
Local, state, and federal agencies and local organizations have worked collaboratively in recent years to explore opportunities to revitalize the Los Angeles River, restoring habitat and creating recreational amenities while continuing to provide for flood protection.

detention camps or relocation centers. Former Civilian Conservation Corps (CCC) Camps, horse tracks, fairgrounds, and rodeo grounds were used for assembly centers where Japanese Americans were gathered and processed then sent to relocation centers or internment camps. In California, relocation centers were established at Manzanar in the Owens Valley and Tule Lake, near the Oregon border. By 1942, all Japanese Americans in the western United States had been detained.

Within the study area, Japanese were initially incarcerated and detained at a CCC Camp in Griffith Park (Camp Riverside) and La Tuna Canyon in Tujunga. Camp Riverside was expanded to accommodate up to 550 persons. The Tuna Canyon Detention Station was also a former CCC camp (La Tuna Camp) and held up to 300 people at once. Approximately 2,500 were processed through this location. Both of these sites have since been demolished. However, the City of Los Angeles recently designated a one-acre area on the site of La Tuna Camp as a city historical-cultural monument (Masumoto 2013a, 2013b). After release in 1945, many Japanese Americans returned to and rebuilt Little Tokyo which today is a national historic landmark (1995).

New Paradigm for Flood Protection and Conservation

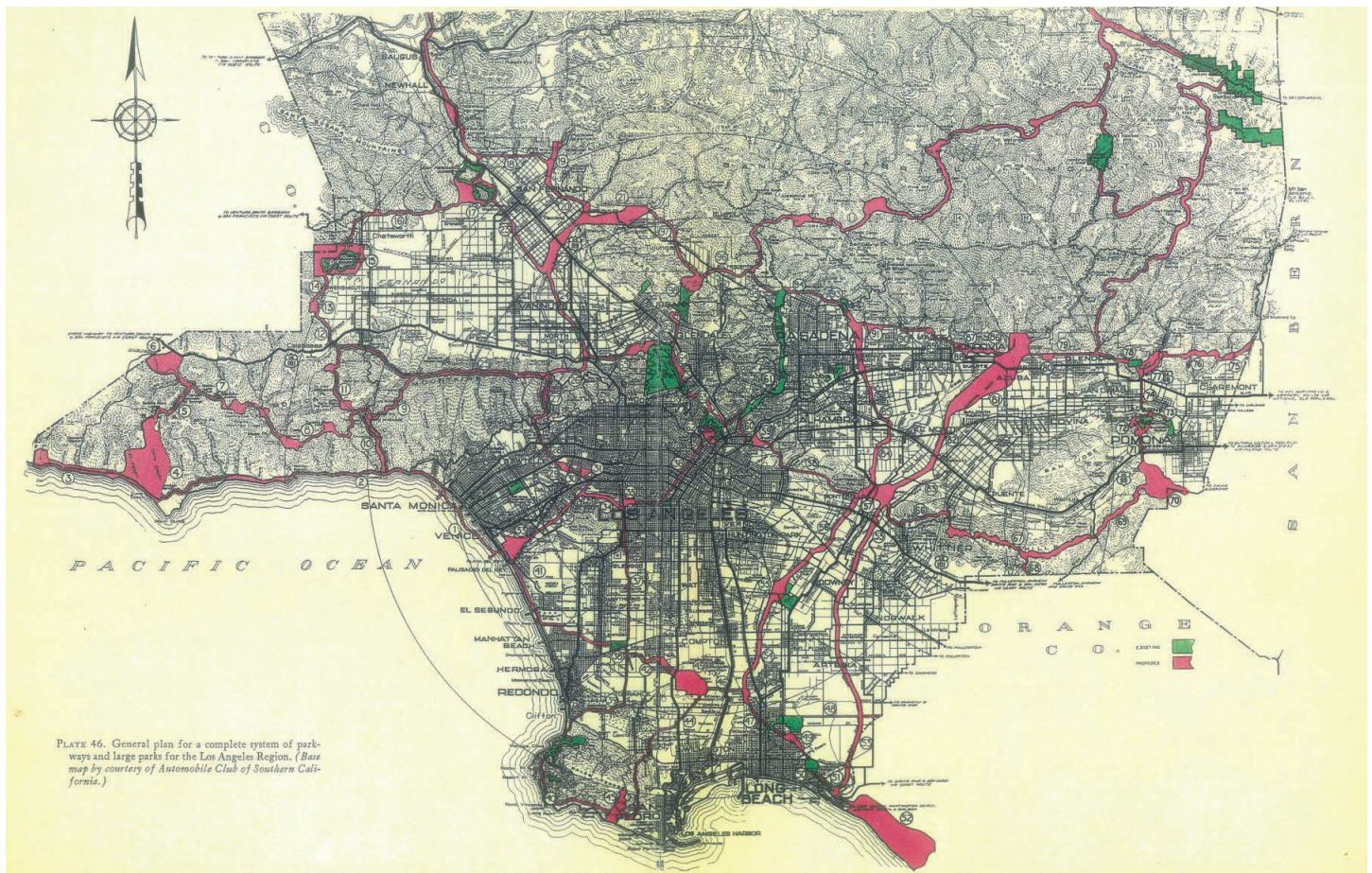
Beginning in the 1960s, the need for conservation and preservation of natural habitats and floodplains grew, particularly with passing of legislation such as the National Environmental Policy Act of 1969. In evaluating flood system responses to storm events in 1969 and 1978, engineers began to appreciate the cumulative nature of the entire flood protection system, which could multiply the severity of downstream effects many times above the limits for which the infrastructure was designed, even though the direct impacts of the natural event itself were well below those limits. This opened the door for considering other, non-traditional strategies to mitigate flooding such as hazard zoning, which relied on political and social strategies to relocate vulnerable development and dense concentrations of people away from areas of high natural risk (Orsi 2004, National Research Council 1980).

The concept of using parklands and less engineered solutions to provide flood protection

had been proposed for the region as early as 1930 in a report commissioned by the Los Angeles Chamber of Commerce. Authored by the nationally prestigious planning firms of Olmsted Brothers and Harland Bartholomew and Associates, the original purpose of the study was to develop a comprehensive public parks and recreation plan. Among its many recommendations (which included preserving the Santa Monica Mountains as parkland), this report suggested that the county purchase broad areas of low-lying land along river drainages and manage these as recreational greenbelts. This would serve the dual purpose of creating more open space for public enjoyment while at the same time providing effective flood protection by preserving natural floodplains and keeping vulnerable development out of them. Despite the simplicity and public appeal of this idea, the proposal would not be implemented because of associated costs and the financial threat it posed to existing property values (Hise and Deverell 2000, Orsi 2004). However, various aspects of this plan would be implemented as a result of later conservation efforts.

Local conservation efforts in the 1960s and 1970s resulted in the designation of Santa Monica Mountains National Recreation in 1978. In the 1980s local groups began to challenge the precedent in the Los Angeles basin of engineering nature away and advocate instead for restoring some floodplains and river channels which could serve as public open space most of the time, while absorbing and mitigating the energy of floods during storm events. One of the earliest attempts to realize this potential in the Los Angeles basin came with the establishment of Friends of the Los Angeles River in 1985 by poet Lewis MacAdams (Orsi 2004, Gottlieb 2007).

Through a range of direct action and community organizing, MacAdams increased public awareness of the Los Angeles River, which many Angelenos no longer even knew existed. This and similar community-based environmental advocacy groups would have considerable influence on the City of Los Angeles, which commissioned the Los Angeles River Task Force in 1990 to “articulate a vision for the future of the river.” The subsequent *Los Angeles River Master Plan* was released in 1996 by Los Angeles County Department of



A 1930 report titled, "Parks, Playgrounds and Beaches for the Los Angeles Region" prepared by the Olmsted Brothers and Bartholomew and Associates for the Citizen's Committee on Parks, Playgrounds and Beaches proposed a network of "large reservations in mountains, canyons, deserts and islands", and, shown above, a "general plan for a complete system of parkways and large parks for the Los Angeles region." (Olmsted Brothers and Bartholomew and Associates 1930).

Public Works. Departing from past emphasis on engineered solutions to flood control, the new Master Plan considered a variety of alternatives which would include limiting development in areas where natural processes could be restored—for example, as riparian wetlands along segments of the Los Angeles River. The Los Angeles State Historic Park, established in 2001 on a former industrial site near downtown, is one recent example of this new approach to flood management which relies on preserving and restoring open space along natural river corridors instead of building concrete walls. Future development of the park may include restoration of wetlands within the adjacent Los Angeles River channel. Adjacent to Los Angeles State Historic Park on Metropolitan Transportation Authority right-of-way lies an intact segment of the Zanja Madre. This ruin was unearthed by archaeologists in 2001 and represents one of the more significant cultural artifacts associated with this resource (Orsi 2007; CDPR 2012, Gottlieb 2007).

Associated Resources (American Period)

Numerous historic properties from the American Period are preserved within the study area. Many sites have been listed on local, state, or national historic registers. Resources include excellent examples of architectural styles, Cold War sites, observatories, public institutions, recreation areas, historic ranches, agriculture, highways, aqueducts, and industrial sites. Several sites have been designated national historic landmarks. The sites are organized by theme and topic in *Table D-11: Cultural Resources Related to the American Period (1848-Present)* in *Appendix D*. Several themes have a notable representation of associated resources and are described below.

Agriculture and Ranching

The study area contains two rare intact examples of ranching and agriculture in the twentieth century. Within SMMNRA, the Rancho Sierra Vista Historic District is significant for the period of 1936 through 1947 when it was purchased, developed, and used as a cattle



The Gamble House in Pasadena is designated national historic landmarks representing the theme of residential architecture. The 1908 Gamble House is the most complete and best preserved example of the work of the architects Greene & Greene. Photos: Diane Kane/CalTrans.

The study area contains numerous examples of significant architecture both listed and eligible for listing on the National Register of Historic Places.

ranch by Carl H. Beal. The ranch retains the majority of its acreage, original structures, use, and landscape elements from this period and is consequently one of, if not the, most intact ranches from the first half of the twentieth century in the Santa Monica Mountains and their surrounding foothills.

The Bothwell Ranch in Tarzana is one of the last remaining commercial citrus orchards in the San Fernando Valley which was once a vast agricultural center. Established in the 1920s, it continues to operate today (Architectural Resources Group, Inc. 2013a).

Architecture, Landscape Architecture and Urban Design

The climate and landscape of southern California influenced a wide range of architectural styles. The study area contains numerous examples of significant architecture both listed and eligible for listing on the National Register of Historic Places. Many diverse architectural styles are represented including Mission/Spanish revival, Modern architecture, Arts and Crafts, and Queen Anne to name a few. Styles of regional distinction include the ranch house and the bungalow (an adaptation of the Indian bangala) (Kaplan 1987). The automobile, whose use flourished quickly in the region also due to the mild climate (early autos did not have heating systems) also influenced regional architecture and urban design inspir-

ing streamline moderne styles and “googie” architecture, eclectic styles employed by restaurants and other businesses looking to catch the attention of auto drivers.

The City of Pasadena boasts one of the most preserved and revered concentrations of Arts and Crafts (1890-1915) and Queen Anne (1880-1900) style architecture in the nation. Los Angeles is also interspersed with works from Frank Lloyd Wright and son Lloyd Wright’s most unique and intriguing works. In the Hollywood hills there are many outstanding works of Mediterranean and Spanish Colonial Revival (1870-1940) homes. The types of structures and historic uses represented in the study area include adobes, hotels, ranches, villas, and courtyards.

The study area features two national historic landmarks that represent Arts and Crafts and Modern styles of architecture. The Gamble House National Historic Landmark (1987), located in Pasadena is the most complete and best preserved example of the work of the architects Greene & Greene. Built in 1908, it embodies the highest level of the California Bungalow style associated with the Arts and Crafts movement of the early 20th century (Mackinson 1970).

The Eames House National Historic Landmark is located adjacent to the study area in Pacific Palisades (Historic Resources Group 2007) is associated with the the Case Study House program which was unique in the nation for its concerted efforts to introduce modern domestic architecture to the broader public in the period after World War II.

In 2013, a National Register of Historic Places Multiple Property Documentation Form was submitted for “The Case Study House Program: 1945-1966” (Moruzzi 2013). The nomination included eleven Case Study Houses, ten of which were subsequently listed in the National Register of Historic Places. Eight of these ten houses are located within or adjacent to (within ½ mile) the study area (*Table D-11: Cultural Resources Related to the American Period (1848-Present) in Appendix D*).

Recreation

With mild climate allowing year-round outdoor activity, many areas in the region



Rose Bowl stadium, shown above under construction in 1922 was built in the Arroyo Seco canyon of Pasadena. At the time of construction, the Arroyo Seco was still unchannelized and can be seen meandering through the canyon. Photo: Security Pacific National Bank Collection/Los Angeles Public Library.

An interest in the wilderness and outdoors was furthered by the writings of naturalist John Muir. Muir first hiked the San Gabriel Mountains in 1875 where he reveled in the wildlife views, trails, and canyons that the mountains provided (Muir 1894).

developed facilities to provide recreational opportunities. In the Angeles National Forest, recreation flourished in the late 19th century. An interest in the wilderness and outdoors was furthered by the writings of naturalist John Muir. Muir first hiked the San Gabriel Mountains in 1875 where he reveled in the wildlife views, trails, and canyons that the mountains provided (Muir 1894). Historic trails and remnants of the Mount Lowe Railway (part of the Pacific Electric Railway system) that connected residents to the mountains for recreation are located in the national forest.

Recreational areas were also developed in the Santa Monica Mountains. Notably, Griffith Park at 4,300 acres is one of the largest urban parks in the United States. Determined eligible for listing in the National Register of Historic Places, contributing features include Fern Dell, Mount Hollywood, Bird Sanctuary, Griffith Park Observatory and Planetarium, Los Feliz Adobe, Merry-Go-Round, Harding Golf Course Clubhouse, Swimming Pool and Building, Boys' Camp, and Mulholland Fountain (Gonzalez and Anderson 2013).

In the 20th century flood control basins were utilized for recreational purposes. Sepulveda

basin and Hansen Dam are both examples of this type of recreational resource.

Amusement parks were also popular in the region, located on beaches and in the mountains. The Santa Monica Pier contains the Santa Monica Looff Hippodrome National Historic Landmark which is a rare example of an early shelter built to house a carousel.

