/or interests in land needed to implement land use plans and to manage, protect, develop, maintain, and use resources on public land and further provide access for public use and enjoyment of such lands (as exemplified by perpetual access to lands having outstanding recreational value); provided such acquisitions are within the limitations of applicable authorities and available funds and are in conformity with land use plans that apply to the area involved.
- B. Acquire land and/or interests in land necessary for effective program operation. Before acquisitions, BLM must determine whether requirements may be met by improved utilization of present holdings; whether other suitable existing Federal holdings are available, including possible joint-use agreements; or whether requirements may be met by obtaining excess property from other agencies.
- C. Accept donations of land or interests in land which implement land-use planning goals and will help consolidate and facilitate the management, use, and protection of the public lands and its resources.
- D. Only perpetual interests may be acquired when using the Federal portion of the Land and Water Conservation Fund (LWCF). Land and/or interests in land acquired where any portion of the consideration is derived from the LWCF shall remain in Federal ownership and shall not be disposed of by any means, including exchange, Recreation and Public Purpose lease/patent, or sale.

The National Monument Act of 2000 does provide for exchanges of Federal lands acquired using LWCF but only with the ACBCI and then only in a limited geographic area within the National Monument itself.

Authority for the BLM acquisition program is derived from the following sources and are applicable to all BLM-administered public lands (This is only a partial listing since many cited authorities do not involve BLM acquisitions in the National Monument):

- (1) The Federal Land Policy and Management Act (FLPMA) of October 21, 1976, as amended (P.L. 94-579), (43U.S.C. Secs. 1715, 1737, 1748, and 1762). FLPMA is BLM's basic acquisition authority. Sections of this act are pertinent to the acquisition of lands or interests in lands and the acceptance of donated property.
  - A. Section 205 (43 U.S.C. Sec. 1715) provides the BLM with the basic authority to acquire land or interests therein where such acquisitions are consistent with the Departmental mission and with applicable land use plans. The power of eminent domain is limited to certain specified situations in the acquisition of land:
    - "(a) Notwithstanding any other provisions of law, the Secretary, with respect to the public lands and the Secretary of Agriculture, with respect to the access over non-Federal lands to units of the National Forest System, are authorized to acquire pursuant to this act by purchase, exchange, donation, or eminent domain, lands or interests therein. Provided, that with respect to the public lands, the Secretary may exercise the power of eminent domain only if necessary to secure access to public lands and then only if the lands so acquired are confined to as narrow a corridor as is necessary to serve such purpose..."
    - "(b) Acquisitions pursuant to this section shall be consistent with the mission of the department involved and with applicable departmental land-use plans."
- (2) Land and Water Conservation Fund Act (LWCF) of 1965 (September 3, 1964), as amended (P.L. 88-578), (16 U.S.C. Sec. 460, et seq.), (78 Stat. 897). The LWCF Act is a funding source for the acquisition of land and interests in land. LWCF funds cannot be used before a project is approved and funds appropriated by Congress.
- (3) Specific Geographic Area Authorities. These authorities are applicable to BLM-administered lands located in specific geographical areas and located within specific designated areas. In addition to granting acquisition authority, many of these acts also establish specific limitations and guidelines to be followed.
- (4) Wilderness Act of September 3, 1964 (P.L. 88-577), (78 Stat. 890), (16 U.S.C. Sec. 1131, et seq.). This law established the National Wilderness Preservation System. Section 603(c) of FLPMA (43 U.S.C. Sec. 1782) provides that once an area has been designated for preservation as Wilderness, the provisions of the Wilderness Act, which apply to National Forest Wilderness areas, shall apply with respect to the use and administration of BLM-designated areas.

The Secretary of the Interior is directed by Section 702 of the CDPA: " In preparing land tenure adjustment decisions.... the Secretary shall give priority to consolidating Federal ownership within the National Park units and Wilderness areas designated by this Act."

It is the policy of the Forest Service to:

- A. Give priority to consolidation of National Forest System lands within existing National Forest units.
- B. Acquire rights-of-way needed to ensure optimum protection and use of National Forest resources.
- C. Complete land-for-land exchanges to consolidate National Forest System lands and private, State, or local government land patterns, or to make other adjustments in landownership that the Forest Service deems to be in the public interest.
- D. Transfer and interchange land with other agencies to consolidate National Forest System lands, to clarify and reduce the cost of administration and protection, and to improve resource conservation production and utilization.
- E. Give priority to processing of land purchases and donations that are identified in approved National Forest lands and resource management plans or landownership adjustment plans.
- F. Encourage donations of land to consolidate National Forest System lands, to improve resource conservation, and to obtain land needed for administrative or research purposes.

