United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

1. Name of Property

Historic name: Burro Flats Cultural District__(Public Version) _____
Other names/site number: _____
Name of related multiple property listing**:**
___N/A_____
(Enter "N/A" if property is not part of a multiple property listing

---

2. Location

Street & number: __5800 Woolsey Canyon Road (Santa Susanna Field Laboratory)_____
City or town: _Canoga Park__ State: _California_ County: _Ventura_
Not For Publication: [X] Vicinity: [X]

---

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this ___ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property ___ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

___national ___statewide ___local

Applicable National Register Criteria:

___A ___B ___C ___D

_____
Signature of co-certifying official/Title: **Date**
California State Office of Historic Preservation_____
State or Federal agency/bureau or Tribal Government

_____
Signature of co-certifying official/Title: **Date**
National Aeronautics and Space Administration_____
State or Federal agency/bureau or Tribal Government

4. National Park Service Certification

I hereby certify that this property is:

___ entered in the National Register

___ determined eligible for the National Register

___ determined not eligible for the National Register

___ removed from the National Register

___ other (explain:) _____

_____

Signature of the Keeper Date of Action

5. Classification

Ownership of Property

(Check as many boxes as apply.)

Private:	[X]
Public – Local	[ ]
Public – State	[ ]
Public – Federal	[X]

Category of Property

(Check only **one** box.)

Building(s)	[ ]
District	[X]
Site	[ ]
Structure	[ ]
Object	[ ]

Number of Resources within Property
(Do not include previously listed resources in the count)

Contributing	Noncontributing	
	42	buildings
117	9	sites
	7	structures
1	0	objects
118	58	Total

Number of contributing resources previously listed in the National Register 1

---

6. Function or Use
Historic Functions
(Enter categories from instructions.)
RELIGION: ceremonial site
DOMESTIC: village site
DOMESTIC: camp
INDUSTRY/PROCESSING/EXTRACTION: processing site
AGRICULTURE/SUBSISTENCE: processing
COMMERCE/TRADE: trade (archaeology)
TRANSPORTATION: pedestrian-related
RECREATION AND CULTURE: work of art
LANDSCAPE: unoccupied land; natural feature

Current Functions
(Enter categories from instructions.)
RELIGION: ceremonial site
GOVERNMENT
EDUCATION: research facility

7. Description

Architectural Classification
(Enter categories from instructions.)
N/A

Materials: (enter categories from instructions.)
Principal exterior materials of the property: N/A

Narrative Description
(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)

Summary Paragraph

Burro Flats Cultural District is a Traditional Cultural Property (TCP) located in open, rocky terrain above the Simi Valley in the Santa Susana Mountain Range. Elevations measure up to 663 meters (2,175 feet) above mean sea level and the landscape consists of a diverse terrain of ridges, canyons, and sandstone rock outcrops. Natural caves and rockshelters are scattered throughout the area, and Bell Creek crosses the district. The district is situated within a relatively undeveloped, continuous corridor of the Simi Hills, in a border area of southeastern Ventura County, California. Ethnographically, several Native American groups, generally identified by language group, inhabited the area. In alphabetical order, they include Chumash, Fernandeño, Kizh/Gabrieleño, and Tataviam. The TCP is associated with Native American individuals or groups whose ancestors resided in Ventura County or Los Angeles County; who indicated an interest to the National Aeronautics and Space Administration (NASA) in the nomination of the area as a TCP; who participated in interviews for this nomination; or who have visited the area in the modern era, often for religious purposes. Interviews with these consultants in 2013, 2016, and 2018 determined the boundary and contributing resources of the TCP. Contributing resources comprise one object and one hundred eighteen sites including the National Register-listed Burro Flats Site (CA-VEN-1072), a rock art and habitation site that includes areas for celebrating the winter solstice and the summer solstice, and a mourning area. Fifty-eight noncontributing resources include Santa Susana Field Laboratory (SSFL) buildings, sites, and

structures that do not add to the historic associations for which this the property is significant because they are not related to the documented traditional cultural significance of the property. While the November 2018 Woolsey Canyon Fire burned across much of the district, periodic burning and the new growth that follows are part of the natural environment. According to the community, despite the wildfires, construction, and use of the SSFL for research and testing by various federal agencies and a private company since the mid-twentieth century, the district retains all aspects of historic integrity.

