

appreciate the extent of the effects of Spanish colonial settlement of Arizona and California (NPS 2003). The largely unchanged landscape at Fort Hunter Liggett provides context for the visitor to better understand this rich story.

The National Park Service or California State Parks could collaborate with the Monterey Diocese to interpret stories of early California exploration and settlement at the Mission San Antonio de Padua or the Milpitas Hacienda. Such collaboration could include the development of interpretive materials, such as brochures and wayside signs, walking tours to interpret early Mission life, assistance with artifact curation and display, or assistance with preservation, restoration, or interpretation of outlying features such as the gardens, aqueduct, mill, orchards, vineyards, cemetery, washing facilities, Indian quarters, and other features. Staff of the Juan Bautista de Anza National Historic Trail could work with the Mission and Fort Hunter Liggett to interpret this portion of the Juan Bautista de Anza National Historic Trail. Salinan organizations have also expressed an interest in developing partnerships to protect sensitive sites from potential visitor impacts and to interpret their heritage.

Suitability of Cultural Resources

The inclusion of the Milpitas Hacienda in the national park system would provide representation of the themes “expressing cultural values” and “developing the American economy” for its connection to Hearst’s estate and as representation of Hearst’s life. Hearst’s historic estate stands out among the American country houses for its scale and character and would provide the best example of this type of estate on the west coast. The siting and architectural design distinguishes Hearst’s country estate from the other estates in the country. Inclusion of the Milpitas Hacienda in the national park system would provide an excellent opportunity to interpret the lives of both William Randolph Hearst and Julia Morgan. The addition of the Milpitas Hacienda would expand and enhance California State Parks operation of the Hearst San

Simeon State Historical Monument in interpreting the full story of Hearst’s country estate.

The Fort Hunter Liggett study area represents the theme “peopling places” and the topic “encounters, conflicts, and colonization” through resources that represent Spanish settlement and encounters with the native Salinan people. The relatively unchanged landscape provides the historic context for the Juan Bautista de Anza National Historic Trail, the Mission San Antonio de Padua, and associated archeological sites. The Milpitas Hacienda and Fort Hunter Liggett cultural landscape would be suitable for inclusion in the national park system. However, these resources are not available to the NPS because they are in use as an Army Reserve training facility.



Mural at the Milpitas Hacienda, Richard Crusius photo

NATURAL HISTORY THEMES

The natural history thematic framework provides a basis for comparing new additions to the national park system with other candidates and similar areas currently in the system. Natural history themes are a series of categories encompassing the natural phenomena of the country.

Natural Regions (Biophysigraphic Provinces)

The physiographic and biologic features of the country tend to be regionally oriented, thereby providing an opportunity to divide the country into relatively natural regions. These regions give primary consideration to the geologic histories, structures, and landforms, which in turn influence considerably the climates, soils, vegetation, and animal life associated with the regions (NPS 1972).

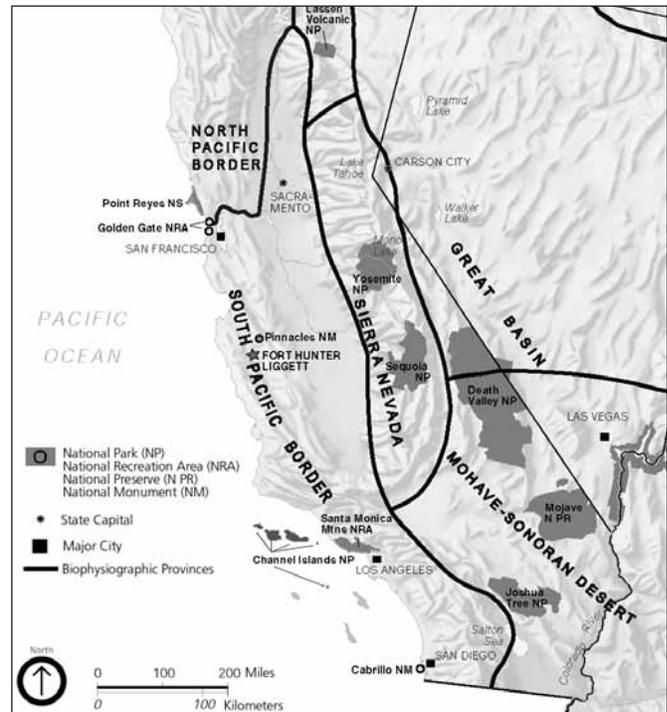
Fort Hunter Liggett is located in the southern Coast Ranges of the South Pacific Border Region, as described in “Natural History in the National Park System” (NPS 1990). This region includes the southern Coast Ranges, the Transverse Ranges, and the Peninsular Ranges of California and the Central Valley. These ranges have extensive forest composed of a mixture of coastal, Sierran, and inland species.