Authority for the Forest Service acquisition program is derived from the following sources and are applicable to all National Forest System lands:

- (1) Act of August 3, 1956 (79 Stat. 1034). Section 11(a) of this law provides that the Department of Agriculture can purchase land or interests therein, as necessary, to carry out its authorized work.
- (2) Receipts Acts. Act of June 15, 1938 (52 Stat. 699), as amended by act of May 26, 1944 (58 Stat. 227). Provides for the purchase of lands within San Bernardino and Cleveland National Forests in Riverside County, California.
- (3) Land and Water Conservation Fund Act (LWCF) of September 3, 1964 (78 Stat. 897, as amended). The LWCF is primarily a funding authority for land acquisition. Purchases using funds appropriated under this act must be primarily of value for outdoor recreational purposes or to conserve habitat for fish, wildlife, and plants, including those listed as endangered or threatened species.
- (4) Wilderness Act of September 3, 1964 (78 Stat. 896), (16 U.S.C. 1134). This act authorizes the Secretary of Agriculture to acquire privately owned lands within the perimeter of any area designated as Wilderness.

Authority for the Forest Service regarding land donations:

- (1) Act of March 3, 1925 (43 Stat. 1133, as amended). Section 5 of this act authorizes the Secretary of Agriculture to accept donations of land for any National Forest or experimental purpose. Lands may be acquired inside or outside National Forests, as necessary for the intended use of the site.
- (2) Act of August 3, 1956 (70 Stat. 1034). Section 11 of this act provides for the acquisition of land, or interest therein, by purchase, exchange, or otherwise, as may be necessary to carry out the Department's authorized work.
- (3) Act of October 10, 1978 (92 Stat. 1065). This law provides authority to the Secretary of Agriculture, on behalf of the United States, to accept, receive, hold, utilize, and administer bequests or devises of real and personal property made for the benefit of the Department of Agriculture or for the accomplishment of any of its functions.

Authority for the Forest Service regarding land exchanges:

- (1) General Exchange Act of March 20, 1922 (42 Stat. 465, as amended), (16 U.S.C. 485, 486). This act authorizes the exchange of land or timber that was reserved from the public domain for National Forest System purposes.
- (2) Weeks Act of March 1, 1911 (36 Stat. 961 as amended), (16 U.S.C. 516). This act authorizes the exchange of National Forest System land or timber that has Weeks Law (acquired land) status.
- (3) Forest Service Omnibus Act of October 23, 1962 (76 Stat. 1157), (16 U.S.C. 555a). This act authorizes the exchange of National Forest System lands having acquired status when no other exchange authority applies to the disposal of those specific lands.
- (4) Federal Land Policy and Management Act (FLPMA) of October 21, 1976 (90 Stat. 2755 as amended), (43 U.S.C. 1701, 1715, 1716, 1717). This act supplements all earlier exchange authorities except the Sisk Act of December 4, 1967 (16 U.S.C. 484a).
- (5) Department of Agriculture Organic Act of August 3, 1956 (70 Stat. 1032), (7 U.S.C. 428a(a)). There must be authorization language in the annual Appropriation Act for Interior and Related Agencies in order to use this authority.
- (6) Wilderness Act of September 3, 1964 (78 Stat. 896), (16 U.S.C. 1134). This act authorizes the acquisition of non-Federal land and interests in Wilderness areas in exchange for Federal land in the same State.

### **Land Exchanges**

Currently there are two exchanges being processed; one is with the ACBCI, and the other is with UCR under the UC Reserve System. No other land is currently available for exchange within the National Monument. The following describes lands involved in the exchanges:

#### **ACBCI Exchange**

Parcels of BLM lands identified for exchange with the ACBCI include portions of the Skyline, Garstin, Shannon, Berns and Wild Horse Trails. These trails receive substantial recreational use by hikers and horseback riders, as indicated by use levels observed by BLM employees from January 2001 to April 2002 in the Murray Hill complex of trails (223 users observed on the Clara Burgess Trail during 254 hours of monitoring; BLM 2002). Given that the Clara Burgess Trail is more remote than other trails in the Murray Hill area, use of the Garstin, Shannon, Berns and Wild Horse Trails can reasonably be expected to be greater. Recreational access to these trails would be governed in accordance with Tribal decisions. Impacts to recreation would be contingent on the extent of restrictions, if any, that may be imposed. Impacts to recreation from management prescriptions applicable to the acquired parcels will be determined through the pending trails management plan.