Peter Strauss Ranch in the Santa Monica Mountains is significant for its association with the emergence and popularity of regional amusement and recreation parks in the years following World War II. Lake Enchanto at Peter Strauss Ranch represents an important transition period between exclusive private country clubs and large corporate amusement parks.

The Rose Bowl National Historic Landmark in Pasadena is significant as the site of the oldest and most renowned college football "bowl" game. The Rose Bowl's renown, while linked to college championship football, also has been enhanced by other sports activities, as well as civic, cultural, and political events that have occurred in it. These have included "Super Bowls" of professional football, the cycling events of the 1932 Olympics and some of the soccer events of the 1984 Olympics as well as the 1999 Women's World Cup showdown between China and the U.S. It is now the home of the UCLA football team.

The Rose Bowl Stadium is also part of a larger historic district, the Pasadena Arroyo Parks and Recreation District, which was listed in the National Register at the local level of significance in 2008. The District is significant for its relationship to the parks movement which fostered the preservation of scenic places and the creation of playgrounds and recreation centers (Grimes 2007).

Visual and Performing Arts

Given the region's significant role in television and movie production, there are numerous sites in and around the study area that convey this topic. Sites range from commercial historic districts, movie ranches, and studios to homes associated with famous actors. Paramount Ranch in SMMNRA is held by some historians to be the nation's best remaining example of a film production facility from



Keystone Studios, shown here in 1915, was one of the first film studios in Los Angeles. Located in the neighborhood known as “Edendale” (now Echo Park) and founded by Mack Sennett, the studio was associated with many important actors including Mabel Normand, Charlie Chaplin, Raymond Griffith, Gloria Swanson, Ford Sterling, Andy Clyde, The Keystone Kops, Bing Crosby, and W. C. Fields. Photo: Security Pacific National Bank Collection/Los Angeles Public Library.

Hollywood’s ‘Golden Era of Motion Pictures.’ Also within SMMNRA is the Upper Franklin Canyon Historic District which has been used as a film and television location since the 1930s (GPA Consulting 2013). The Joel McCrea Ranch (listed on the NRHP in 1997) in Thousand Oaks is significant for its association with Joel McCrea, a major Hollywood movie star, whose film career spanned more than forty years and included more than eighty films, such as *Sullivan’s Travels*, *The Palm Beach Story*, and *The Virginian*. Will Rogers House (listed on the NRHP in 1971) in Pacific Palisades (and associated state park) is significant for its association with the noted American humorist and motion picture actor. The Hollywood Boulevard Commercial and Entertainment District (listed on the NRHP in 1985) is significant for its connection to the Golden Era of Hollywood which is depicted in this commercial corridor.

Just outside of the study area along the Los Angeles River in the San Fernando Valley is the CBS Studio Lot, one of the first motion picture studios established in the San Fernando Valley. The CBS Studio site was established in 1928 as Mack Sennett’s Studioland and CBS

continues to use the site for filming today (Historic Resources Group 2013a).

The community of Newhall in the Santa Clarita Valley contains many notable Hollywood movie sets and is the site of the Walk of Western Stars. Some of the relics in downtown Newhall associated with the Western film genre include the Tom Mix cottages, used as housing for the early motion picture industry and the American Theater designed by Charles S. Lee and funded in large part by Actor William S. Hart whose retirement home is within the study area and eligible for listing on the National Register. Other sites include Melody Ranch (aka Placeritos Ranch and Monogram Ranch), built in the early 1920s and owned from 1952 to 1990 by actor Gene Autry and used as a location for hundreds of Western films, television series and commercials; and the Walt Disney Company’s Golden Oak Ranch in nearby Placerita Canyon. Griffith Park, in the eastern Santa Monica Mountains outside of SMMNRA, Beale’s Cut (Santa Susana Mountains) and Ahmanson Ranch (Simi Hills) were also iconic film location sites.

Science and Technology

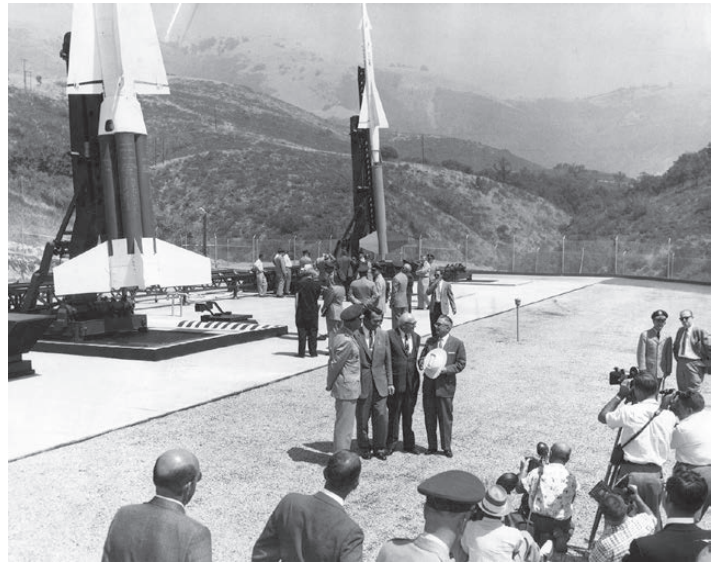
The Los Angeles Region has played an important role in aeronautical and astronomical advances. This is depicted in sites such as the Mount Wilson and Griffith Observatories and range of sites related to the Cold War era (Santa Susana Field Laboratory, missile sites) and space exploration (JPL NHLs).

Astronomy

The Mt. Wilson Observatory in the San Gabriel Mountains was established in 1904 with funding from the Carnegie Institution by American astronomer George Ellery Hale, who also designed the facility and served as its director until his retirement in 1923. George Hale’s primary interest was in solar research. Early development at the Mt. Wilson Observatory began with construction of solar telescopes designed specifically for making observations of the sun. Three solar telescopes, still in use today, were constructed, including the 100-inch diameter Hooker reflector. The Hooker reflector was used for some of the most significant astronomical achievements substantially expanding our conception of the universe and of our place in it and providing



The Griffith Park Observatory was constructed in 1933 as a public facility. In addition to affording spectacular views of the Los Angeles basin, the Pacific Ocean, and San Gabriel Mountains, the observatory has publicly accessible telescopes, and exhibits. Photo: NPS.



The Nike-Hercules base at Oat Mountain in the Santa Susana Mountains was the first base to go operational in the U.S. The opening ceremony, shown above, took place August 30, 1958. Photo: Valley Times Collection/Los Angeles Public Library.

evidence for an expanding universe which supported the hypothesis of a unitary creation event (later dubbed the “Big Bang”).

The non-profit Mount Wilson Institute operates the observatory under an agreement with the Carnegie Institution. The Hooker 100-inch reflector telescope remains one of the world’s most important optical telescopes, and the Mt. Wilson Observatory continues to host significant scientific research in a variety of fields of astronomy and astrophysics.

The Griffith Observatory in the Hollywood Hills has been determined eligible for listing in the National Register of Historic Places. After experiencing the 60-inch telescope on Mount Wilson (the only one in the world when constructed), Griffith J. Griffith, the benefactor of Griffith Park, decided to construct an observatory accessible to the public. The observatory was constructed by the Works Progress Administration in 1933 and opened to the public in 1935.

It should also be noted that just east of the study area, in the San Gabriel Valley, are two national historic landmarks related to the theme of astronomy and research conducted at the Mt. Wilson Observatory. This includes the Hale Solar Laboratory NHL (1989) and the Edwin Hubble House (1976). The Hale Solar Laboratory is significant for its association with George Ellery Hale, the person

most responsible for the rise of the science of astrophysics in the United States and who, as described above, was associated with the Mount Wilson Observatory. Edwin Hubble, also noted above, was one of the leading astronomers of the 20th century and made his most important discoveries at the Mount Wilson Observatory.

Cold War

Recent surveys at NASA’s Santa Susana Field Laboratory have identified nine individual sites and three historic districts related to the Cold War era as eligible for listing in the National Register of Historic Places (NASA 2009). The three eligible historic districts would comprise the Alfa, Bravo, and Coca Test Areas. The Delta Test Area was removed and no longer retains historical integrity (NASA 2009). The Alfa, Bravo, Coca, and Delta test stand areas were constructed after the Korean War in the 1950s.

The properties associated with the Sodium Reactor Experiment (SRE) site, one of several atomic energy-related projects that were carried out at the Santa Susana Field Laboratory facility beginning in the early 1950s, currently have no official status of historical significance and may not be eligible, at least under national register criteria, because they presumably lack integrity. However, further investigation will be needed to determine if any features remain (or will remain following completion of cleanup operations) to convey the significance

The Space Flight Operations Facility (SFOF) National Historic Landmark is the hub of the communications network through which NASA controls its unmanned spacecraft flying in deep space.

The Twenty-five Foot Space Simulator National Historic Landmark was built in 1961 and is the only NASA facility capable of producing high-quality space simulation for testing spacecraft under conditions of extreme cold; high vacuum; and intense, highly uniform, solar radiation (Butowsky 1984).

of the site's history. Currently, the Coca test stands are proposed for removal because of contamination (NASA 2014).

The study area contains other recognized resources that relate to Cold War-era science and technology. The Thompson-Ramo-Wooldridge laboratory in Solstice Canyon (SMMNRA) was an important site of early pioneering space research. The site was used to test satellite equipment for space missions, including the Pioneer 12. The structures were burned in a recent fire, but foundations and other site features remain. The study area contains four Cold War-era Nike missile sites. The Mountains Recreation and Conservation Authority interprets a Cold War-era Nike missile site at San Vicente Mountain. The Los Pinetos Nike missile site, a national register property, is located in the Angeles National Forest. Another Nike site is now the site of a county fire training facility in the Santa Monica Mountains. There is also a former Nike missile site on the southern slope of Oat Mountain in the Santa Susana Mountains.

Space Exploration

In 1984, the NPS completed the *Man in Space* theme study to commemorate efforts to explore space including landing a man on the moon, investigating the near Earth environment, and exploring the planets and solar system as part of National Aeronautics and Space Administration's (NASA) American Space Program. Within the study area, the "Man in Space" theme is represented by two properties within Jet Propulsion Laboratory (JPL) complex. The Space Flight Operations Facility (SFOF) National Historic Landmark is the hub of the communications network through which NASA controls its unmanned spacecraft flying in deep space. This facility is where spacecraft tracking and scientific data are received and processed from JPL's Deep Space Network. Also located on the JPL campus, the Twenty-five Foot Space Simulator (Simulator) National Historic Landmark was built in 1961 and is the only NASA facility capable of producing high-quality space simulation for testing spacecraft under conditions of extreme cold; high vacuum; and intense, highly uniform, solar radiation (Butowsky 1984).

Additionally, the Santa Susana Field Laboratory has several sites representing this theme,

including the vertical test stands at the Coca Site which were used to develop the Space Shuttle Main Engine.

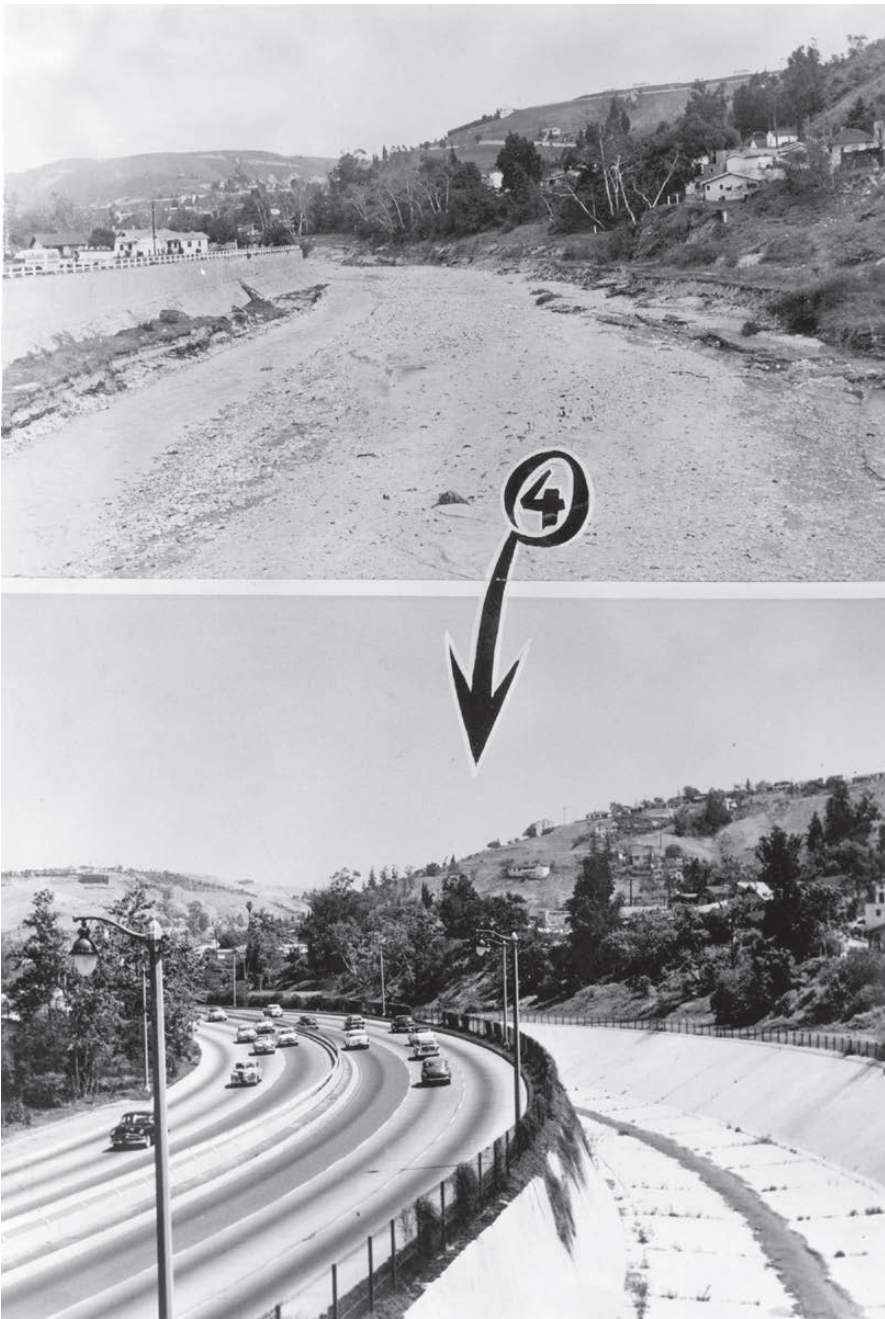
Transportation, Engineering, and Industry

Significant innovations in transportation systems, water conveyance, flood control, and highway development are represented in many study area sites including remnant railways, train stations and stops, bridges, tunnels, and roads. For instance, the Mount Lowe Railway Historic District illustrates the engineering challenges associated with linking the Pacific Electric Railway with recreation destinations high in the rugged San Gabriel Mountains.