NATURAL HISTORY THEMES REPRESENTED IN FORT HUNTER LIGGETT:

- **Dry Coniferous Forest and Dry Woodland**
– regional theme: foothill woodland
- **Chaparral**
- **Riparian Woodland**
- **Vernal Pools**

Dry Coniferous Forest and Dry Woodland

This natural history theme is characterized by coniferous forest and woodland. The climate is warmer but drier than that of boreal (subalpine) forest, with drought setting the lower limits of elevation where these dry forests give way to steppe or chaparral (NPS 1990a).



Adapted from the Physiographic Provinces Map, NNL Program, Pacific West Region, Oakland, CA, 29Jan04, M.G. Sawlan.

Foothill woodland. The foothill woodland community is dominated by several species of oaks endemic to California. Blue oak, valley oak, gold-cup oak, interior live oak, and California Black oak can all occur together in a single stand. Digger pine and coulter pine are mostly restricted to the foothill woodland areas of California. Madrone, California Bay, and California buckeye are occasional members. (NPS 1973).

The oak woodlands and savannas of Fort Hunter Liggett represent the “foothill woodland” regional theme and have no parallel in other parts of the country. The oak woodlands and savanna habitats of Fort Hunter Liggett are unique in their combination of size and resource integrity. These habitats cover 72,000 acres and include 10 oak taxa and at least 2 named hybrids on Fort Hunter Liggett, the widest diversity of oak taxa of any area of its size in California (see “Oak Woodlands and Savanna” in the “Resource Description” chapter). These oaks include valley oak, blue oak, and coast live oak. The native understory vegetation is also an important part of the oak savanna community. The absence of plowing has allowed native grasses and forbs to survive,

contributing to a rare degree of integrity for a valley oak savanna community. Fort Hunter Liggett's oak woodlands and savanna provide habitat for many threatened and endangered species and endemics including birds, tule elk, and the purple amole. In addition, the natural setting at Fort Hunter Liggett provides a historic context for the cultural resources.

Most valley oak woodlands and savannas occur on private land. Fort Hunter Liggett has the largest valley oak habitat (over 17,000 acres) in the state that is protected through public ownership, private conservancies or land trusts.⁵ The California Department of Fish and Game estimates that there are only about 100 high quality valley oak stands, and less than 10,000 acres of high quality habitat. A significant portion of this habitat is located on Fort Hunter Liggett. Only 9% of California's valley oak woodland and savanna occur on public, tribal, or conservancy lands. Of this figure, 20% are within the

boundaries of Fort Hunter Liggett. Valley oak woodlands in the northwestern corner of Fort Hunter Liggett are contiguous with another 3,200 acres of valley oak woodland in the Wagon Caves area, part of Los Padres National Forest (Keeler-Wolf and Barbour, 1997). (See Table 6: Largest Public Land Areas Containing Valley Oak Habitat in California and Table 7: Valley Oak Habitat in Private or Public Ownership or Conservation).

Fort Hunter Liggett encompasses approximately 45,000 acres of blue oak woodland (U.S. Army Reserve Command, Fort Hunter Liggett, 2003). Blue oak is found on more than 10,000 square miles of land in California and is not considered to be endangered. However, the absence of regeneration in blue oak savannas and woodlands, combined with the effects of increasing development in habitat areas, raises concern for the long term viability of this species and the landscapes it creates (Pavlik, et al., 1991). Fort Hunter Liggett also encompasses 1,800 acres

Table 6: Largest Public Land Areas Containing Valley Oak Habitat in California

	Valley oak woodland (acres)	Valley oak savanna (acres)	Total (acres)
1. Fort Hunter Liggett	3,367	13,793	17,160
2. Los Padres National Forest	5,300	5,700	11,000
3. Sunol Regional Park and Ohlone Regional Wilderness Area	6,000	2,400	8,400
4. Henry W. Coe S.P.	7,300	-	7,300

Table 7: Valley Oak Habitat in California

	Valley oak woodland (acres)	Valley oak savanna (acres)	Total (acres)
Private ownership:	575,000	243,000	818,000
Public ownership or conservation:	58,000	27,000	85,000
Total in state:	633,000	270,000	903,000