The following Federal lands within the National Monument have been identified for exchange with the ACBCI:

- T.4S., R.4E.:
  - section 16 (all)
  - section 17, W1/2NW1/4NE1/4, W1/2E1/2NW1/4NE1/4
  - section 18, W1/2NE1/4, N1/2NE1/4SW1/4, S1/2 of Lot1, N1/2 of lot2
  - section 36, lots 1-4, W1/2NE1/4, W1/2SE1/4, E1/2SW1/4, SE1/4NW1/4, N1/2SW1/4SW1/4, E1/2NW1/4SW1/4, SW1/4NW1/4SW1/4, S1/2NW1/4NW1/4SW1/4
- T.5S., R.4E.:
  - section 5, lots 1-4, S1/2NE1/4, S1/2NW1/4, S1/2
  - sections 16, 21, 27, & 29, 32, & 36 (all)

In exchange, the following ACBCI lands are proposed for transfer to the United States.

- T.5S., R..5E.:
  - sections 7 and 19 (all)
  - section 20, W1/2W1/2

#### UCR Exchange

The parcel of BLM lands identified for exchange with the UC Reserve System does not include portions of any recognized trails; current use of this parcel for recreational purposes is not known, but is anticipated to be low given its remoteness and the rugged nature of the terrain. Hence, impacts to recreation from disposal of the parcel would be minor. Impacts to recreation from management prescriptions applicable to the acquired parcels will be determined through the pending trails management plan.

The following Federal lands within the National Monument have been identified for exchange with UCR:

- T.6S., R..6E.:
  - section 22 (all)

In exchange, the following UCR lands are proposed for transfer to the United States.

- T.6S., R..6E.:
  - section 27 (all)

#### Potential Funding Sources for Acquisition

The following is a partial list of funding sources for the acquisition of lands within the National Monument.

- Federal Sources
  - LWCF (BLM and Forest Service)
  - Receipts Act (Forest Service)
  - Land exchanges with ACBCI
- Tribal Sources
  - ACBCI
- State Sources
  - Proposition 12 bond funds
  - Proposition 40 bond funds
  - Proposition 51 (pending)
  - General fund appropriations (when available)

- Habitat Conservation Fund grant program
- Local Sources
  - County of Riverside
  - Cathedral City
  - The city of Indian Wells
  - The city of La Quinta
  - The city of Palm Desert
  - The city of Palm Springs
  - The city of Rancho Mirage
- Non Profit Sources
  - American Land Conservancy
  - Native American Land Conservancy
  - Friends of the Desert Mountains

**3.R. Socio-Economic Considerations**

**3.R.1. Regional Economy and Demographics**

The following section describes the demographics of the areas surrounding the National Monument. These areas include the cities and unincorporated Riverside County lands in the Coachella Valley, the unincorporated mountain communities of Anza, Idyllwild, and Mountain Center, and the desert pass communities of Cabazon, Beaumont and Banning. All these communities have been included in the analysis because of their proximity to the Plan Area, their potential location as “gateways” to the National Monument, and the potential for their being impacted by the National Monument Management Plan.

**Population and Demography of the Region**

Population. Population growth surrounding the National Monument has varied depending on the area. In the Coachella Valley, growth has been very rapid, as the Valley’s cities have attracted a more diverse and year-round population. In the mountain communities, on the other hand, the perceived limitations of access, job opportunities and water availability have resulted in considerably less significant growth. As described in the Table 3-13 below, the incorporated and unincorporated Coachella Valley area population grew approximately 86% during the 1980s, from 104,549 to 194,718. During the 1990s, this population grew to 274,470, which represents a 10-year gain of 79,752, or 41%. In the mountain communities from 1990 to 2000, the population increased only 16%, demonstrating the differing population pressures of the two areas. Altogether, the population of the region in 2000 was estimated at 320,522 persons.

**Table 3-13. Population Trends for the Coachella Valley Region**

City/Community	Population		
	1980	1990	2000
<b>Incorporated Coachella Valley</b>			
Cathedral City <sup>1</sup>	9,500	30,085	42,647
Coachella	9,129	16,896	22,724
Desert Hot Springs	5,941	11,668	16,582



City/Community	Population		
	1980	1990	2000
Indian Wells	1,394	2,647	3,816
Indio	21,611	36,793	49,116
La Quinta	3,328	11,215	23,694
Palm Desert	11,081	23,252	41,155
Palm Springs	32,359	40,181	42,807
Rancho Mirage	6,281	9,778	13,249
<b>Unincorporated Coachella Valley</b>			
Bermuda Dunes	N/A <sup>2</sup>	4,571	6,229
Mecca	N/A <sup>2</sup>	1,966	5,402
Morongo Valley	1,193	1,544	1,929
Thousand Palms	2,732	4,122	5,120
<b>Mountain Communities</b>			
Anza	1,057	1,860	3,773
Idyllwild	3,123	3,975	3,635
Mountain Center	1,228	1,896	1,553
<b>Desert Pass Communities</b>			
Banning	14,951	20,570	23,443
Beaumont	12,322	9,685	11,315
Cabazon	1,521	1,588	2,333

<sup>1</sup> Cathedral City was not incorporated until 1981.