Innovations in highway construction and design are depicted in the historic Arroyo Seco Parkway (State Route 110), an 8-mile freeway connecting Pasadena to downtown Los Angeles. The Arroyo Seco Parkway Historic District was listed in the National Register of Historic Places at the state level of significance in 2011. The highway's innovative four-level interchange was determined individually eligible at the national level of significance in 1986 as part of the California Department of Transportation's 1986 Historic Bridge Inventory prior to the eligibility reevaluation and National Register of Historic Places nomination of the Arroyo Seco Parkway.

Remnants of transportation corridors associated with the Butterfield Overland Trail are also present in the study area (Beale's Cut, Los Encinos State Historic Park). Both San Fernando Pass and Santa Susana Pass lie within the study area. The former is now known as Newhall Pass and the modern highway bypasses the original route. However, Beale's Cut, originally excavated in 1854 by Phineas Banning for wagon traffic to Fort Tejon and deepened by Edward Beale in 1863, still remains. The stage stop at Los Encinos also lies near the study area in the San Fernando Valley and is protected within Los Encinos State Historic Park.

The study area also contains a wide range of resources that reflect efforts to store and transport water, including sections of the historic Zanja Madre (the original water systems that supplied El Pueblo de Los Angeles and continued to transport water regionally through the American Period), key components of the



The first freeway in the west, the Arroyo Seco Parkway, was completed in 1940 in conjunction with channelization of the Arroyo Seco. This pair of photos illustrates the transformation of the Arroyo Seco from a natural waterway into the Arroyo Seco Parkway and adjacent flood control channel. Photo: Herald-Examiner Collection/Los Angeles Public Library.

California Aqueduct, and numerous dams and reservoirs created for water storage (e.g. Franklin Canyon Dam, Chatsworth Dam, Encino Reservoir). Portions of the Los Angeles Aqueduct and associated infrastructure that carry and store water from the Owens Valley are also located throughout the study area.

Resources associated with the Los Angeles County Flood Control System, a comprehensive and coordinated flood control system constructed by the U.S. Army Corps of Engineers and the Los Angeles County Flood Control District, are located throughout the study area. As the first and largest program to receive funding under the Flood Control Act of 1936, the Los Angeles County system includes dams, debris basins, spreading grounds, diversion tunnels, outlets, inlets, guide walls, gates, and spillways. A U.S. Bureau of Reclamation theme study on large federal dams determined that the Los Angeles County Flood Control System might be nationally significant for its impact on the history and development of the greater Los Angeles metropolitan area (Billington, Jackson, and Melosi 2005). Further study is needed to identify which resources contribute to the national significance of the systems and to document the integrity of contributing resources. *Table D-12: Re-Engineering Nature – Resources Related to Water Conveyance* and *Table D-13: Re-Engineering Nature – Resources Related to Flood Protection* in *Appendix D* include a selective inventory of sites related to water conveyance and flood protection.

Well No. 4, Pico Canyon Oil Field National Historic Landmark (1966) in the Santa Susana Mountains was the longest-running oil well in the world before being taken out of service in 1990, having pumped crude oil almost continuously for 114 years. Also associated with the context of early oil development at Pico Well No.4 is nearby Mentryville, a California Historic Landmark. Mentryville is the original site of the Star Oil Company, one of several predecessors of Standard Oil of California. Established in 1870, it was named after pioneer oilman Charles Alexander Mentry, who drilled Well No. 4 in 1876. Still well-preserved at the site are Charles Mentry's house and barn and a one-room schoolhouse.

Recreational Resources and Visitor Opportunities

Introduction

With its varied landforms and landscapes, the study area features a variety of scenic and recreational resources. Large, wild, open spaces in the mountains and hills are contrasted with dense urban areas. Within the large expanse of urban areas, hidden, “wild places” that provide recreational opportunities can be found. A short drive can take a person from one of America’s most densely populated regions, to stark desert and serene wilderness areas. Sub-alpine mountain environments are located just miles away from dry deserts and mild coastal beaches.

Recreational resources in the study area range from large wildland parks within Santa Monica Mountains National Recreation Area (SMMNRA), to small neighborhood parks. Recreation activities include a broad range of options including organized sports, swimming, hiking, biking, horseback riding, swimming, camping, picnicking, fishing, wildlife viewing, hang-gliding, use of off-road vehicles, target shooting and hunting. Despite the diversity of recreational opportunities and open spaces, the region has had difficulties preserving enough open space and recreational areas to meet the needs of its ever-growing population.

This section describes an inventory of recreational resources in the study area, an overview of recreational use, an analysis of recreational needs and demand, and an overview of future opportunities for recreation within the study area.

Geographic Scope

The geographic scope of the recreational resources and visitor opportunities description primarily corresponds to the 650,000-acre study area with the exception of the description of the Angeles National Forest and San Gabriel Mountains National Monument. These U.S. Forest Service managed areas contain 180,000 acres of the 650,000-acre study area. However, some information about forest use and visitation applies to the broader national forest.

Inventory of Existing Parks and Open Space

The study area features a variety of areas devoted to recreation in some form, often in conjunction with the preservation of natural open space or historic sites. These include federal and state lands, and an assortment of regional and local parks, nature centers, and preserves. Parks and open space are not evenly distributed throughout the region, and access for those without private transportation is limited.

The study area largely includes the mountains surrounding the more populated valley and



The mountains and hills of the study area are generally large open spaces contrasted with densely populated urban areas in the valleys. In addition to contributing to the scenic quality of the region, these mountains and hills provide for many recreational uses, such as hiking in Griffith Park, shown above. The Verdugo Mountains and San Gabriel Mountains can be seen in the background. Photo: NPS.

basin portions of the Los Angeles region. By extension, most of the larger open space and park areas are located within the mountains while open space and parks in the urban valley and basin areas are relatively sparse, consisting of isolated patches or narrow, disconnected corridors of green space in a matrix of urban and suburban development. Some larger regional open space and park facilities located within or close to dense populations include Hansen Dam Recreation Area and Sepulveda Basin Recreation Area (which is adjacent to the study area). Both are owned by the U.S. Army Corps of Engineers and managed by the City of Los Angeles for recreational use. Griffith Park, a City of Los Angeles park, is another atypically large open space park facility close to large populations.

Open space may be described as any land that is not developed for urban use. This may include natural areas set aside for species protection, lands used for agriculture or natural resource extraction, recreation areas, or areas unsuitable for development either due to a potential hazard (such as slide areas or floodplains) or due to other uses such as groundwater recharge or flood protection (California Resources Agency et al. 2001).

Parks are a type of open space that is designed and managed for uses such as recreation,

natural resource conservation, and education. Recreational use may be designated active, passive, or both. Passive use refers to activities that are generally low impact such as hiking, fishing, picnicking, bird watching, or non-motorized boating. Active recreational use may include facilities designed for sports such as soccer or baseball, and lakes for motor-boats and jet skis.

This section examines parks and open spaces that are specifically managed for recreation or conservation purposes. Within the study area, agencies from all levels of government provide open space, park and recreational amenities (*Table 2-3: Parks and Open Space Agencies in the Study Area*, *Table 2-4: Approximate Acreage of Study Areas Parks and Open Space*). *Figure 2-12: Parks and Open Space* provides for an overview of park and open space distribution throughout the study area.

The two largest areas administered for parks and open space are the Angeles National Forest and SMMNRA, the latter of which includes a variety of state and local sites available for public access and enjoyment.

Angeles National Forest and San Gabriel Mountains National Monument

In 1892, this area was established as the San Gabriel Timberland Reserve, eventually be-

Table 2-3 Parks and Open Space Agencies in the Study Area

Level of Government	Agency
Federal	Bureau of Land Management (BLM) National Park Service (NPS) U.S. Army Corps of Engineers (USACOE) U.S. Forest Service (USFS)
State	California State Parks San Gabriel and Lower Los Angeles Rivers & Mountains Conservancy (RMC) Santa Monica Mountains Conservancy University of California
County	Los Angeles County Department of Parks & Recreation Los Angeles County Department of Public Works Los Angeles County Flood Control District County of Ventura
Joint Powers Authorities (JPAs)	Conejo Open Space Conservation Agency Desert and Mountain Conservation Authority Mountains Recreation and Conservation Authority Santa Clarita Watershed Recreation and Conservation Authority
Special Districts	Conejo Recreation and Park District Pleasant Valley Recreation and Park District Rancho Simi Recreation and Park District
Cities	City Parks and Recreation Departments Community Services Departments Public Works Departments

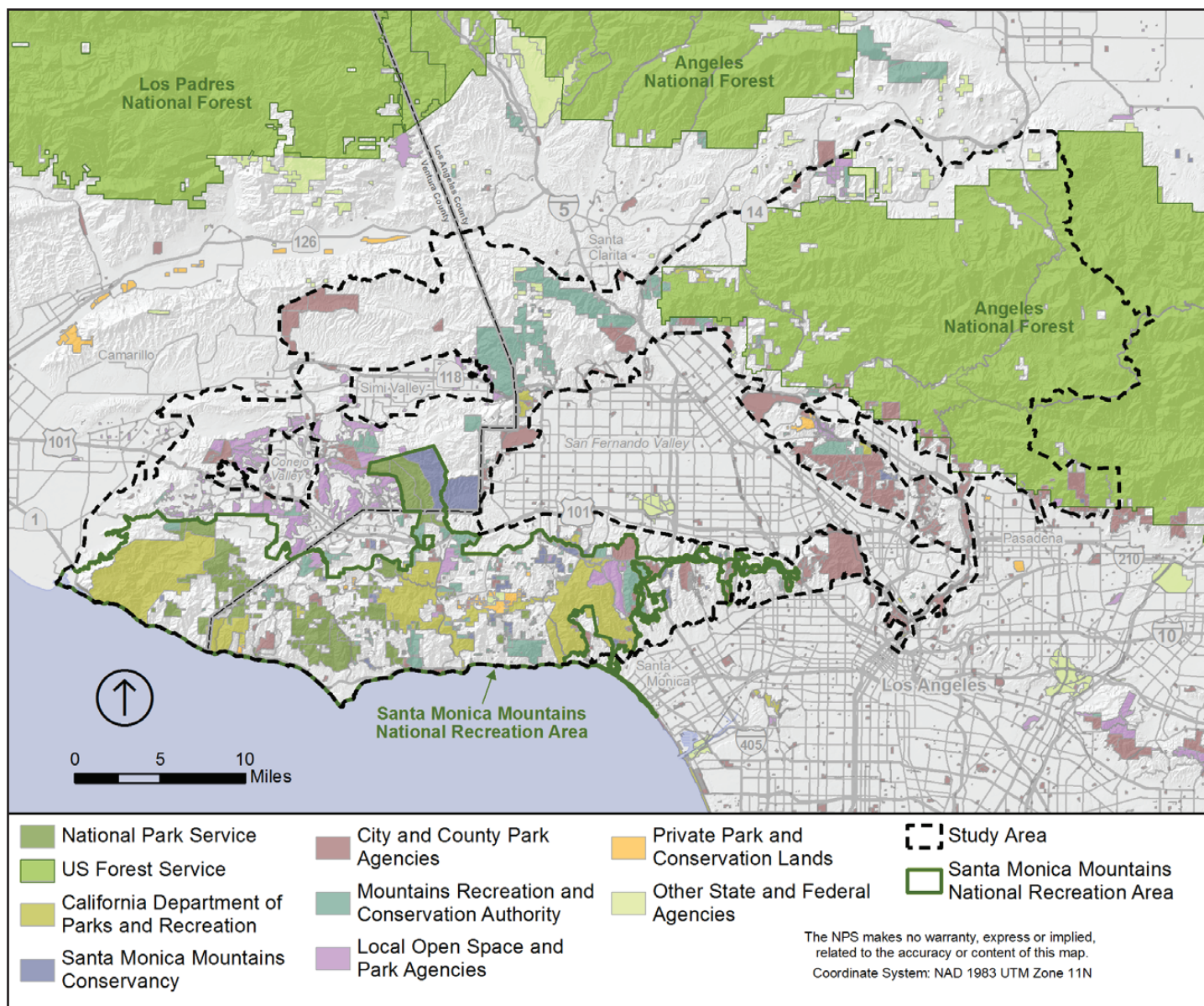


Figure 2-12: Parks and Open Space

Table 2-4: Approximate Acreage of Study Area Parks and Open Space

Parks and Open Space	Approximate acreage within study area	% of study area (707,000 acres)	% of study area open space
Angeles National Forest & San Gabriel Mountains National Monument	180,000	27.7%	52.9%
NPS Lands (SMMNRA, NPS-owned)	23,350	3.6%	6.9%
Bureau of Land Management Lands (BLM)	2,970	<1%	<1%
State Parks	37,280	5.7%	11.0%
County and Regional Parks	74,500	11.5%	21.9%
State Parks	37,280	5.7%	11.0%
Wilderness Parks	2,710	<1%	<1%
Historical Parks and Cultural Sites	1,150	<1%	<1%
Equestrian Parks (public)	75	<1%	<1%
Open space with no public access	6430	1.0%	1.9%
Total Open Space (including USFS and BLM lands)	339,990 acres		

Sources: California Protected Areas Database (CPAD) Version 1.9, March 2013, www.calands.org; SMMC Parks, August 2013, Santa Monica Mountains Conservancy

Notes: Some state parks are historical or cultural sites so these figures overlap (902.7 acres of overlap). Congressionally designated Wilderness areas acreage is included in the total acreage for the Angeles National Forest & San Gabriel Mountains National Monument.



In the Angeles National Forest and San Gabriel Mountains National Monument, waterfalls, like Eaton Falls shown on the left, are an important recreational feature. Trails to panoramic views of the Los Angeles basin and Pacific Ocean are another draw for visitors. Inspiration Point, shown on the right, has been a long time destination for visitors, including tourists accessing the mountains via the Mt. Lowe Railway in the early 1900s. Lefthand photo: Eric Lowenbach. Righthand photo: NPS.