Narrative Description

The Native American community has indicated the district is important for its past and renewed use in celebrating the winter and summer solstices. The area around the solstice site remains particularly significant to the community's beliefs, customs, and practices. The district also includes sites important to the community's history and described in oral history. The high places, natural rockshelters, and caves provide plentiful flora with plants traditionally used for celebrations and ceremonies, as well as year-round fresh water.

The rock art sites and rockshelters with artifacts recorded on SSFL were included by several consultants when asked to name important features of the district. Additionally, rockshelters not recorded as archeological sites were described as equally important to the overall cultural district. Other contributing resources include trails, and outcrops containing marine fossils. Although some of these features are recorded as components of archeological sites, their importance to the cultural district is based on the associations between these features and the oral histories of the local Native American community. Features considered important by consultants include natural features, such as landforms, rockshelters, outcrops, overhangs, hills, crests, creeks, springs, viewsheds, flora, fauna, open spaces, and sky.

The district is important for its associations with cultural practices and traditions of the Native American community. Associations include the district's past and renewed use in celebrating the winter and summer solstices and its past use as a mourning area, as well as for its associations with local beliefs, including physical places and representations of oral histories remembered by community members and recorded by early ethnographers. The district also includes locations important to the community's history and described in their oral traditions.

Environmental Setting

The SSFL (**Figure 1**) is divided into four developed areas (Areas I, II, III, and IV) and northern and southern undeveloped areas. The National Aeronautics and Space Administration (NASA) administers a 42-acre (17-ha) portion of Area I and 409 acres (165 ha) designated as Area II. Areas I, III, IV, and the undeveloped areas are owned by The Boeing Company (Boeing).

The Simi Hills are part of the Santa Monica Mountains, which run east-west across Southern California and form part of the Transverse Ranges of the Pacific Coast Ranges physiographic region. The elevation ranges from 1,650 to 2,175 feet (503 to 663 meters) above mean sea level (NASA, 2017). The geology of the area is composed of the Cretaceous Chatsworth Formation,

sediments that range from hard sandstone bedrock to clay, shale, and crushed sandstone and that contain marine fossils. The topsoil is alluvial sand deposits, silt, and clay from erosional processes. The Chatsworth Formation covers most of SSFL. The Santa Susana Formation, a light gray shale and shaly sandstone, is a much younger formation found within a small area of SSFL. The solstice site, situated on rocky terrain, occupies an upland area adjacent to the Burro Flats landform, a level area that sits at the crest of the Simi Hills. Bell Creek runs through the area. Overlying soils consist of weathered bedrock and alluvium (unconsolidated sand, silt, and clay materials) that have been eroded primarily from the surrounding Chatsworth and Martinez formations. Several geologic faults traverse the site (NASA, 2017).

Sixteen vegetation habitat types are found at SSFL, comprising freshwater marsh, open water, unvegetated drainage channels, coast live oak woodland, southern coast live oak riparian forest, southern willow scrub, mulefat scrub, baccharis scrub, Venturan coastal sage scrub, chaparral, native grassland, non-native grassland, ruderal, rock outcrop, eucalyptus woodland, and developed areas. California bay trees, old growth oak trees, mugwort, and datura were specifically mentioned by consultants as important plants that grow on the SSFL (Consultant Data, 2018). Rock outcrops occur throughout SSFL. The banks of ephemeral streams are lined with western sycamore (*Platanus racemosa*). Several local creeks have headwaters at SSFL. The Humboldt lily was specifically mentioned as being located on the SSFL during the ethnohistory interviews. This lily, which can reach up to ten feet tall, is described by the Kizh as showing the Creator's blessing over the area. It only grows in certain areas in their origin story, and the plant is associated with the Mourning Ceremony, practiced to send off the souls of the deceased (Consultant Data, 2016).