⁵ Analysis based on land cover data from the California Gap Analysis Project, 1998. Public owners include CA Department of Fish & Game, CA Department of Parks and Recreation, CA Department of Water Resources, county/city/regional parks and preserves, Native American lands, State Lands Commission, National Oceanic and Atmospheric Administration, Bureau of Land Management, US Department of Defense, US Fish and Wildlife Service, US Forest Service, National Park Service, and various water and open space districts. Conservancies include, but are not limited to, the Audubon Society, The Nature Conservancy, land trusts, and private universities.

of coast live oak woodland, and 680 acres of sycamore alluvial wetland (U.S. Army Reserve Command, Fort Hunter Liggett, 2003). This area is considered to possess the most ecologically complete sycamore woodlands in California.

Expansive oak woodlands and savannas were once a dominant feature of the landscape during the California Mission Era. Now these landscapes are becoming increasingly fragmented or converted to agriculture, ranchettes, and urban sprawl. All sizeable locations of valley oak woodland and savanna habitat other than at Fort Hunter Liggett and Los Padres National Forest are in unprotected private ownership. Valley oak habitats are especially at risk because their locations in valley bottoms and on low foothills are also considered prime land by both farmers and developers (Pavlik, et al., 1991). The California Gap Analysis Project has recommended that valley oak woodlands, mixed serpentine chaparral, and sycamore alluvial woodland have the highest conservation priority.

Chaparral

As described in the Significance chapter, Fort Hunter Liggett contains unique chaparral communities that harbor rare endemic species and disjunct plant species, species typically found only in other regions of California. Serpentine beds harbor the largest concentrations of endemic plant species in California. Several rare and endemic species have been identified at Salmon Creek and Burro Mountain, the largest serpentine block in Monterey County. Burro Mountain features both wetland and upland endemic species associated with serpentine.

Riparian Woodland

The study area contains significant riparian areas. Riparian communities are rare and have been severely reduced from their former range in California (Noss, et al., 1997). Intact riparian areas along the San Antonio and Nacimiento rivers provide important habitat for the Federally-listed endangered arroyo toad; the Federally-listed threatened bald eagle; and the Santa Lucia mint,

an endemic species found only in reaches of the Nacimiento River on Fort Hunter Liggett. The rare tule elk particularly favor grazing in riparian and bordering oak woodland areas (Stevens, et al., 1998).

Vernal Pools

The study area contains 26 acres of vernal pools. Vernal pools were at one time common in the entire state of California and southern Oregon. Ninety percent or more of California's vernal pools have been lost (Ferren, et al., 1996), and the losses are continuing as ranches and other undeveloped lands are plowed or developed (CEMML 1999). Vernal pools at Fort Hunter Liggett provide habitat for the Federally-listed threatened vernal pool fairy shrimp and the Federally-listed endangered San Joaquin kit fox.

Comparisons to Sites Managed by the National Park Service and by Other Entities

While oak woodlands and savannas exist in several national park units, the broad array and vast expanse of oak habitat found at Fort Hunter Liggett are not currently represented in the national park system and in other publicly protected areas. Valley oak woodlands and savannas are represented at several National Park units including Santa Monica National Recreation Area, Point Reyes National Seashore, Golden Gate National Recreation Area and Pinnacles National Monument. American River Bluffs in Sacramento County, California, comprising less than 1,000 acres, was designated as a national natural landmark as an exceptional example of blue oak woodland. The nearly 20,000-acre Mount Diablo State Park was designated as a national natural landmark for natural history themes, including foothill woodland, chaparral, and blue oak woodland (NPS 1973). The Los Padres National Forest includes extensive oak woodland and savanna, but is less extensive than at Fort Hunter Liggett. The habitats at these units are not nearly as widespread or diverse as those found at Fort Hunter Liggett, and have only a fraction of the amount of rare valley oak plant communities. (See Table 8: Comparison of Oak Woodland and

Savanna at Fort Hunter Liggett with Representation in the National Park System and Table 6: Largest Public Land Areas Containing Valley Oak Habitat in California).

With the exception of the valley oak savanna at Cheeseboro Canyon, most valley oak habitats at Santa Monica Mountains National Recreation Area are disturbed and do not retain the natural understory plant associations of those at Fort Hunter Liggett (NPS 2001c). The blue oak woodland at Pinnacles National Monument comprises less than 1,200 acres and is mixed with coast live oak and other species. Because of its location at a higher altitude, its character and understory are not comparable to the rolling lowland habitat found at Fort Hunter Liggett. Point Reyes National Seashore and Golden Gate National Recreation Area have fairly extensive coast live oak habitat ranges, but very little valley or blue oak habitat. Golden Gate National Recreation Area has 3,900 acres of annual grassland habitat that also supports sparser distributions of coast live oak.