Comprising over 70% of Los Angeles County's open space, the Angeles National Forest and San Gabriel Mountains National Monument primarily serve day-use and family recreation activities.

coming the Angeles National Forest in 1908. On October 10, 2014, President Obama established the San Gabriel Mountains National Monument which became the eighth U.S. Forest Service national monument. Located primarily in the Angeles National Forest, the monument is 346,177 acres as shown in *Chapter 1*, on page 4 (USFS 2014). Because the national monument is newly established, the following description is based on information about the Angeles National Forest, including those areas newly designated as the San Gabriel Mountains National Monument.

Visitation and Use

Located in the heart of the greater Los Angeles metropolitan region, more than 15 million people live within a 90-minute drive of the Angeles National Forest and San Gabriel Mountains National Monument. Proximity to such a large urban population means that these U.S. Forest Service managed areas are among the most visited in the United States. In 1992, the U.S. Forest Service reported that the Angeles National Forest was the second highest ranked national forest in the United States for intensity of use. The U.S. Forest Service estimates that over 3.5 million visitors come to the national forest on an annual basis making recreation the predominant use of the forest.

Comprising over 70% of Los Angeles County's open space, the Angeles National Forest and San Gabriel Mountains National Monument primarily serve day-use and family recreation activities. Almost all of the visitors are

local in origin. Because over 90% of the San Gabriel Mountains are steep and rugged, these visits tend to be concentrated in the developed recreation areas that are easily accessible by roads. Within the study area, major destination areas include Big and Little Tujunga Canyons, and the network of trails that are accessible from the foothill communities of the northeast San Fernando Valley, Crescenta Valley, and northwest San Gabriel Valley. Parks providing access to these trail networks include Wilson Canyon Park north of Sylmar, Deukmejian Wilderness Park in Glendale, Hahamonga Watershed Park and Eaton Canyon Park in Pasadena, and Sierra Madre Historical Wilderness Area in Sierra Madre. In addition, many local trail access points dot the edges of the Angeles National Forest and San Gabriel Mountains National Monument.

Waterfalls are an important recreational feature of the San Gabriel Mountains. Geologic uplift associated with the Sierra Madre fault system created numerous falls that dot the southern base of the mountains. Some of the most popular and easily accessed falls include the Pasadena Glen Falls, Millard Canyon Falls, Bailey Canyon Falls, Eaton Falls, and Switzer's Falls (Chester 2004).

In the western San Gabriel Mountains, most recreational facilities such as trailheads, picnic, areas, interpretive sites and campgrounds are located along the Angeles Crest Scenic Highway, the Angeles Forest Highway, Chantry Flat road, Sand Canyon/Little Tujunga

Recently, the U.S. Forest Service through its Southern California Consortium, has been providing environmental education and outreach to underserved urban communities on the importance of natural resources within southern California's national forests.

road, and Soledad Canyon road. The recently established Magic Mountain Wilderness area comprises 12,282 acres of the San Gabriel Mountains National Monument. However, no designated trails currently access this area. A segment of the Pacific Crest National Scenic Trail (Pacific Crest Trail or PCT) traverses the mountain divide and exits the forest near BLM lands in the Upper Santa Clara River area. The Gabrieleno National Recreation Trail also traverses this area of the national forest.

Visitor Services

Visitor services provided in the Angeles National Forest and San Gabriel Mountains National Monument includes interpretive services, visitor center management, interpretive media, in-forest concessions, management, fee collection, community outreach, visitor safety and law enforcement services. The overall mission of the interpretive services, visitor centers and education program is to forge intellectual and emotional connections between people and their natural and cultural heritage.

The U.S. Forest Service provides education and interpretation through visitor centers, interpretive sites and outreach programs. Located along the Angeles Crest Highway, the Chilao Visitor Center and Clear Creek Information Center each provide services and literature for visitors including environmental education activities, general forest information and forest related materials. There are also several interpretive sites at locations such as Red Box, Inspiration Point, and along the Upper Santa Clara River (Soledad). The Inspiration Point site offers an opportunity to learn about the history of the Mount Lowe Railway in the San Gabriel Mountains. The U.S. Forest Service also provides a number of interpretive and education programs. Recently, the U.S. Forest Service through its Southern California Consortium, has been providing environmental education and outreach to underserved urban communities on the importance of natural resources within southern California's national forests. Through this program, the U.S. Forest Service has established relationships in Hispanic and African-American communities in urban areas, with proposals to establish Native-American and Asian programs in the near future. The program also focuses on the recruitment and employment.

Also located in the Angeles National Forest, along the Angeles Crest Highway, is the Haramokngna American Indian Cultural Center. Operated by Pukúu Cultural Community Services, a native non-profit organization, the purpose of the cultural center is to share Native American history, heritage, and culture of the five regional tribes of the Angeles National Forest and San Gabriel Mountains National Monument. Those tribes include the Tongva, the Chumash, the Tataviam, the Kitanemuk, and the Serrano. The site features a visitor center, museum, and art gallery. Programs include festivals, and exhibitions.

Other community outreach includes activities that encourage the stewardship of national forest lands through the participation of people from local areas. These efforts foster sustainable recreation. Partnerships and volunteers are emphasized to improve visitor services and increase opportunities for interpretation and environmental education.

Throughout the Angeles National Forest and San Gabriel Mountains National Monument, the U.S. Forest Service manages hundreds of recreation special-use authorizations, including concession campground complexes, concession target shooting areas, ski areas, a marina, and organization camps. The U.S. Forest Service also issues and administers numerous recreational events, such as mountain bike events and car rallies (USFS 2005).

Facilities

The U.S. Forest Service operates over 350 buildings throughout the national forest and national monument areas. These range from restroom facilities, fire stations and administrative offices. In addition to the visitor centers and interpretive sites previously mentioned, the U.S. Forest Service operates 63 campgrounds with over 1,100 individual campsites and an additional 36 picnic areas. Numerous trails are located in the forest, these trails are described in the following section, Trails and Scenic Highways.

Multiple agencies maintain a large road network in the national forest and national monument, including bridges, culverts, low-water crossings and tunnels. The California Department of Transportation is responsible for one major highway in the study area portion of

Santa Monica Mountains National Recreation Area is a cooperative effort that joins federal, state, and local park agencies with private landowners to protect the natural and cultural resources of this transverse mountain range and seashore while providing public access and recreational opportunities.

the national forest, California State Route 2. Los Angeles County also maintains a portion of the road network. The U.S. Forest Service maintains 1,000 miles of roads.

The 2005 land management plan for the Angeles National Forest indicates that roads and trails will be maintained to minimize the level of effects to species and watersheds while safely accommodating use. National Forest staff plan to maintain approximately 10% of National Forest System roads to their objective maintenance level. Decommissioning of unneeded or unauthorized roads and trails will be emphasized. Angeles National Forest staff plan to complete site-specific road analysis on approximately 30% of the unclassified roads and make appropriate designations.

Wilderness Areas

There is one Congressionally designated wilderness area in the study area, which is located in the new San Gabriel Mountains National Monument. The Magic Mountain Wilderness area is 12,282 acres and was designated by Congress as a wilderness area in 2009. The area features steep narrow canyons with a combination of chaparral, pines and hardwood forests. This area provides habitat for many of the forest's threatened and endangered species. There are currently no officially designated trails that fall within this wilderness area.

Santa Monica Mountains National Recreation Area

Visitation and Use

Santa Monica Mountains National Recreation Area (SMMNRA) is located in the southwestern portion of the study area. Administratively, the national recreation area is a cooperative effort that joins federal, state, and local park agencies with private landowners to protect the natural and cultural resources of this transverse mountain range and seashore while providing public access and recreational opportunities. Four parkland management agencies own and cooperatively manage most of the public parkland within SMMNRA. California State Parks (CSP) owns approximately 35,850 acres covering five individual state parks and several beaches. NPS owns 23,500 acres covering 13 park sites and individual open space lands for habitat and trail connec-

tivity. Santa Monica Mountains Conservancy (SMMC) and its land management agency, Mountains Recreation and Conservation Authority (MRCA), own 15,160 acres covering 18 park sites. More than one-half the land base is within the California Coastal Zone, replete with scenic ridgelines and stunning views toward the Pacific Ocean and including 13 county and state public beaches along the coastline.

The mountains, beaches, historic sites, and wild landscapes of SMMNRA attract an estimated 33 million visits per year. The vast majority of visitors come from greater Los Angeles. An estimated two million visitors use the recreation trail network and participate in park educational programs. Visitation to NPS-managed sites in the recreation area totals approximately 500-700,000 people annually (NPS 2012c). Among the more popular recreation destinations within SMMNRA are beaches and trails. Besides beach and trail related activities, other recreation in SMMNRA includes camping, climbing, fishing, visiting historic sites, wildflower viewing, and wildlife viewing.

For many visitors, SMMNRA serves as a regular weekend beach trip or a site for daily visits to their local community or neighborhood park. Other visitors come to the recreation area from farther away on day trips as organized interest groups – seniors, youth groups, birding groups, educational groups, bicycle clubs, hiking and trail running groups, bus tours, special needs users, or family groups. Another group of visitors might be described as cultural heritage tourists, those who travel to see cultural and historic sites and engage in culturally related activities ranging from museums and historic house tours to craft fairs.

Sizable groups of regional visitors are drawn to SMMNRA for special events such as the annual Science Festival, themed special events (such as a sneak preview screening and reception for the Ken Burns film “The National Parks: America’s Best Idea”) and the BioBlitz (a 24-hour species inventory co-sponsored by National Geographic) which brought large crowds. Various commercial users constitute another visitor category at SMMNRA. These users may include people in the film industry on a shoot, corporations or non-profits using the park for a retreat or group picnic, or recre-

Santa Monica Mountains National Recreation Area Interpretive Themes

The following interpretive themes have been identified for Santa Monica Mountains National Recreation Area. Interpretive themes are often described as the key stories or concepts that visitors should understand after visiting a park—they define the most important ideas or concepts communicated to visitors about a park unit. The themes were developed as part of the 2012 long-range interpretive plan and have been adopted as part of the national recreation area's foundation document, as described in *Chapter 1: Introduction*.

- **Mediterranean Ecosystem** – In a growing urban environment, Santa Monica Mountains National Recreation Area preserves a substantial portion of the rare Mediterranean biome (ecosystem), a rapidly diminishing resource that exists in only five places in the world.
- **Escape / Open Space** – In a vast, expanding urban area, the open space of the Santa Monica Mountains provides an oasis for inspiration, renewal, and recreation.
- **Gateway to the National Park System** – Santa Monica Mountains National Recreation Area is a gateway for discovering America's natural wonders and cultural heritages and the need to preserve them.
- **Human Use/Cultures** – For more than 10,000 years, people have shaped this land, just as the land has shaped the people. These processes continue today.

ational services providers offering horseback riding, kayaking, or other kinds of tourism.

Visitor Services

A wide range of agencies provides visitor services and recreation in SMMNRA. Among these services are outreach, education, visitor safety and law enforcement, interpretation, volunteer programs, and visitor center management. A quarterly publication titled, "Outdoors," provides a schedule of programs and events offered by various public agencies throughout SMMNRA.

Interpretive Services and Public Programming

The NPS manages one visitor center (Anthony C. Beilenson Interagency Visitor Center located at King Gillette Ranch), one Native American Indian culture center (Satwiwa), one small weekend visitor contact station (Circle X), a portable visitor contact trailer, an information table at Paramount Ranch on the weekends, and a roving van staffed by NPS staff and volunteers. During heavy visitor use, NPS park rangers rove high visitation areas for several

hours and provide informal interpretation to visitors they encounter (NPS 2012c). The NPS also recently opened an outreach office at El Pueblo de Los Angeles Historical Monument in partnership with CSP.

Partners to NPS provide a range of interpretive and public programming within SMMNRA. CSP offers an array of interpretive services: interpretive tours, educational programs, summer community group programs, an annual whale festival, and seasonal campground programs. CSP also has visitor contact stations at Leo Carrillo, Sycamore Canyon, Malibu Creek State Park, Topanga State Park (Trippet Ranch – currently closed for renovation), Will Rogers State Historic Park, and Malibu Lagoon, where CSP facilitates docent-led tours at the Adamson House.

MRCA operates visitor contact stations at Franklin Canyon Park and Temescal Gateway Park. In addition, the Charmlee Wilderness Park has a small visitor contact station. MRCA also offers a wide range of programs within SMMNRA including curriculum-based environmental education programs; after-school programs for at-risk youth; public programs for seniors, families and small children; transportation programs that offer groups and organizations the opportunity to visit public open space; and training programs for individuals and other park professionals.

Visitors can also take advantage of the several Junior Ranger programs throughout SMMNRA offered by NPS and MRCA.

Outreach

In 2010, the NPS interpretive division formally established an outreach branch to lead future efforts to connect the park, its resources, and its mission with urban audiences in the Los Angeles area. This branch also serves as a resource for existing outreach efforts undertaken by staff from various divisions throughout the park.

A very successful youth employment program called SAMO Youth, begun in 2000, introduces students to the National Park Service mission and the benefits of environmental careers while accomplishing much-needed work at the park. This training and employment program is designed to reach students early



Education programs in Santa Monica Mountains National Recreation Area provide opportunities for urban school aged children to visit the national park system and sometimes engage in hands-on conservation work. Photos: NPS.

in their career decision-making. In particular, this program serves youth who may not otherwise have discovered the National Park Service as a career choice because of limited exposure to the park or the agency.

Education

The NPS education team at SMMNRA has developed a continuum of popular, high-quality curricula with close attention to California state education standards and, where applicable, the National Science Education Standards. Education programs range from kindergarten through high school and are aligned to state curriculum objectives for designated subject areas. Many of these programs are conducted at NPS sites and some involved hands-on habitat restoration work.

The NPS education team at SMMNRA is also working with the Santa Monica Mountains Education Consortium on its five-year education plan to encourage collaboration and communication on the use of the resources of the recreation area for K-12 science education. In addition, the park has recently implemented the Teacher-Ranger-Teacher (TRT) Program, a nationwide program that introduces teachers and their students to the NPS.

The park's educational offerings also draw on the resources of the Southern California Research Learning Center (SCRLC), one of a network of 17 NPS Research Learning Centers across the nation. SCRLC programs focus primarily on college-level students and university-affiliated researchers, as well as Public

Participatory Science including the Climate Change Ambassador and the National Native Bee/Climate Change programs.

SMMNRA is a pilot park for the California Phenology Project, which is an effort among several national parks in California to engage visitors in citizen science monitoring efforts that contribute to climate change research.