<sup>2</sup> Data not tabulated in 1980.

Source: U.S. Census Bureau (Census 1980, 1990, 2000)

The Coachella Valley population is expected to continue to grow rapidly over the next two decades. The Southern California Association of Governments (SCAG) forecasts that the population will reach approximately 440,301 by year 2010, and 540,901 by year 2020. Given their historic rate of growth, Terra Nova Planning and Research has estimated a 15.9% and 12% decennial growth rate for the mountain and desert pass communities, respectively. Thus, the mountain communities can be expected to grow to 10,386 by 2010, and 12,037 by 2020, and the desert pass communities to 41,542 by 2010, and 46,527 by 2020.

**Median Age.** According to the 2000 U.S. Census, the median age of residents living in the region ranged from a low of 22.6 in Mecca, to a high of 63.4 in Indian Wells. This wide range of ages is representative of the region's diverse population, which includes students, young families, middle-aged professionals, retirees and seniors. In the mountain communities, the median age range was much less varied, standing at 42.3 in Anza, 46.5 in Idyllwild, and 45.9 in Mountain Center. Finally, in the desert pass communities, Banning has a median age of 40.1 years, Beaumont 31.1 years, and Cabazon 35.6 years.

**Race and Ethnicity.** The region is primarily Caucasian, with approximately 68.8% of residents classifying themselves as "white." However, nearly half (44.5%) of the population in the Coachella Valley identified itself as Hispanic or Latino, of any race, while only 12.6% of the mountain communities' population identified themselves as Hispanic or Latino, and 31.3% of the residents of the desert pass communities identified themselves as Hispanic or Latino. Table 3-14 below describes the region's racial/ethnic composition, according to the 2000 U.S. Census.

**Table 3-14. Ethnicity in the Coachella Valley Region**

Race	Population	
	Total Number	Percent
White	220,674	68.8%
Black or African American	8,725	2.7%
American Indian/Native Alaskan	3,928	1.2%
Asian	7,531	2.3%
Native Hawaiian/Pacific Islander	283	0.09%
Some Other Race	67,969	21.2%
Two or More Races	11,492	3.6%
<b>Total</b>	<b>320,602</b>	<b>100%<sup>1</sup></b>
Hispanic/Latino (of any race)	134,973	42%

<sup>1</sup> Difference due to rounding.

Source: U.S. Census Bureau (Census 2000)

Households

According to the 2000 U.S. Census, there were approximately 119,293 households in the region. Average household sizes ranged from a low of 1.92 persons per household in Rancho Mirage to a high of 5.04 in Mecca. In the mountain communities, average household size for each of the three zip codes averaged 2.4 persons, while in the desert pass communities, average household size ranged from 2.6 to 3.1 persons. This indicates that the region contains a wide variety of family units, ranging from singles and couples to large, extended families.

Employment and Income

The primary employment centers in the valley are located in the Coachella Valley. In the mountain communities, Idyllwild has a local business community and a considerable tourism industry. In the desert pass communities, local commercial and highway-serving commercial enterprises are the primary employers, along with a strong retail component associated with the Desert Hills Premium Outlet stores. According to the California Employment Development Department (EDD), the number of jobs in the Coachella Valley increased from 74,146 in 1991 to 100,231 in 1999. This represents a gain of 26,085 jobs, or 35.2%, over the eight-year period. The region's largest employment sectors are retail trade, agriculture, and hotel and amusement. Other growing industries include construction, business services, and distribution and transport services. In the mountain communities, there were 3,516 employed persons in 2000, representing 39.2% of the total population. In Banning and Beaumont, the EDD reported 16,850 persons in the labor force in 2002, representing 31.6% of the population. EDD does not report on the community of Cabazon.