High quality riparian, chaparral and vernal pool habitats exist in other foothill areas of California. However, very few publicly owned areas of this size harbor the quantity of rare species seen at Fort Hunter Liggett.

Large areas of valley foothill riparian woodland are found on other sites throughout California. Valley foothill riparian areas of varying character and quality are located in the Sacramento and San

Joaquin Valleys, the Salinas River Valley and various coastal areas. Fort Hunter Liggett is unique in that it contains the largest extent of high quality sycamore alluvial wetlands.

The majority of vernal pool habitat in California is located in the California Central Valley which supports slightly less than 1 million acres of vernal pool habitat. Fort Hunter Liggett is part of the Central Coast Vernal Pool region. Many pools in this region have been degraded or destroyed. Small acreages of protected vernal pools are located on Fort Ord, Clear Creek Management Area (managed by the Bureau of Land Management), and San Simeon State Park.

The Cuesta Ridge Botanical Area at Los Padres National Forest land in San Luis Obispo County contains a comparable size area rich in endemic serpentine chaparral. Serpentine outcrops on Cuesta Ridge are most well-known for having one of the largest areas of Sargent Cypress (*Cupressus sargentii*) forest. Fort Hunter Liggett's Burro Mountain area differs from this 1300-acre site because it includes both wetland and upland endemic serpentine communities. The variety of species at Burro Mountain also differs greatly from Cuesta Ridge. This may be attributed to a difference in serpentine soil types. There are two general groups of serpentine soils, those derived from serpentine ophiolites and those derived from serpentinized peridotites. Soils derived from serpentinized ophiolites often consist of an iron - rich mineral, montmorillonite, and contain less

Table 8: Comparison of Oak Woodland and Savanna at Fort Hunter Liggett with Representation in the National Park System

Park Unit	Types of Oaks	Area (acres)
Santa Monica Mountains National Recreation Area	Coast live and valley oak woodlands and savannas	6,900
Golden Gate National Recreation Area	Coast live oak woodland and savanna	5,700
Point Reyes National Seashore	Coast live oak woodland	1,600
Pinnacles National Monument	Blue oak woodland	1,200
Fort Hunter Liggett	Valley, blue, and coast live oak woodlands and savannas	72,000

magnesium than serpentinized peridotite (CEMML 1999). As described in the Significance chapter, Burro Mountain is comprised of serpentinized peridotite while Cuesta Ridge is associated with the Cuesta Ridge ophiolite.

Interpretive and Educational Potential

The combination of rare plant communities at Fort Hunter Liggett provides unique opportunities for interpretation and education. While other areas in California protect similar habitats, Fort Hunter Liggett is the only location where this variety and quantity of species and habitats could be interpreted in one location.

Although much of the installation is restricted for military activities, the public may currently see the oak woodlands and savannas and chaparral communities while traveling on public roads through Fort Hunter Liggett. The natural landscape could be interpreted at the Milpitas Hacienda as part of the historic setting for the Hearst era, and for its relevance to prehistoric settlement, the Hispanic period and the settlement period. Controlled visitor access to natural features could be arranged through guided tours.

There is great potential for scientific study at Fort Hunter Liggett. The installation harbors many species that no longer exist in other areas of California. Several training areas that may harbor rare and usual plant species have yet to be inventoried. Professional botanists familiar with Fort Hunter Liggett anticipate that future surveys and monitoring will show that additional rare species listed in Table 4 may be best represented by viable populations on Fort Hunter Liggett. Additionally, Burro Mountain has been the subject of several geological studies. A 1974 NPS study suggested that this area could be eligible for national natural landmark status for its contribution to our understanding of plate tectonics.

Valley oak habitat on the Los Padres National Forest adjacent Fort Hunter Liggett to the northwest has been proposed as a Research Natural Area because it includes some of the best remaining pristine habitat of this type. This pristine valley oak habitat extends into Fort Hunter Liggett providing opportunities for a larger research area.