Other SMMNRA partners also offer high-quality, curriculum-based educational programming. A 2010-2011 sampling of programs includes the following (NPS 2012c):

- CSP offers educational programming for grades 3-12 on marine ecology at Leo Carrillo State Park; native plants and wildlife at Point Mugu State Park; habitat preservation and wetlands functions at Malibu Lagoon; and habitat preservation and wilderness safety at Malibu Creek.
- MRCA offers three- to five-day residential educational camps focusing on natural sciences, social sciences, outdoor skills, and team- and leadership-building at King Gillette Ranch and Temescal Gateway Park. MRCA also works with the NPS education team to provide interpretive nature hikes for K-6th grades at Franklin Canyon Park.
- The Mountains Restoration Trust offers a Youth Naturalist Program, a Discovery Nature Camp, and the SHRUB program for children and youth, as well as programs in conservation, restoration,



Several visitor facilities operated with partners and volunteers are found in SMMNRA, including several owned by NPS. Satwiwa Native American Indian Cultural Center at Rancho Sierra Vista (left), and the new Anthony C. Beilenson Interagency Visitor Center at King Gillette Ranch. Photos: NPS.

Like most National Park Service sites, SMMNRA could not function at current levels without its volunteers. The park registered over 8,000 individual volunteers who contributed more than 86,167 volunteer hours in FY2011 (NPS 2012c).

- natural and cultural history, and native plants for grades 2-12.
- The Resource Conservation District (RCD) of the Santa Monica Mountains offers programs for grades K-6 on Chumash cultural and natural history at Topanga State Park, and science programming for grades 4-6 on freshwater lake habitats at Sepulveda Basin Wildlife Reserve and Malibu Lagoon.
- The Children's Nature Institute offers a regular schedule of Outreach Field Discovery trips to SMMNRA.
- NatureBridge, the newest educational partner in SMMNRA, began offering overnight programming for youth organizations and students in grades 4-12 at Circle X Ranch in 2010.

Volunteers

Like most National Park Service sites, SMMNRA could not function at current levels without its volunteers. The park registered over 8,000 individual volunteers who contributed more than 86,167 volunteer hours in FY2011 (NPS 2012c).

Volunteer programs range from the Mountain Bike Unit and the Mounted Volunteer Patrol, to partnerships with national and local organizations such as the Sierra Club, Boy Scouts and Girl Scouts U.S.A., Santa Monica Mountains Trails Council, and local colleges to provide volunteers for special events such as National Trails Day, National Public Lands Day, Keep America Beautiful, the Great Amer-

ican Clean Up, and Earth Day. Other growing volunteer resources derive from providing community service opportunities for high school and college students. SMMNRA has also developed volunteer projects for college students from programs such as AmeriCorps, Student Conservation Association, and Alternative Spring Breaks (NPS 2012c). In addition, a group of approximately 25 people provide consistent support for interpretive, education, and outreach activities throughout SMMNRA; and a core of some additional 60 volunteers assist NPS and MRCA with interpretive programming in Franklin Canyon. These volunteers help with educational programming, lead hikes, present special programs within their areas of interest, and volunteer their skills in technology and other expertise to assist in programming (NPS 2012c).

Facilities

As with visitor services, there is a broad range of agencies that provide recreation in SMMNRA, and as such, facilities are owned and managed by several entities.

SMMNRA encompasses more than 35 different sites and facilities where recreation, interpretative and education activities are currently provided, including those sites described above under Visitor Services.

Several NPS-owned sites have basic facilities such as parking areas, kiosks, signs, trails, and in some cases picnic areas, restrooms and water. This characterizes Arroyo Sequit, Cheeseboro/Palo Comado Canyons, Rocky Oaks,



Hansen Dam, located along Tujunga Wash near the base of the San Gabriel Foothills, includes diverse facilities, including two equestrian centers. The area is a popular location for equestrian uses. Photo: NPS.



A variety of California State Parks operates in the study area, including some newer, more urban-oriented parks such as Los Angeles State Historic Park. Photo: California State Parks.

Two significant flood risk management facilities, Sepulveda Dam Basin and Hansen Dam Basin include recreation uses through long term leases with the City of Los Angeles.

Solstice Canyon, and Zuma/Trancas Canyons. Other NPS owned sites in SMMNRA include visitor, educational and interpretive facilities including those described under Interpretive Services and Public Programming at King Gillette Ranch, the Satwiwa Native American Indian Cultural Center at Rancho Sierra Vista, Franklin Canyon Park, and Circle X Ranch. Still other NPS owned facilities include Paramount Ranch, featuring the “Western Town” movie set, and Peter Strauss Ranch, which was a ranch and resort and still retains features from those uses. Several of the NPS lands are cultural landscapes that are listed, eligible, or potentially eligible for listing on the National Register of Historic Places (NRHP).

There are 16 campgrounds within SMMNRA, six of which are designated for group use. The group campgrounds range in maximum capacity from 20 to 150 people. The non-group campgrounds provide 342 tent and RV sites throughout SMMNRA. The largest campgrounds are operated by CSP and include Sycamore Canyon, Leo Carrillo, Thornhill Broome and Malibu Creek. Two walk-in campgrounds, La Jolla in Pt. Mugu State Park and Musch Camp in Topanga State Park are also managed by CSP. CSP also manages several large picnic areas including Sycamore Cove and Piuma (part of Malibu Creek State Park). There are two commercial use permittees for SMMNRA that rent horses and give tours on NPS land. The national recreation area also contains an extensive network of trails and related facilities as described in the next section.

Bureau of Land Management Lands

The Bureau of Land Management (BLM) manages nearly 3,000 acres of land in the study area. These lands consist of isolated parcels scattered throughout Soledad basin, which are managed by BLM’s South Coast District Resource Management Plan. This plan has designated most of the parcels in the study area for sale or exchange under Federal Land Policy and Management Act of 1976 (FLPMA). The FLMPA declared it the policy of the United States that, “...the public lands be retained in federal ownership, unless as a result of the land use planning procedure provided in this Act, it is determined that disposal of a particular parcel will serve the national interest...” As a result, several parcels are designated for exchange with the U.S. Forest Service (BLM 1994).

U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers operates several dam facilities in the Los Angeles basin the primary purposes of which relate to flood risk management and water resources. Other activities that do not impede or diminish the purpose of flood risk management are permitted in these areas by the U.S. Army Corps of Engineers, most notably recreation. Since the 1940s, the U.S. Army Corps of Engineers has been authorized to construct, maintain, and operate public park and recreation amenities as part of these dam and basin projects, and to permit the construction, maintenance, and operation of such amenities (USACOE 2011b). Two significant flood risk management facili-



Ed Davis Park in Towsley Canyon, located in the eastern Santa Susana Mountains and managed by the Mountains Recreation and Conservation Authority, includes trails for walking, hiking, and mountain biking through a variety of habitat types. Photo: NPS.



Los Angeles County Department of Parks and Recreation operates a variety of visitor centers in and near the study area including Placerita Canyon Nature Center (shown), and Eaton Canyon Nature Center. Photo: NPS.

Both Los Angeles State Historic Park and Rio de Los Angeles State Park are located along the Los Angeles River and were in large part the result of grassroots advocacy to bring this additional park and open space land to underserved communities.

ties, Sepulveda Dam Basin in the southern San Fernando Valley along the Los Angeles River, and Hansen Dam Basin at the confluence of Big and Little Tujugna Washes in the northeastern San Fernando Valley, include recreation uses through long term leases with the City of Los Angeles.

The recreation lease area at Sepulveda Dam Basin includes approximately 1,500 acres with facilities including two public golf courses, a universally accessible playground, several sports facilities, a garden center, a Japanese garden, model airplane facility, a dog park, an intergenerational center, a miniature golf course, a velodrome, individual park areas with picnicking, playgrounds, and sports fields, and natural areas (USACOE 2011b). The recreation lease area for Hansen Dam Basin is approximately 1,300 acres. Current uses in the basin includes an aquatic center with a lake for fishing, boating and a separate lake for swimming; a golf course; a sports complex; a recreation center; a park facility with picnic, sports and trail facilities; and two equestrian centers. Recreational trails are found throughout the Hansen Dam Basin (USACOE 2011).

State Parks

California Department of Parks and Recreation (CSP) owns and manages a diverse range of facilities from state beaches, to wildland parks, to urban and historic parks. More recently in the agency's history, CSP has added two urban parks to the study area, including Rio de Los Angeles State Park and Los

Angeles State Historic Park, providing close to home access to more urban communities. Both of these parks are located along the Los Angeles River and were in large part the result of grassroots advocacy to bring additional park and open space land to underserved communities.

In all, CSP operated 14 sites in the study area. In addition to the two newer urban parks mentioned above, Los Encinos State Historic Park is also located in urban Los Angeles. Five CSP sites, Point Mugu, Leo Carrillo, Malibu Creek, and Topanga state parks, and Will Rogers State Historic Park, are entirely within the boundary of SMMNRA. Other state park facilities are public beaches including Robert H. Meyer Memorial State Beach, Point Dume State Beach, Malibu Lagoon State Beach, and Will Rogers State Beach among others. Other CSP sites in the study area include Santa Susana Pass State Historic Park and Placerita Canyon State Park.

County and Regional Parks

The Los Angeles County Department of Parks and Recreation manages numerous parks throughout the study area. Some county parks function as local and community parks for unincorporated areas of Los Angeles County while others function as large regional parks that offer many types of recreational opportunities to a large service area. In addition, Los Angeles County manages a series of sites classified as natural areas, most of which include nature centers. Additional facilities managed

by Los Angeles County as recreational facilities include the Hollywood Bowl and John Anson Ford Amphitheatre, both of which are large outdoor performing arts facilities located within park-like settings. The County of Ventura manages four regional parks within the study area, including Happy Camp Regional Park in Moorpark, Oak Park and Tapo Canyon Park, both in Simi Valley, and Santa Rosa Valley Park in Thousand Oaks.

A number of open space and park sites that function for regional use are owned and/or managed by state-established conservancies, such as the Santa Monica Mountains Conservancy, special districts, and joint powers authorities. A joint powers authority (JPA) is an entity whereby two or more public authorities such as local governments or special districts operate collectively under a separate board to address common goals. JPAs are commonly used in the region for open space, parks, and recreation purposes.

Local and Community Parks

Local and community parks are generally less than 50 acres and are designed to serve the active recreational needs of neighborhoods and communities. The types of parks that would fall in this category include athletic fields and courts, playgrounds, and pocket parks. Activities include play, organized sports, picnicking, barbecuing, and hiking or walking on trails. Nearly 200 local and community parks are located in communities throughout the study area. Together these parks provide over 12,000 acres of land managed specifically for recreational use. These parks are typically managed by city park agencies and community services departments.

Griffith Park in the City of Los Angeles is one of the largest municipal parks in North America, spanning 4,217 acres. A gift to the people of Los Angeles by Colonel Griffith J. Griffith in 1896, the park is also the largest City-designated historic landmark in Los Angeles. The park is located at the eastern terminus of the Santa Monica Mountains and includes portions of the adjacent Los Angeles River. The park provides a broad range of developed facilities such as the Los Angeles Zoo and Botanical Gardens, the Griffith Observatory, the Greek Theatre, the Autry National Center

(a museum), Travel Town Transportation Museum, a visitor center, and four golf courses. By contrast, the park also includes large areas of natural habitat including chaparral, woodland and riparian vegetation. Fifty-six miles of hiking and equestrian trails throughout the park offer passive recreation and exceptional scenic views of the region. Located north of downtown Los Angeles, Griffith Park is adjacent to dense populations in the Los Angeles basin and the San Fernando Valley, serving as an urban oasis.

An analysis conducted by the Trust for Public Land demonstrated that higher density communities with lower than average median income in Los Angeles County typically do not have adequate access to local and community parks (TPL 2004). Although many cities in the study area have ample access to local and community parks, others have few or no parks available. The section *Recreation Needs and Opportunities* discusses this issue further.

Local Wilderness Parks

In recent years land conservancies and municipal governments have cooperated to preserve wilderness parks. Wilderness parks are large undeveloped open spaces that provide passive recreational opportunities and protect habitat for wildlife. Recreational activities include hiking, biking, horse riding and dog-walking. Wilderness parks are typically located in foothill communities such as Glendale, Pasadena and Sierra Madre and provide recreational connections to the Angeles National Forest. Over 2,700 acres of land in the study area has been designated as this type of parkland.

Pasadena manages a unique kind of natural park called a watershed park. Hahamongna Watershed Park is located above Devil's Gate Dam adjacent to the Angeles National Forest. Established in 1997, these lands were previously used for sand and gravel mining operations. When these operations ceased, habitat was restored and a park that integrates water resource conservation facilities was established based on community input and participation. The park is meant to be a showcase for water and natural resources education and utilization, preservation of native plants and habitat, Native American culture and both passive and active recreation.

Historical Parks and Cultural Sites

Often cultural and historic sites occur within a park-like setting and are managed by government agencies or non-profit organizations. These facilities tend to have an educational mission, providing opportunities for outreach and education. Examples of historic parks in the study area include Los Angeles State Historic Park, Los Encinos State Historic Park, Santa Susana Pass State Historic Park and Will Rogers State Historic Park, all managed by the State of California. Local historical parks, museums and markers that commemorate historical events and features are found throughout the study area. El Pueblo de Los Angeles Historical Monument in downtown Los Angeles is an example of a locally managed cultural site.