Median household incomes in the Coachella Valley have risen steadily over the past decade. In 1990, they ranged from a low of \$20,687 in Desert Hot Springs, to a high of \$87,942 in Indian Wells. By 1998, the range increased: from \$29,555 in Desert Hot Springs to \$125,642 in Indian Wells. These data suggest a wide variation in residents' economic situations and expendable incomes.

In the mountain communities, the median household income was \$25,824 in Mountain Center, \$27,692 in Anza, and \$34,408 in Idyllwild in 1990. By 2000, the median household income had increased to \$43,487, \$30,338, and \$35,746, respectively. Clearly, demographics in Mountain Center have changed to include a more affluent component of the population.

Finally, in the desert pass Communities, Banning’s median household income rose from \$22,514 in 1990, to \$32,076 in 2000; Beaumont’s rose from \$22,331 to \$29,721, and Cabazon’s from 13,830 to \$20,598. All three communities demonstrate a lower income level than most Coachella Valley cities and all mountain communities.

Poverty

The 2000 U.S. Census identified the following poverty levels, by race, in the cities and communities of the region:

**Table 3-15. Persons (by Race) below Poverty Level in the Region (2000)**

City/Community	Race				
	African American	Asian	Hispanic	Native American	White Alone
<b>Incorporated Coachella Valley</b>					
Cathedral City	199	68	4,022	38	1,421
Coachella	9	11	6,401	136	23
Desert Hot Springs	244	32	2,146	92	1,820
Indian Wells	0	0	15	0	114
Indio	337	87	9,077	90	837
La Quinta	20	29	1,069	0	652
Palm Desert	51	146	1,468	7	2,041
Palm Springs	542	91	2,916	90	2,698
Rancho Mirage	9	18	212	0	492
<b>Unincorporated Coachella Valley</b>					
Bermuda Dunes	0	9	54	0	287
Mecca	0	0	2,380	95	0
Morongo Valley	0	0	30	16	356
Thousand Palms	6	0	420	0	227
<b>Mountain Communities</b>					
Anza	N/A	N/A	N/A	N/A	N/A
Idyllwild	0	0	113	9	303
Mountain Center	N/A	N/A	N/A	N/A	N/A
<b>Desert Pass Communities</b>					
Banning	639	410	1,759	277	1,498
Beaumont	54	22	1,127	50	940
Cabazon	23	5	214	78	376

City/Community	Race				
	African American	Asian	Hispanic	Native American	White Alone
<b>Total</b>	<b>2,133</b>	<b>928</b>	<b>33,423</b>	<b>978</b>	<b>14,085</b>

Based on Table 3-15 above, a total of 51,547 persons, or 16% of the total population in the region are below the poverty level. Clearly, the number of persons below the poverty level varies greatly by community, and on a percentage of total population basis, is most significant at the eastern end of the Coachella Valley.

**Overview of Coachella Valley Economy**

Agriculture was the Coachella Valley’s dominant industry during the first half of the 20<sup>th</sup> century. The region’s main staple, the date palm, was introduced around the turn of the century by the U.S. Department of Agriculture, and the industry soon expanded to include the cultivation of grapes, citrus, and other fruit and vegetable crops.

As early as the 1920s, however, hotels, restaurants, country clubs, and casinos began to emerge in the upper Coachella Valley, especially in the Palm Springs and Cathedral City areas. Equestrian camps and resort hotels, including the historic La Quinta Hotel, were constructed in the lower valley. By the 1930s, the character of the region had been transformed toward the budding resort industry, with the marketing and construction of weekend homes throughout the valley. A new era of development emerged during the post-World War II era, giving the region its predominant image as a destination resort community.

Over the past three decades, the Coachella Valley has expanded to become one of the premier destination resort areas in the country. Today, it is characterized by high quality hotels, convention facilities, spas, and planned residential golf course developments. According to the Palm Springs Desert Resorts Convention and Visitors Bureau, approximately 3 million (overnight) visitors come to the Coachella Valley annually, and tourism has an estimated \$1.5 billion annual economic impact on the region. The resort industry is expected to continue to grow into the future.

In the mountain communities, employment has been tourism-based for a long period of time. The limited employment opportunities in these areas have resulted in residents seeking employment in other communities, including the Coachella Valley and Hemet. Since growth rates in these communities are also slower than those of the Coachella Valley, localized employment growth is also expected to be slow.

In the desert pass communities, the economy has long relied on highway-serving commercial employment, as well as employment in the Coachella Valley. The retail sector has always been significant in this area, and was made more so by the construction of the Desert Hills Premium Outlet stores in Cabazon. Banning and Beaumont have also sought to expand their industrial base, with limited success.