Suitability of Natural Resources

The combination of intact plant communities and rare species at Fort Hunter Liggett provides outstanding opportunities for interpretation, education and scientific study of natural resource types. Fort Hunter Liggett contains excellent examples of foothill woodland, chaparral, riparian woodland, and vernal pool resources. The serpentine substrate at Burro Mountain harbors, chaparral, riparian and wetland species that are only known to this location. Fort Hunter Liggett contains over 72,000 acres of oak woodlands and savanna, ten times larger than that of Santa Monica Mountains National Recreation Area. There is no equivalent size area of California oak habitat protected, whether by federal, state, local or private managers, anywhere in the United States (NPS analysis of 1998 California Gap Analysis data, Land- cover for California). Because of the threats to the oak woodlands and savannas and their increasing rarity, it would be suitable to include the protected oak habitat at Fort Hunter Liggett in the national park system. However, these resources are not available to the NPS because they are in use as an Army Reserve training facility.

Summary

The NPS has determined, based on resource quality, character, rarity and representation of cultural and natural history themes, that if the Fort Hunter Liggett study area were to become excess to the Army's needs, it would be suitable for inclusion in the national park system. The Milpitas Hacienda represents the themes "expressing cultural values" and "developing the American economy" for its connection to William Randolph Hearst's historic estate and media empire. Hearst's estate, including La Cuesta Encantada (Hearst Castle®), stands out among American country houses and would provide the best example of this type of estate on the west coast. Inclusion of the Milpitas Hacienda in the national park system would provide an excellent opportunity to interpret the lives and work of William Randolph Hearst and Julia Morgan and could expand visitor experience and interpretation at Hearst San Simeon State Historical Monument. Visitors could be provided with the

opportunity to stay overnight at the Milpitas Hacienda. As visitors tour both Hearst San Simeon State Historical Monument and the Milpitas Hacienda, they can experience the vastness of the Hearst estate that appears largely as it did at the peak of Hearst’s power.

The Fort Hunter Liggett study area represents the theme “peopling places” and the topic “encounters, conflicts, and colonization” through resources that represent Spanish settlement and encounters with the native Salinan people. The relatively unchanged landscape provides the historic context for the Juan Bautista de Anza National Historic Trail, the Mission San Antonio de Padua, and associated archeological sites.

The landscape at Fort Hunter Liggett provides representation of the natural history themes “dry coniferous forest and dry woodland,” “chaparral,” “riparian woodland” and “vernal pools.” Fort Hunter Liggett contains over 72,000 acres of oak woodlands and savanna, ten times larger than that

of Santa Monica Mountains National Recreation Area. There is no equivalent size area of California oak habitat protected, whether by federal, state, local or private managers, anywhere in the United States. Because of the threats to the oak woodlands and savannas and their increasing rarity, it would be suitable to include the protected oak habitat at Fort Hunter Liggett in the national park system.

Intact riparian areas along the San Antonio and Nacimiento rivers, vernal pools and plant communities associated with serpentine substrate provide important habitat for Federally-listed and endemic species. The combination of rare plant communities on Fort Hunter Liggett provides outstanding opportunities for interpretation, education and scientific study and is suitable for inclusion in the National Park System. However, Fort Hunter Liggett is not available to the NPS at this time because it is in use as an Army Reserve training facility and is expected to be retained by the Army indefinitely.

The following table summarizes the analysis of how resources of Fort Hunter Liggett are suitable for inclusion in the national park system.

Table 9: Suitability Analysis

THEME	SUITABILITY ANALYSIS FOR THE FORT HUNTER LIGGETT STUDY AREA
Cultural Themes	
<i>Expressing Cultural Values</i>	
Architecture, Landscape Architecture, and Urban Design	<ul style="list-style-type: none"> ▪ Quality, quantity, character: The Milpitas Hacienda is the best representation of the architectural style that Julia Morgan and Hearst used in many of the supporting structures on the historic Hearst ranch. It is the most elaborate among these structures because of its scale, masterful design, ornamentation, skilled use of reinforced concrete, and integrity. ▪ Rarity: Among the other buildings associated with San Simeon not in public ownership that exist today, the Milpitas Hacienda is the only building available for public use. ▪ Interpretive and educational potential: Addition of the Milpitas Hacienda would expand and enhance California State Parks operation of Hearst San Simeon State Historical Monument in interpreting the full story of Hearst’s vision of a country estate. ▪ Similar resources protected: NPS units that represent architecture in the form of large estates in the 19th and early 20th centuries include the Vanderbilt Mansion NHS and Death Valley NP’s Scotty’s Castle. Other estates managed by other entities include the Biltmore Estate, Vizcaya, and Olana. These sites do not compare in scale and character. The surrounding landscape, including the elaborate gardens, lush grasslands, and mountains of Central California adds to the uniqueness of the Milpitas Hacienda and San Simeon estate.
mass media	<ul style="list-style-type: none"> ▪ Quality, quantity, and character: Hearst often ran his media conglomerate that included newspapers, radio stations, wire services, newsreels, and a movie company from La Cuesta Encantada. ▪ Interpretive and educational potential: Opportunity to interpret how Hearst used his newspapers to voice his views and played a highly influential role in the national and international events of his era. ▪ Similar resources protected: There are no units in the national park system that represent mass media.