Equestrian Parks, Centers, and Districts

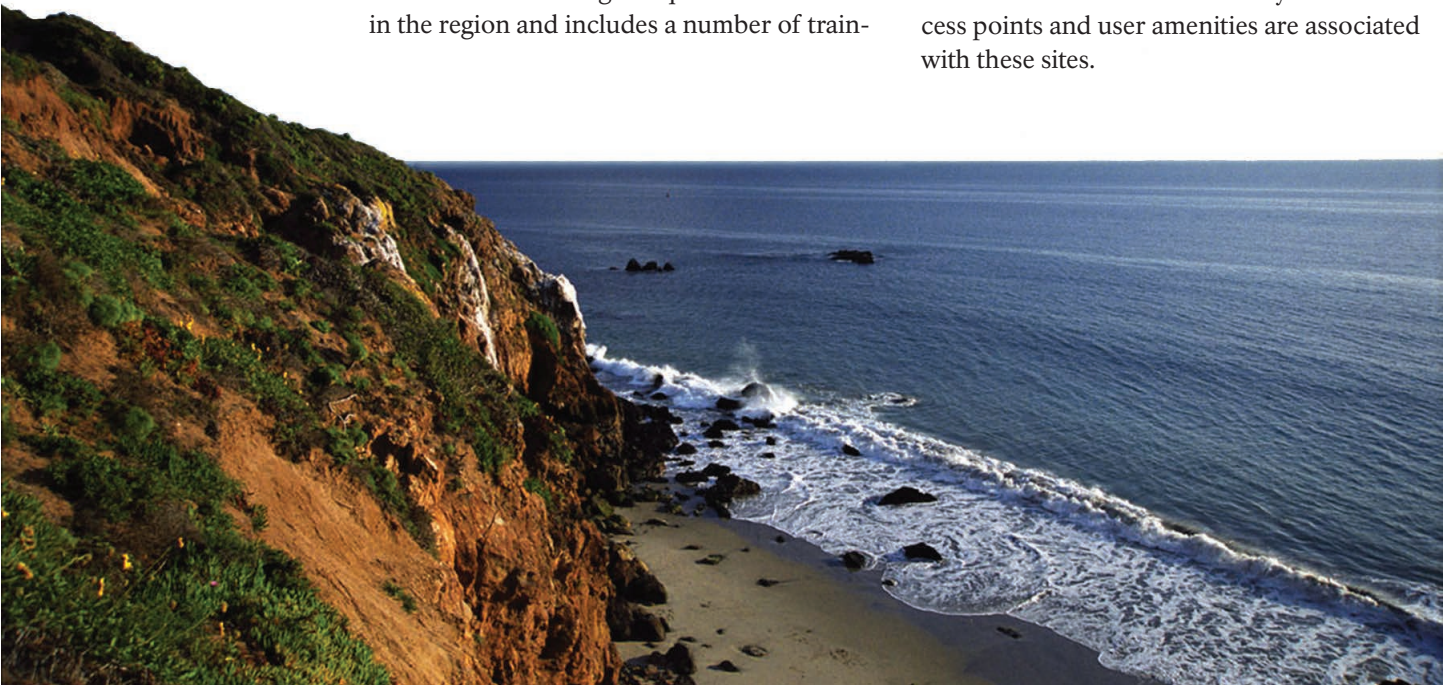
Use of trails and river corridors by equestrians has a long history in the study area. Although some of these facilities have been displaced by urban development, many facilities remain and include robust equestrian communities across the study area. Most equestrian oriented facilities are located along the urban-open space interface areas where land use patterns and associated policies facilitate horsekeeping and equestrian recreation facilities. Many facilities are operated by private entities, but some publicly owned and managed facilities also are located within the study area. The Los Angeles Equestrian Center within Griffith Park is one of the largest equestrian facilities in the region and includes a number of train-

ing and show arenas, boarding facilities and connections to trails.

Several local jurisdictions such as the cities of Los Angeles, Burbank, Simi Valley, Malibu, and Santa Clarita have designated residential equestrian districts in the study area. Several unincorporated communities also have land use designations for residential horsekeeping such as Altadena, Acton, and Agua Dolce. Equestrian districts are established to recognize particular areas where the keeping or maintaining of horses and other large domestic animals for the personal use of members of the family residing on the premises is permitted.

Beaches

The study area includes large contiguous stretches of beaches, including iconic sites known for their scenic quality and historic and current association with ocean-based activities such as surfing. Along the coastal portion of the study area, California State Parks operates five major beaches including those at Point Mugu State Park, Leo Carrillo State Park, Malibu Lagoon State Beach, Point Dume State Beach, and Robert H. Meyer Memorial State Beach (LADBH 2013). Los Angeles County manages another 8 beaches, including Nicholas Canyon, Zuma Beach, Point Dume, Dan Blocker Beach, Malibu Surfrider Beach, Las Tunas Beach, Topanga Beach, and Will Rogers Beach (LADBH 2013) as well as a number of smaller beaches. A variety of coastal access points and user amenities are associated with these sites.



Many continuous stretches of beaches are located in the study area, including Point Dume State Beach. Photo: NPS.

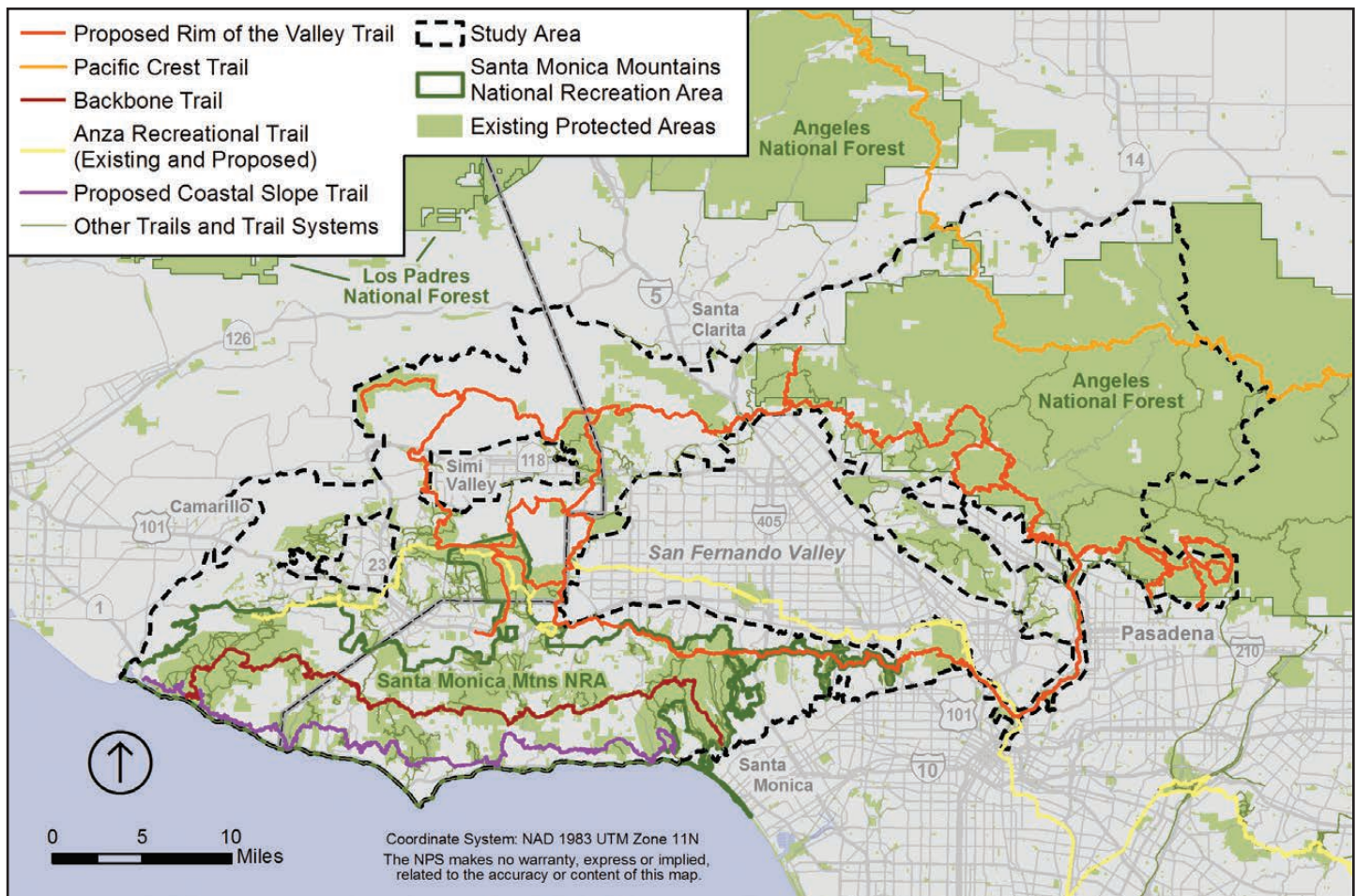


Figure 2-13: Regional Trails

The increasing demand for trails is exemplified in the 2007 Public Opinions and Attitudes on Outdoor Recreation conducted for California State Parks which revealed through surveys that the top outdoor activity in the state is recreational walking, with bicycling on paved surfaces ranked as third, and day hiking on trails as fourth (CSP 2009).

Trails and Scenic Highways

Trails and scenic highways provide opportunities for hiking, horseback riding, running, biking, and leisure driving. They also provide a means of connecting people to places including parks and open spaces where they can partake in other recreational activities. The study area contains a wide range of trail types including paved trails separate from roadways, unpaved trails, and nationally recognized scenic, historic, and recreation trails.

Trails

Trail corridors allow people to connect from their communities to open space and park resources, while experiencing their surroundings and contributing to their mental and physical well-being. Trail use also provides opportunities for social interaction. With the integration of educational and interpretive elements, trails also become spaces for connecting people to special places and their stories. The increasing demand for trails is exemplified in the 2007 *Public Opinions and Attitudes on Outdoor Recreation* conducted for

California State Parks which revealed through surveys that the top outdoor activity in the state is recreational walking, with bicycling on paved surfaces ranked as third, and day hiking on trails as fourth (camping at developed sites was ranked second)(CSP 2009). When asked if they would increase their participation in any particular activities if good opportunities became available, respondents indicated that recreational walking and trail hiking were in the top three activities in which they would engage. The value of trails to communities is also reflected in local jurisdictions' polling of residents. As part of the City of Los Angeles' 2009 Recreational Needs Assessment process, residents were surveyed about unmet recreation needs. Respondents were presented a list of 30 various parks and recreation facilities and were asked to indicate which ones they and members of their household experienced a need for. The parks and recreation facilities with the highest percentage of need from respondent households were walking and biking trails (63%), small neighborhood parks (60%), large community and regional parks (53%),

shelters and picnic areas (50%) and nature trails (46%)(City of Los Angeles 2009).

Many trails exist in the upland mountains and foothills of the region. However, trail corridors also follow waterways which provide the ability to traverse and connect subwatershed areas as well as other open space areas. Trail corridors, depending on their widths, provide opportunities for integrating native vegetation and limited habitat and groundwater recharge and water quality improvement features such as bioswales.

Trails are maintained by a broad range of agencies. In the Santa Monica Mountains, nearly 500 miles of trails and roads are managed by the NPS, California State Parks, and a variety of regional and local agencies. The Angeles National Forest offers hundreds of miles of hiking and equestrian trails which include portions of National Recreation Trails, and the Pacific Crest National Scenic Trail. Trails in the Angeles National Forest are open to hiking, equestrian and mountain bike use, except for the Pacific Crest National Scenic Trail and trails in designated wilderness areas.

In the urban areas, trails are primarily used for two purposes, recreation and non-motorized transportation. The County of Los Angeles manages a regional trail network. Their trails are described as multi-use “riding and hiking trails,” but not all of the trails are necessarily feasible for equestrian use. The City of Los Angeles’ recreation trails, primarily found in parks such as Griffith and Elysian Parks, are currently limited to hiking and equestrian uses. Other local agencies have adopted trails plans and policies, often in coordination with adjacent jurisdictions to promote trail connectivity.

Trail data for this area is inconsistent because of the many agencies that manage trails. Agencies which have trail data include the Angeles National Forest, the Santa Monica Mountains Conservancy, the Mountains Recreation and Conservation Authority, Conejo Open Space and Conservation Agency, and the Los Angeles County Department of Parks and Recreation hiking and riding trails. Various municipal governments also collect trail data.

National Trails

The study area contains trails designated under the National Trails System, a network of scenic, historic, and recreation trails created by the National Trails System Act of 1968. These trails provide for outdoor recreation needs, promote the enjoyment, appreciation, and preservation of open-air, outdoor areas and historic resources, and encourage public access and citizen involvement. The study area includes all three types of national trails (*Figure 2-13: Regional Trails*).

National scenic and historic trails preserve stories that are essential to a true understanding of the American experience. Although national scenic trails and national historic trails may only be designated by an act of Congress, national recreation trails may be designated by the Secretary of the Interior or the Secretary of Agriculture to recognize exemplary trails of local and regional significance in response to an application from the trail’s managing agency or organization. National scenic and historic trails within the study area include the Pacific Crest National Scenic Trail, the Juan Bautista de Anza National Historic Trail and the Old Spanish National Historic Trail. National Recreational Trails include the Gabrieleno Trail, the Los Angeles River Trail and the Silver Moccasin Trail.

Established in 1968, the Pacific Crest National Scenic Trail spans 2,650 miles from Mexico to Canada through three western states, revealing the beauty of the desert, and the Sierra Nevada, Transverse and the Cascade Ranges. In the study area, the trail traverses the Angeles National Forest entering at Cajon Pass and traversing across Blue Ridge, past Mt. Baden-Powell eventually descending to Highway 14 at Agua Dulce where it enters the Sierra Pelona. The vistas from the trail in the Angeles National Forest include the Los Angeles basin and Mojave Desert.

The Juan Bautista de Anza National Historic Trail (Anza Trail), which is managed by the National Park Service, commemorates the route followed by a Spanish commander, Juan Bautista de Anza, in 1775-76 when he led a contingent of 30 soldiers and their families through what is now Mexico, Arizona and California to found a presidio and mission



The Glendale Narrows section of the Los Angeles River Trail north of downtown Los Angeles is designated as the recreation route for the Juan Bautista de Anza National Historic Trail as well as being a designated national recreation trail. Through partnerships with local organizations, NPS has installed interpretive signs along this section of the trail. The Los Angeles River Trail and Greenway is envisioned by local agencies and communities as a recreation corridor that includes water-based recreation and trail and bikeway uses. Photos: NPS.

near the San Francisco Bay. This unit of the national park system has an auto route and a recreational route. The recreational route is currently planned along the Los Angeles River from El Pueblo de Los Angeles Historical Monument north and then west to the Simi Hills. Portions of the Anza Trail pass through SMMNRA before continuing north.

The Old Spanish National Historic Trail (Old Spanish Trail) commemorates the Santa Fe-to-Los Angeles route that sent dry goods west and horses and mules east. The Old Spanish Trail forged the first overland link to California for the east coast markets served by the Santa Fe Trail and the trade-hungry markets of Mexico and New Mexico using El Camino Real de Tierra Adentro. The trail, which is more than 2,700 miles long and crosses New Mexico, Colorado, Arizona, Utah, Nevada, and California, goes through the eastern Los Angeles region paralleling the Juan Bautista de Anza National Historic Trail before terminating at El Pueblo de Los Angeles Historical Monument.

The BLM and NPS work with partners to provide recreation, public education and interpretation, including: marking trails for public use, conducting historic and archeological research, developing visitor services and facilities, and protecting trail-related sites and segments along the historic routes.