**Tourism in the Coachella Valley**

The Coachella Valley has long been recognized as one of the premier destination resort areas in the United States, and hotels and motels play a vital role in the regional economy. Accommodations range from highway-serving motels, to bed and breakfasts and small hotels, to full-service luxury resorts with spas, tennis and golf facilities, and

specialty shops. According to the Palm Springs Desert Resorts Convention and Visitors Bureau, in 2001, there were 217 hotels and motels with a total of 14,319 rooms in the Coachella Valley. Together, they generated \$346.5 million in annual gross hotel room sales. Regional hotel development and revenue trends from 1996 through 2001 are shown in Table 3-16 below.

**Table 3-16. Hotel/Motel Trends in the Coachella Valley Region (1996-2001)**

Year	Number of Hotels/Motels <sup>1</sup>	Number of Hotel/Motel Rooms	Annual Gross Room Sales
1996	225	14,061	\$263,863,690
1997	230	14,333	\$284,973,227
1998	236	14,566	\$313,052,359
1999	222	14,556	\$350,758,958
2000	233	14,763	\$364,427,229
2001	217	14,319	\$346,561,531

<sup>1</sup> Excludes condominiums, timeshares, and rental properties other than hotels/motels.

Source: "General Information Handout," Palm Springs Desert Resorts Convention and Visitors Bureau, 1999 and 2002.

Table 3-16 above indicates that, although the number of Coachella Valley hotels/motels decreased by eight (3.5%) from 1996 to 2001, the number of rooms increased by 258 (1.8%), and annual room sales increased by nearly \$82.7 million (31%). This suggests that the regional hotel/motel industry continues to be strong.

Average daily hotel/motel rates vary with hotel size, location, quality, and availability of amenities. According to Smith Travel Research, in May 1999, the average valley-wide daily rate was \$118, and in May 2000, it was \$116. In addition, in order to remain profitable, the typical hotel/motel must maintain a 65% occupancy rate, or percentage of rooms filled in a month. Smith Travel Research has also reported that occupancy rates for properties of more than 20 rooms in the Coachella Valley have hovered around this rate in recent years, measuring 63.0% in May 1999 and 66.4% in May 2000.

A 1995 survey reported by the Palm Springs Desert Resorts Convention and Visitors Bureau sheds light on the hotel preferences of the Coachella Valley's approximately 3 million (overnight) annual visitors. More than 1,300 hotel/motel visitors in the Coachella Valley were surveyed and indicated a preference for large-scale accommodations. During their visits, the greatest percentage (44%) of visitors stayed in large-scale facilities with more than 150 rooms. The majority (49%) also intended to stay at large full-service resorts on their next visits, as shown in Table 3-17 below.

**Table 3-17. Preferred Visitor Accommodations in the Coachella Valley**

Type of Accommodations	% of Visitors
Hotel/Motel	69.7%
Large, Full-service Resort	(49.3%)
Mid-sized Hotel	(13.0%)
Small Hotel	(6.6%)
Bed and Breakfast	(0.8%)
Condominium	7.0%
Friends/Relatives	2.5%
House	0.0%
Other	5.8%
No answer	15.0%
<b>Total</b>	<b>100.0%</b>

The 1995 hotel visitor survey also indicated that 59% of visitors to the Coachella Valley reside in California, with the majority (48%) living in southern California. Approximately 60% were visiting the valley for pleasure/vacation, 16% for conventions, 11% for business/vacation, 5% for business alone, and the remainder was visiting relatives, passing through, or visiting for some other reason. The average travel party consisted of two people, and the average visitor age was 42 years. Average length of stay was 3.0 nights. The most favored forms of recreation were shopping (67%), sun and swimming (56%), golf (40%), and sightseeing (37%).

**Tourist Expenditures**

A 1998 visitor survey conducted by the Palm Springs Desert Resorts Convention and Visitors Bureau indicated that the average daily expenditure per overnight visitor in the Coachella Valley was \$254, not including hotel room costs. Table 3-18 below provides a breakdown of the various types of expenditures, adjusted for approximately 4% annual inflation. It also reflects the 2002 year-to-date room rate.