THEME	SUITABILITY ANALYSIS FOR THE FORT HUNTER LIGGETT STUDY AREA
Cultural Themes	
<i>Developing the American Economy</i>	
Transportation and Communication	See "mass media" above
<i>Peopling Places</i>	
Encounters, Conflicts, and Colonization	<ul style="list-style-type: none"> ▪ Quality, quantity, character: The integrity of both the landscape and cultural and archeological resources associated with Fort Hunter Liggett and the Mission San Antonio de Padua significantly contribute to the story of the Juan Bautista de Anza National Historic Trail. The landscape setting of the mission is little changed from Anza's visit. ▪ Rarity: The Mission San Antonio de Padua is one of only five California Missions that existed during the 1776 Anza expedition and is one of the locations that are historically significant to the trail. ▪ Interpretive and educational potential: There may be opportunity to work with the Mission San Antonio de Padua in interpreting the stories of mission life, the native Salinan people, and the historic trail. Interpretation and educational programs could be located at the Milpitas Hacienda and at the Mission. The stories can be told through the archeological resources associated with the Mission. ▪ Similar resources protected: The Mission is owned and protected by the Monterey Diocese. Comparable sites differ from the study area in that most are located in urban areas. Other NPS units similar to this resource that represent this theme include: San Antonio Missions National Historical Park, the Presidio of San Francisco, and Tumacácori National Historical Park. The 20 other California Missions, owned by either the Catholic Church or CA State Parks also represent this theme.
Natural History Themes	
<i>Dry Coniferous Forest and Dry Woodland</i>	
foothill woodland	<ul style="list-style-type: none"> ▪ Quality, quantity, character: The oak woodlands and savanna habitats of Fort Hunter Liggett are unique in their combination of size and resource integrity. These habitats cover 72,000 acres and include 10 oak taxa and at least 2 named hybrids on Fort Hunter Liggett, the widest diversity of oak taxa of any area of its size in California. The absence of plowing has allowed native grasses and forbs to survive, contributing to a rare degree of integrity for a valley oak savanna community. The Fort Hunter Liggett area is considered to possess the most ecologically complete sycamore woodlands in California. ▪ Rarity: The California Department of Fish and Game estimates that there are only about 100 high quality valley oak stands, and less than 10,000 acres of high quality habitat. A significant portion of this habitat is located on Fort Hunter Liggett. ▪ Interpretive and educational potential: The National Park Service and California State Parks would interpret the landscape, including the oak woodlands and savannas, as part of the historic setting for the cultural resources. ▪ Similar resources protected: Despite the fact that California's oak landscapes are a powerful emblem of wild California, comprising a rich assemblage of plant and animal life unlike anywhere else on the planet, such a broad array and vast expanse of oak habitat is not currently represented in the national park system.
<i>Chaparral, Riparian Woodland, Vernal Pools</i>	
	<ul style="list-style-type: none"> ▪ Quality, quantity, character: The total number of sensitive plant species on Fort Hunter Liggett is among the highest for similar sized areas of California. Intact riparian areas along the San Antonio and Nacimiento rivers and vernal pools provide important habitat for the Federally-listed species. The Fort Hunter Liggett area is considered to possess the most ecologically complete sycamore woodlands in California. Chaparral communities associated with serpentine substrate harbor a high number of endemic species. ▪ Rarity: The unique geological substrate of Fort Hunter Liggett harbors several plant communities typically found in other areas of California. Several rare chaparral species are known only to Fort Hunter Liggett. ▪ Interpretive and educational potential: The National Park Service and California State Parks would interpret high diversity of rare and endemic species. ▪ Similar resources protected: High quality riparian, chaparral and vernal pool habitats exist in other areas of California. Very few publicly owned areas of this size harbor the quantity of rare species seen at Fort Hunter Liggett. Many plant species are known only to the Santa Lucia Mountains. While some of these rare species can be found on the adjacent Los Padres National Forest, the geology and plant communities on Fort Hunter Liggett are more diverse.