The Gabrielino Trail follows the route of an original 1920s road that ran from Pasadena

north up the canyon past wilderness resorts and old rustic cabins. The road lost its appeal after the Angeles Crest Highway was built, but today it has reinvented itself as a multiuse trail for hikers, horseback riders, mountain bikers, and birders. Much of the hike follows a gurgling stream past thick groves of live oak, sycamore, Douglas-fir, and big-leaf maple trees. Except for the first half mile, the path is almost entirely in the shade, making it a great year-round hike. Some hikers prefer to begin at the northern end of the Gabrielino Trail, heading south into the forest from Switzer Falls Picnic Area and ending at the Arroyo Seco trailhead.

The Los Angeles River Trail currently exists in segments of what will eventually be a 51-mile greenway trail. The 7-mile section that extends through the river reach called the Glendale Narrows is designated as a national recreation trail, and as the trail is extended, those reaches will also be designated. Through the Glendale Narrows, the river is more natural because the bottom of the channel was never paved, allowing vegetation to grow in the channel. Historically, the river flowed freely across a vast floodplain—varying its seasonal path by many miles—but was channelized in concrete after devastating floods in the 1910s and 1930s. Today, efforts are underway to restore ecological value to the river in order to encourage the proliferation of native species and respect to it as a natural and cultural heritage resource. This reach of the Los Angeles River Trail also serves as the Anza Trail recreation route.

An interagency trail management plan is currently being prepared for SMMNRA to address network management issues that have accrued over the years.

The Silver Moccasin Trail is the oldest designated national recreation trail and stretches 51 miles through the Angeles National Forest backcountry. The trail runs from Red Box down the West Fork of the San Gabriel River, up Shortcut Canyon and across the head of Big Tujunga to Charlton Flat and onto Chilao. From this point it follows along the Pacific Crest Highway to Mt. Baden-Powell and ends at Vincent Gap. This trail has been used by the Boy Scouts of America since 1942. Those that successfully complete the 5-day trip receive a Silver Moccasin badge.

Santa Monica Mountains National Recreation Trails

Within SMMNRA, a nearly 500-mile public trail network made up of trails and unpaved service roads is heavily used by hikers, joggers, equestrians, and mountain bikers. Many others enjoy the trails for birdwatching, picnicking, painting, and photography. An additional 100 miles of public trails are on parklands adjacent to the Santa Monica Mountains trail network; several of those trails connect to the recreation area. There are over 130 official trailheads throughout SMMNRA.

The physical pathway for the premiere east-west regional trail across the national recreation area, the 65-mile Backbone Trail system, is complete, with just two remaining private parcels to be acquired for an uninterrupted public right-of-way on the trail. Two backcountry camps exist along the Backbone Trail system, and the public has long expressed a vision for a string of such camps to allow a multi-day trek.

An interagency trail management plan is currently being prepared for SMMNRA to address network management issues that have accrued over the years. The park agencies within SMMNRA inherited many utility roads and old ranch roads that began to be used as recreation trails. The roads were not all constructed to public trail management standards, thereby incurring potential natural and cultural resource impacts. There are also some 200 miles of other unpaved roads and unauthorized trails that need to be planned for inclusion or exclusion from the public trail network. New trails have also been proposed and will be evaluated for potential resource impacts and recreational access needs.

Angeles National Forest Trails

In addition to the popular National Recreation Trails described above, the Angeles National Forest provides hundreds of miles of trails and fire roads. John W. Robinson's book *Trails of the Angeles: 100 Hikes in the San Gabriels* (2001) provides good descriptions of these trails. They range from strenuous to easy and provide access to historic structures, high mountain peaks and wilderness areas. With the exception of the wilderness areas, trails are generally open to mountain bikes. Equestrians also make use of the Angeles National Forest Trails. Many miles of trails are also available for off-highway vehicle use (OHV).

County and Regional Trails

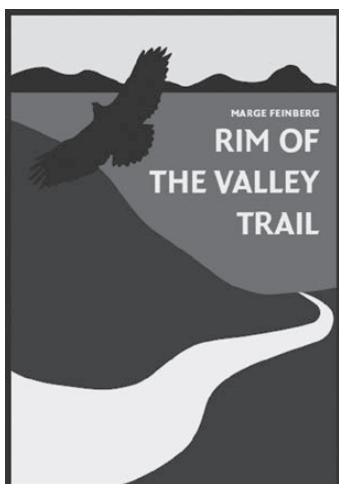
Regional trails and greenways are located throughout the study area linking various parks and open spaces. "Los Angeles County Riding and Hiking Trails" map identifies both existing and proposed trails in the county. Regional trails identified in their document include regional trails, including the Rim of the Valley Trail and Backbone Trail, which are identified as non-county trails, and the Los Angeles River Trail, which is identified as a county trail. The trails map also identifies the Santa Clara River Trail, which will include both county and local trail portions.

In addition to regional trails, the County of Los Angeles has existing and planned trails within unincorporated communities in or adjacent to the study area, primarily in the Santa Monica Mountains, the San Gabriel foothills (including the Altadena and La Crescenta areas), and the area between Sylmar and the City of Santa Clarita, and the Soledad basin. Trail planning is currently underway for the Santa Susana Mountains above the northwest San Fernando Valley area. The County of Los Angeles adopted a trails manual in 2011 to facilitate coordinated trail planning and design in the county.

Ventura County identifies several regional trails in their general plan's Public Facilities and Services Appendix (Ventura County 2007). The majority of the identified regional trails in the study area are owned and managed by other agencies, including NPS, State of California, Conejo Recreation & Parks District, Conejo Open Space Conservation Agency, and Rancho Simi Recreation and Parks



Segments of the Rim of the Valley Trail have been implemented over time, but approximately 40 percent of the trail remains unbuilt. NPS photo.



In 2003, the Rim of the Valley Trail was formally legislated to be renamed the Marge Feinberg Rim of the Valley Trail in recognition of the originator of the trail concept. Image: California State Parks, 2011.

District. The County's regional trails in the study area are planned and located in Happy Camp Regional Park in Moorpark and in Oak Park located in Simi Valley. Ventura County is currently preparing a trails master plan for the Santa Rosa Valley area, located in the western portion of the study area between the cities of Moorpark and Thousand Oaks.

Rim of the Valley Trail

Conceived in the 1970s by Marge Feinberg in her master's thesis, the Rim of the Valley Trail was envisioned as a trail that would encircle the San Fernando Valley and connect major open space areas. A master plan for the Rim of the Valley Trail Corridor was prepared in 1990 by the Santa Monica Mountains Conservancy and encompasses the entire upper Los Angeles River watershed area within the Angeles National Forest and portions of the Upper Santa Clarita River watershed, linking the Santa Monica Mountains, Simi Hills, Santa Susana Mountains, San Gabriel Mountains, Verdugo Mountains, Los Angeles River and Arroyo Seco. The trail route as planned is approximately 200 miles long and nearly 40% complete (CDPR 2011). Numerous regional and local trails connect to the Rim of the Valley Trail route. Responsible jurisdictions are Los Angeles County, Ventura County, City of Los Angeles, U.S. Forest Service, National Park Service, and California Department of Parks and Recreation (CDPR 2002).

The central loop of the planned Rim of the Valley Trail encircles the San Fernando and La Crescenta Valleys. The western section of

this loop trail is bounded by the Upper Las Virgenes Canyon Open Space Preserve in the Simi Hills and Rocky Peak Road in the Santa Susana Mountains. In the Santa Monica Mountains, the trail would follow existing dirt Mulholland and continue east along Mulholland Drive to Griffith Park. From existing trails in Griffith Park, the planned Rim of the Valley Trail drops into the Los Angeles River on an existing bike trail. From there an existing bike trail leads past several pocket parks to the confluence with the Arroyo Seco near downtown Los Angeles. On the north, the Rim of the Valley Trail would cross through the Santa Susana Mountains to connect with existing trails in the foothills of the Angeles National Forest in the San Gabriel Mountains and Hahamonga Watershed Park before turning south along the Arroyo Seco. A segment of the trail also extends north through the San Gabriel Mountains to the Santa Clarita Valley.

West of the San Fernando Valley, the Rim of the Valley Trail could also include loops around Simi Valley and the Simi Hills with an extension to Happy Camp Canyon in Moorpark and Cheeseboro Canyon in Agoura. From the Arroyo Seco in the San Gabriel Mountains, the trail continues east to Eaton Canyon, Santa Anita Canyon and Mount Wilson.

The Rim of the Valley Trail could also serve as an important connection to a myriad of trails and trailheads that provide access to various communities and trail systems throughout the study area. Among the trails and trail systems that could be accessed from the Rim of the Valley Trail are those owned or operated by a number of agencies including many local municipalities and open space organizations such as the Conejo and Rancho Simi Recreation and Park Districts, the Mountains Recreation and Conservation Authority, the Santa Monica Mountains Conservancy, the State of California, the U.S. Forest Service and the National Park Service.

Bikeways

There are several types of bicycle paths and trails available in the study area. Class I bikeways feature off-street, bi-directional paved paths designated for cyclists. The Los Angeles River Trail, of which only sections have been

Trail connectivity between cities and parks exists in some areas but there are many local trails that do not extend beyond jurisdictional borders.

implemented, is an example of a Class 1 bike path. These types of bike trails also serve as regional trails and greenways, connecting communities and park areas. Other bikeways are located along streets and roads. These include Class II bikeways, on-street, one-way striped lanes designated for cyclists, and Class III bike routes, on-street preferred bicycle routes designated by signs only.

The Los Angeles County Metropolitan Transportation Authority (Metro) developed a strategic plan in 2005 to describe a vision for bicycling as a viable transportation mode in Los Angeles County. The strategic plan establishes regional bicycle planning policies and provides tools for local agencies in creating local bicycle plans (MTA 2006).

In the Ventura County portion of the study area, there are no major county bikeway facilities, but the County adopted a countywide bikeways master plan in 2007. In and near the study area, a 5.8-mile, Class I bikeway parallels Arroyo Simi through Simi Valley, providing connections to a variety of parks and open space areas from communities (City of Simi Valley 2008). Throughout the rest of the study area, most bikeways in Ventura County are Class 2 or Class 3 facilities located within roadways.

Equestrian Trails and Access

Equestrian users need strategic access points and staging areas to use the many trails available for equestrian use. Staging areas are located throughout the study area in places such as Griffith Park, Pasadena, Altadena, Tujunga, and other sites that can accommodate trailers or that connect to equestrian centers. Some examples of specific equestrian facilities include the Gabrielino Equestrian Park, Los Angeles Equestrian Center, Malibu Equestrian Park, Arroyo Simi Equestrian Center, Conejo Creek Equestrian Park, Santa Rosa Valley Equestrian Park, and Walnut Grove Equestrian Center. Most Los Angeles County trails are designated for equestrian use, and several municipalities have trails that are designated for shared use including equestrian uses. In the Ventura County portion of the study area, most trails are managed by NPS, California State Parks and local government agencies such as special districts and cities. Many of these trails are also designated for shared use.

Off-Highway Vehicle Trails

Trails for off-highway vehicle (OHV) use are found throughout the Angeles Forest in the Soledad basin. Approximately 291 miles of unpaved roads are open to OHV use on the Angeles National Forest while another 194 miles of unpaved roads are closed to such use. It is estimated that the forest has 131,965 riders annually (Chavez and Knapp 2004). As OHV use grows in popularity, management issues have arisen including use of undesignated trails, soil erosion, water degradation, habitat destruction, the spread of invasive species, damage to cultural sites and conflicts between different recreational user groups.

Trail Connectivity

Another key issue is trail connectivity, or the degree to which trails connect to each other and to open space and park resources. Connectivity relative to specific trail uses is also an issue, with jurisdictions sometimes having different trail use designations along contiguous trails. Within the study area, the Los Angeles County's regional trail system connects local parks, regional parks and national forests. Although most of the trails in the Ventura County portion of the study area are managed by other agencies, Ventura County's general plan includes policies to promote trail connectivity. The Rim of the Valley Regional Trail connects open spaces along the western San Gabriel Mountains Foothills, the Verdugo Mountains, the San Gabriel and San Fernando Valleys and the Santa Monica Mountains. This trail provides several connections to Angeles National Forest Trails. Connectivity between cities and parks exists in some areas but there are many local trails that do not extend beyond jurisdictional borders. The Metropolitan Transit Authority has identified connections for bike trails and commuter bike lanes on city streets.

Scenic Roads and Highways

The study area contains several California Department of Transportation (CalTrans) designated scenic highways, in addition to other types of scenic roads.

Angeles Crest Highway

The Angeles Crest Highway is the only major roadway that traverses the San Gabriel Mountains. The highway traverses from La Canada Flintridge through the heart of the mountains to Wrightwood, on the northeastern base.

The Los Angeles metropolitan region has struggled to provide adequate recreational opportunities for its growing urban areas since its first population boom at the end of the 19th century.

Completed in 1956, the highway was first proposed in the early 1900s to provide access to the spectacular scenery, recreation areas, historic sites, geological features and to mountain communities. In 1971 it was designated a California State Scenic Highway and in 1990 a National Forest Scenic Byway. From the highway, visitors can access campgrounds, ski areas, wilderness areas, historic sites, natural areas, picnic areas, and national recreation trails.

Arroyo Seco Parkway

The Arroyo Seco Parkway is identified as a historic parkway by CalTrans, and a National Scenic Byway by the Federal Highways Administration (FHWA). The parkway is also an historic resource. The road opened to the motoring public in 1940 when California Governor Culbert L. Olson declared the Arroyo Seco Parkway to be the “first freeway in the West.” It was hailed both as a “modern” and “novel” road by state highway engineers due to its safety features. The historic Arroyo Seco Parkway was listed in the National Register of Historic Places in February 2011, designated a National Scenic Byway by the U.S. Secretary of Transportation in 2002, and designated a National Historic Civil Engineering Landmark in 1999 by the American Society of Engineers.

Mulholland Scenic Parkway and Corridor

The 55-mile Mulholland Scenic Parkway and Corridor includes Mulholland Highway in its western portion, and Mulholland Drive in the eastern portion of the corridor. The 24-mile Mulholland Drive in the City of Los Angeles, built in 1924, was envisioned by the famous Water Bureau Chief and City Engineer, William D. Mulholland, as a scenic road that would connect city dwellers to the mountains and beaches. The winding route follows the main ridge of the Santa Monica Mountains west of the 101 Freeway in Hollywood, and offers panoramic city, mountain and ocean views. Eight miles of the corridor from Interstate 405 west to Woodland Hills remain unpaved (a corridor known as “Dirt Mulholland”). Mulholland Highway starts in the City of Calabasas and twists through the western Santa Monica Mountains for thirty miles to Leo Carrillo State Park. The SMMC maintains seven scenic overlooks on Mulholland Drive (SMMC 2013).