**Table 3-18. Average Daily Expenditures of Overnight Visitors in the Coachella Valley (2002-2003)**

Item	Average Daily Expenditure per Person <sup>1</sup>
Hotel Room	\$126.27 <sup>2</sup>
Hotel Restaurants	\$21.69
Other Restaurants	\$67.45
Retail Purchases	\$30.31
Entertainment/Recreation	\$50.22
Local Transportation/Auto Rental	\$16.64
Personal Services	\$3.86
Other	\$19.02
<b>Total</b>	<b>\$335.46</b>

<sup>1</sup> Adjusted for inflation

<sup>2</sup> YTD 2002 average daily room rate in the Coachella Valley

Sources: 2002 YTD room rate from California Hotel & Motel Association in cooperation with the Smith Travel Research Company. Remainder of data, p. 18, "Visitor Study – 1998," Palm

Springs Desert Resorts Convention and Visitors Bureau, 1998, and Terra Nova Planning & Research, Inc. 2002-03 estimates.

As indicated, above, the average daily expenditure for overnight visitors in the Coachella Valley is estimated to be \$335.46.

### **3.R.2. Socio-Economic Issues Specific to BLM and National Forest Lands**

Federal lands within the Plan Area provide a variety of direct and indirect economic benefits to the general economy. These include the granting of rights-of-way on BLM and National Forest lands to provide for solid waste transfers, water agency storage and development and electricity lines as well as commercial recreational uses such as ecotourism, camping and hiking.

The BLM and Forest Service lease lands with locally important resource value. Grazing rights are allowed on the Wellman Allotment within the National Monument, and provide a limited economic value.

Commercial ecotourism, camping, hiking, mountain biking, and equestrian use have also become progressively more important local economic benefits, enhancing the resort industry in the Plan Area and providing opportunities for increased employment in nature- and outdoor-oriented industries and programs. The economic value of BLM and National Forest open space lands is increasing as nearby development continues to lessen the amount of non-Federal open space.

### **3.S. Environmental Justice and Health Risks to Children**

Executive Order 12898. Environmental justice refers to the fair and equitable treatment of all individuals, regardless of race, ethnicity or income level, in the development and implementation of environmental laws and policies. In February 1994, the President of the United States signed EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, which is one of the principal mechanisms used to implement environmental justice concepts at the Federal level. Its fundamental objective is to require each Federal agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”

The EO was accompanied by a memorandum, which emphasized the importance of NEPA as a means for implementing environmental justice principles. The memorandum directs Federal agencies to analyze the environmental effects, including human health, economic, and social effects, of their actions where such analysis is required by NEPA.

Executive Order 13045. On April 21, 1997, the president of the United States signed EO 13045, entitled *Protection of Children From Environmental Health Risks and Safety Risks*. It requires all Federal agencies to assure that their policies, programs, activities, and standards address disproportionate health risks to children that result from environmental health or safety risks. The EO defines environmental health and safety risks as those that are attributable to products or substances a child is likely to come into contact with or ingest, such as air, food, water, soil, and products children use or to which they are exposed.

BLM and Forest Service will utilize the NEPA process to implement EO12898 and 13045 by describing the population affected by the proposed National Monument Management Plan (below) and addressing disproportionately high adverse impacts of the proposed action on special populations (see Section 4.B.15. in Chapter 4).

It is important to recognize that most BLM and National Forest lands in the Plan Area are uninhabited. Nonetheless, BLM and National Forest lands are located near and around resort-residential communities with a permanent population of over 275,000 and are frequently utilized by local residents and visitors alike for recreational and educational purposes. Certain parcels are also accessed by BLM and Forest Service staff and authorized individuals. The following discussion describes special populations in the Plan Area, as these groups are likely to utilize BLM and National Forest lands.

### **Native American Populations**

The percentage of local residents identifying themselves as Native Americans/Alaska Natives account for an extremely small percentage of the regional population and are generally well dispersed geographically.

However, an estimated 20,000 acres of land in the Plan Area consists of Native American reservation lands. These lands include Tribal trust, allotted, and fee (privately owned) lands under the jurisdiction of the ACBCI. Although Indian land is not subject to the provisions of the National Monument Management Plan, the ACBCI is an important partner in the management of the National Monument. In addition, the ACBCI represent an important local population that may utilize BLM and National Forest lands for cultural, recreational and other purposes.

In addition to the Agua Caliente Reservation there are three other Native American Reservations (Morongo Band of Mission Indians, Torres-Martinez Band of Desert Cahuilla Indians and Santa Rosa Band of Mission Indians) located within or adjacent to the National Monument. The Augustine Band of Mission Indians, Cabazon Band of Mission Indians, Cahuilla Band of Mission Indians, Los Coyotes Band of Mission Indians, Ramona Band of Cahuilla Mission Indians, Soboba Band of Mission Indians, and Twenty-Nine Palms Band of Mission Indians have reservations that are located to the west, east and south within a short distance of the National Monument. These Tribes also have a historic, cultural and recreational interest in the lands within the National Monument boundary.