Roads and Highways Eligible for Scenic Highways Designation

In addition to those roads and highways that have received designations, several highways through the study area have been identified as eligible for designation as California State Scenic Highways, including State Route 1 (Pacific Coast Highway) from Santa Monica west to the Oxnard Plain; State Route 27 between Pacific Coast Highways and U.S. Highway 101; U.S. Highway 101 from State Route 27 west through Ventura County; and Interstate 210 from Pasadena north to State Route 126.

Recreation Needs and Opportunities

The Los Angeles metropolitan region has struggled to provide adequate recreational opportunities for its growing urban areas since its first population boom at the end of the 19th century. Throughout the 20th century, population growth and development in the region has far outpaced the creation of recreational facilities. This has occurred despite the completion of previous comprehensive recreation studies that called for investment in more recreational facilities.

Deficiencies in recreation and open space remain for much of the Los Angeles Region. More than 18 million people live in the larger metropolitan region and the California Department of Finance projects there will be another 13 million residents by 2050 (California Department of Finance 2007a). With existing recreation and park areas in most cases already taxed beyond capacity, it is safe to assume that significant efforts will need to take place to ensure sufficient opportunities for diverse recreational experiences in the future. In addition, communities of color and children have disproportionately low access to parks and open space in Los Angeles County (The City Project 2011, Trust for Public Land 2004).

Recreation Demand in the Los Angeles Area

The large population of the Los Angeles area has created a great demand for outdoor recreational opportunities. Challenges faced by the Angeles National Forest and SMMNRA provide a snapshot of difficulties faced by residents and open space managers throughout the area.

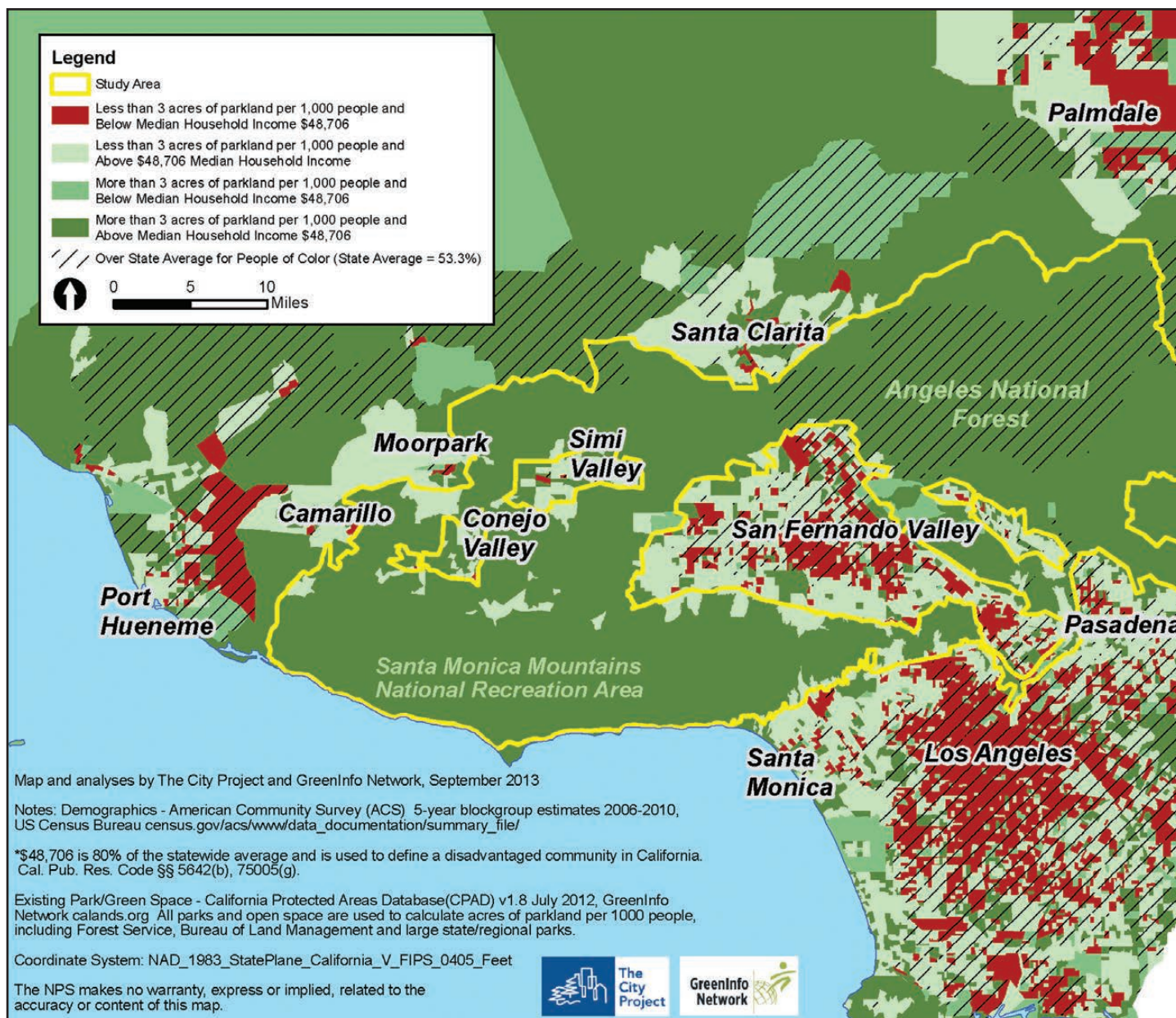


Figure 2-14: Map of Park Poverty, Income Poverty and People of Color Throughout the Study Area

With more than 15 million people within a 90-minute drive, the Angeles National Forest and San Gabriel Mountains National Monument are highly used by local residents. It is estimated that the recreational demand will increase by as much as 15-35% over the next two decades which could affect natural resource protection (UCLA Landscape Architecture Program 2006). When adjusted for inflation, non-fire operational budgets for the Angeles National Forest have actually fallen while recreation demands have continued to increase. With additional staffing and the newly designated San Gabriel Mountains National Monument, the U.S. Forest Service could expand education programs, ranger patrols, and facility maintenance (Richardson 2009).

A number of campgrounds, picnic sites, roads, and trails within the study area were also damaged by the 2009 Station Fire and subsequent erosion, further reducing available recreational facilities. Areas affected by the Station Fire have been reopening to the public based on post-fire recovery of natural resources and repair of infrastructure and facilities, but many areas remain closed and in need of additional funding (USFS 2010).

In SMMNRA, crowding is a frequent issue, particularly at popular locations on busy weekends. Parking is limited in certain sites. An increase in California State Park fees has intensified the problem of unauthorized parking and led to more parking on streets, NPS

The issue of accessibility is of particular concern when measuring existing open and park space in comparison to population densities

sites, and other lands. In addition, depending on timing and specific locations, traffic within the recreation area can become congested (NPS 2012c).

In looking ahead into the future, several demographic and societal trends will change the composition of the public visiting and using parks and open spaces, which will likely impact recreation, visitation and future stewardship in the study area. In ten years, the oldest baby boomers, still America's largest population cohort, will reach age 75 while at the same time, computer and handheld technology literacy will be almost universal. Within the same time frame, millions more children will have come of age with "nature deficit disorder," a profound lack of knowledge about the natural world resulting from restrictions on unstructured outdoor play. Perhaps most significantly, the Latino population of southern California will continue to grow. A substantial amount of 21st-century data from the NPS and the USFS confirm in various ways what can be easily observed at almost any national park or other large expanse of public land: most adult, non-school-group visitors are white.

Recreation Access in the Los Angeles Area

In addressing present and future open space concerns for the study area, disparities must be addressed regarding the disproportional access to park and recreational space. The California Outdoor Recreation Plan, prepared by California State Parks, provides a strategy for statewide outdoor recreation leadership and action to meet the state's identified outdoor recreation needs (CDPR 2009). The most recent version of this document identifies the lack of access to public park and recreation resources as a key issue affecting California. As recent reports from The Trust for Public Land and The City Project indicate, public access (predominantly of minority populations) to parks and recreation facilities is a serious concern in the Los Angeles metropolitan region (*Figure 2-14: Map of Park Poverty, Income Poverty and People of Color Throughout the Study Area*). According to The Trust for Public Land, Los Angeles County ranks at the bottom in comparison to the nation's seven major cities (Boston, New York, San Francisco, Seattle, San Diego and Dallas), in terms of providing access to parks for chil-

dren. In fact, the report, based on 2000 census data, indicates that "more than 1.5 million children in Los Angeles County do not live within walking distance of a public park." and that in most cases, parks in the Los Angeles region are not located near those areas with high concentrations of young children (Trust for Public Land 2004).

Though large open space areas such as SMMNRA and the Angeles National Forest give the appearance of high per capita available recreation space in the Los Angeles area, there is a major issue with equitable access to these areas. As demonstrated in The City Project's work in Los Angeles, many families in the low income neighborhoods of the region often do not have cars nor live near public transportation systems that allow for access to regional parks. Few, if any sites, within SMMNRA and the Angeles National Forest can be accessed by public transportation, a major barrier for urban residents without a car, as well as for tourists and people with disabilities that prevent them from driving. An NPS effort to establish a fixed-route shuttle service within the recreation area some years ago was unsuccessful, though the bus stop shelters remain.

NPS researcher Daniel N. Laven in a 2008 report writes, "Researchers have found consistent and substantial evidence of the underrepresentation of racial and ethnic minorities in outdoor recreation." Theories on why this underrepresentation occurs range from economics to transportation access to cultural preference. For example, according to findings from U.S. Forest Service researcher Deborah Chavez, who has researched Latino usage of Angeles National Forest near SMMNRA, Latino visitors to recreation lands generally prefer more picnic tables and facilities for large family groups – and areas without these amenities will not be as popular among Latino families. In addition, some Latinos she surveyed expressed constraints such as "being uncomfortable in the outdoors," perceiving the long travel time to natural areas as too onerous, and feeling discriminated against at the site. As these trends emerge, these and related demographic changes carry significant implications and opportunities for future planning and programming at parks and open spaces.



To address urban park deficiencies, there have been ongoing efforts by a variety of public and private entities to create pocket parks, such as the first phase of Marsh Park, and other recreational amenities along the Los Angeles River. Photo: NPS.



Non-profit organizations such as Audubon California have been actively addressing the lack of access to urban nature. The Audubon Center at Debs Park in northeast Los Angeles along the Arroyo Seco provides opportunities for urban audiences to learn about nature and engage in nature-based outdoor recreation. Photo: NPS.

Opportunities

Public interest in open space and recreation in the region is significant and concerted efforts are underway by a myriad of non-profit organizations, local and municipalities, community groups, and private and public groups to procure and maintain open space in various areas throughout the Los Angeles region. Furthermore, the \$2.6 billion Proposition 40 has further sparked this interest in public space allowing funds to be allocated for environmental and park projects throughout the state of California (Trust for Public Land 2004).

An inventory of open space within the urbanized portion of the study area (excluding the Angeles National Forest) demonstrates that opportunity areas exist within river and stream corridors, particularly along the Los Angeles River and its major tributaries such as the Arroyo Seco and Tujunga Wash. Underutilized land associated with these corridors provides opportunities to create pocket parks and other open space areas to transform these corridors into greenways. Examples of this can be found along the Los Angeles River, particularly through the Glendale Narrows reach, and along Tujunga Wash. More recently, pilot programs to provide seasonal, water-based recreation along the natural bottom reaches of the Los Angeles River, including the Glendale Narrows and Sepulveda Basin reaches have expanded the range of recreational opportunities.

Opportunities for further trail enhancements and connections exist throughout the study area beyond river and stream corridors, particularly with regard to the Rim of the Valley Trail. Segments of this trail have been implemented and through interagency collaboration, opportunities exist to connect these trail sections. Los Angeles County Department of Public Works has been engaged in trail planning focused on specific subregions such as the northwestern San Fernando Valley and adjacent Santa Susana Mountains area. The City of Glendale has worked with adjacent jurisdictions and agencies with land in the Verdugo Mountains to plan for trail connectivity.

Efforts to connect urban populations to natural areas while providing more close-to-home recreation and open spaces, demonstrates strategies that could be applied in the future. Regional and local stakeholders such as the state land conservancies, land trusts, and other non-profits have worked diligently in their respective efforts to maintain and acquire park and open space in the region. SMMC and MRCA, a joint powers authority that implements projects and programs for its member agencies including SMMC, work to bring natural parks and open spaces into urbanized areas while facilitating opportunities to connect urban audiences to the Santa Monica Mountains. Although much of SMMC's focus has been in the Santa Monica Mountains, the creation of natural spaces via pocket parks

along the Los Angeles River, and larger urban parks such as Vista Hermosa Park in downtown Los Angeles connects urban populations to close-to-home nature. Programs such as the MRCA's junior ranger program, children's education program, and outreach programs engage urban populations who otherwise would have limited access to natural areas. The MRCA's Recreational Transit Program provides free or low-cost bus transportation for people who otherwise would not have access to a mountain park or beach due to lack of reliable personal transportation resources, or lack of public transit that easily connects to beaches or natural areas. The Recreational Transit Program provides the critical link for over 35,000 city dwellers each year to visit the mountains and beaches.

The NPS recently opened a branch office of SMMNRA through partnership with California State Parks at El Pueblo de Los Angeles Historical Monument in downtown Los Angeles. The benefits of an NPS presence in downtown Los Angeles will increase visibility and awareness of SMMNRA among city po-

litical, religious, corporate, and cultural leaders; reach out to under-served populations of all ages and ethnicities; promote SMMNRA to an array of urban dwellers as well as tourists; and offer opportunities for inspired, creative interpretive approaches that have yet to be developed. Opportunities for partnerships abound in this one-of-a-kind downtown neighborhood, and this innovative move offers the interpretive staff the chance to introduce SMMNRA to a multitude of diverse populations. Creative and strategic use of existing and future communication technologies such as social media networking will also expand opportunities to engage visitors in the region and beyond.

Many of these opportunities necessitate spanning political boundaries and engaging in partnerships. Barriers related to the relatively fragmented and complex jurisdictional patterns in the study area and region must be overcome so as to ensure effective and comprehensive management policies for regional recreation and open space planning.



In 2013, the Los Angeles River reach through the Glendale Narrows, was officially opened for recreation including kayaking, fishing and nature viewing. Photo: NPS.