### **Children**

Although the Coachella Valley is nationally recognized as a winter haven for retirees and other seniors, much of the valley's year-round population includes younger families with children. Children are generally well distributed geographically throughout the Plan Area.

### **3.T. Health and Safety, Hazardous Materials**

The manufacture, transport, and disposal of hazardous and toxic wastes have become progressively important issues, especially in desert areas where potential impacts are erroneously considered to be less than in other areas. Regulation of toxic and hazardous materials lies with a variety of Federal, State, and local agencies, including the EPA, the California Office of Health Planning and Development, and County health



departments. Applicable Federal regulations include the Resources Conservation and Recovery Act, the Comprehensive Environmental Response, Compensation and Liability Act, the Federal Insecticide, Fungicide and Rodenticide Act, the Safe Drinking Water Act, the Federal Clean Air Act, and the Toxic Substances Control Act.

Counties are authorized by State law to prepare Hazardous Waste Management Plans (HWMP) in response to the need for safe management of hazardous materials and waste products. Within the Plan Area, the California Regional Water Quality Control Board and area water districts maintain information concerning contaminated water wells and groundwater. State and Federal EPA and the State Department of Health also provide information concerning specific hazardous waste sites.

There are no large industrial or commercial users of hazardous materials in the Plan Area or area of influence, although there are identified hazardous/toxic material small quantity generators associated with commercial, industrial and medical operations. These have the potential to be associated with accidental spills, purposeful illegal dumping, air emissions, and other uncontrolled discharges into the environment. Improper use and management of these materials pose a significant potential threat to the environment.

Products, chemical and purified chemical compounds, and elements that are considered hazardous or toxic exist in wide variety and are used in households, commercial businesses and industrial operations and processes. They range through home and pool-related chlorine products, chemical fertilizers, herbicides and pesticides, stored fuels and waste oil, chemical solvents and lubricants, and a variety of medical materials, including biological and radioactive wastes.

### **Hazardous Waste Management Plans**

Jurisdictions responsible for land management coordinate with appropriate County, State and Federal agencies in the identification of hazardous material sites, and their timely cleanup. In order to manage these issues, the jurisdiction may establish and maintain information on these sites and periodically monitor facilities and operations that produce, utilize or store hazardous materials. By staying involved in multi-agency monitoring of illegal dumping, conferring in the regulation of underground storage tanks and septic systems, and regulating the transport of hazardous materials through the Plan Area, BLM and Forest Service can better protect against potential hazards associated with hazardous materials and wastes.

The BLM and Forest Service coordinate and cooperate with Riverside County in addressing illegal use and/or dumping of hazardous and toxic materials on public lands. The Riverside County HWMP was adopted by the Board of Supervisors and approved by the California Department of Health Services in 1990. The County HWMP identifies the types and amounts of wastes generated in the County and establishes programs for managing these wastes. The Riverside County HWMP also assures that adequate treatment and disposal capacity is available to manage hazardous wastes generated within its jurisdiction and addresses issues related to manufacture and use.

State and Federal EPA and the State Department of Health also supply information concerning specific hazardous waste sites and their locations. The California Department of Industrial Relations, Cal-OSHA Division, regulates the proper use of hazardous materials in industrial settings. Private database screening and

documentation services are also available, which will search, extract, and summarize reports on contaminated sites recorded in various State and Federal databases.

### **Household Hazardous Waste**

Residential use of household chemicals, automobile batteries, used oil, paint and similar materials result in hazardous waste. “ABOP” (Antifreeze, Batteries, Oil and Latex Paint) disposal sites are available for Plan Area residents to dispose of these materials. These facilities will take up to 5 gallons or 50 pounds of materials per trip, and all materials must be clearly marked and sealed. Local residents may also properly dispose of used motor oil through a variety of local programs, including curbside pick up. Riverside County also organizes Household Hazardous Waste collection days throughout the year at fire stations and city corporation yards across the valley.

### **Hazardous Materials Response**

Hazardous and toxic materials are determined critical by County health departments, which can require owners of storage facilities to test, temporarily close and/or remove all hazardous liquids, solids or sludge located on the site. Leaking underground storage tanks must be removed by contractors having Hazardous Waste Certification and a General Engineering License. Between cessation of storage and actual closure, monitoring is generally required by the site’s operating permit. When soils contamination is detected, the clean up procedure to be followed, the degree or level of cleanliness required by the regulator, and the method of treatment (if permitted) will be directed by the Riverside County Hazardous Materials Division and/or the California Regional Water Quality Control Board.