Wildlife surveys performed at SSFL and published in the Resource Conservation and Recovery Act Facility Investigation Program Report, Surficial Media Operable Unit (MWH, 2004) provide wildlife descriptions for SSFL. The wildlife surveys identified thirteen mammal species, including bobcat (*Lynx rufus*) and mule deer (*Odocoileus hemionus*). Sixty-nine bird species have been identified at SSFL. Historically, bears also inhabited the area. Although not native, burros are mentioned in ethnographic accounts describing the area (Harrington, 1986). The most frequently observed birds are California scrub jay (*Aphelocoma californica*), yellow-rumped warbler (*Dendroica coronata*), turkey vulture (*Cathartes aura*), red-shouldered hawk (*Buteo lineatus*), northern flicker (*Colaptes auratus*), California quail (*Callipepla californica*), red-winged blackbird (*Agelaius phoeniceus*), and great blue heron (*Ardea herodias*).

Raptors found on SSFL include the sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), great horned owl (*Bubo virginianus*), and Peregrine falcon (*Falco peregrinus*). Ten reptile species and three amphibian species have been observed on SSFL. Western whiptail (*Aspidoscelis tigris*), side-blotched lizard (*Uta stansburiana*), California slender salamander (*Batrachoseps attenuatus*), Pacific tree frog (*Hyla regilla*), and California toad (*Bufo boreas halophilus*) are among the reptiles and amphibians found on SSFL (NASA, 2009). Two fish species have been noted on SSFL: catfish and goldfish (MWH, 2004).

During the 2000s, all of the consultants who contributed to a site ethnohistory prepared in 2016 (Lawson et al., 2017) had visited the Burro Flats Site at least once. Multiple consultants said that one could feel the ancestors and smell the vegetation. Sage was specifically noted. "There are lessons hidden in every rock. There is something new to see and learn each time you visit the site," according to one of the consultants (Consultant Data, 2016).

Period of Occupation

There has been relatively little dating of the archeological deposits found within SSFL. Based on artifact types excavated from CA-VEN-1072 in the 1950s, the site dates from approximately 5000 BCE to contact (King, 2012). King derived the early date from stone artifacts, including heavily patinated, fused shale projectile points of early types. Also found were limited artifacts that appear to indicate occupation during the Mission period, as evidenced by the presence of a glass trade bead and a drilled Majolica ceramic fragment (King, 2012). *Huwam/Hukxa'oynga* (*El Escorpión*) was the closest named village to the TCP and was among the larger villages in the San Fernando Valley. It was also one of the villages written in the registers of the Mission San Fernando. By the end of the 1700s, mission records show familial ties and marriages between the residents of El Escorpión and both Chumash and Fernandeño speaking villages (McLendon and Johnson, 1999). Historic accounts suggest that native peoples were still living in the vicinity of the *Potrero del Burro*, also referred to as the Burro Flats Landform, and presumably were using winter and summer solstice areas in the early 1900s when Charles A. Bell, a rancher, acquired a large tract of land near the present day SSFL (Lawson et al., 2017). Charles Bell told Harrington (1986) that every stream that came down from the mountains north of his ranch had a Native American rancheria at the mouth.

During the 1920s and into the 1940s, the Simi Hills and the SSFL area were used by Hollywood as movie locations (Vincent, 2016). In the 1930s, Henry Silvernale bought over 1,000 acres in the area and raised cattle on the land. In the late 1940s, the U.S. Government and Northrop American Aviation acquired the SSFL land and began the research, development, and testing of liquid-fueled rocket engines. When SSFL became a secure research facility, access to the site by the general public was restricted. Native Americans continued to visit the site, according to consultants. Several consultants noted that they knew of others in their community that visited the site. Although public access remains limited, the local community is able to visit and utilize the solstice site.

Oral histories recorded by early ethnographers, as well as oral histories provided by consultants (Consultant Data, 2013, 2016, 2018), indicate use and occupation of the district extending back to the creation of the world. Harrington (1986, Reel 106) records Juan and Juana Menendez' discussion of a place with tracks of the Savior and tracks of a small burro. The tracks in the rock are a result of a visit made by God, called El Señor by Menendez, right after he made the world and before it had dried. The place is described by the Menendez as "a place of first class importance and interest" (Harrington, 1986, Reel 106: frame 152). Juan Menendez identified this rock as upstream from the historic-era Bell Ranch on the creek, presumably what is now called Bell Creek. Although not recorded formally as a resource within SSFL, consultants have reported that a rock matching this description is located within SSFL (Consultant Data, 2018).

Marine fossils in rock formations on the SSFL are described as the bones of the First People (Native American ancestors) and connected to the time when animals were people. The fossils are specifically related by consultants to Woodpecker and the Chumash story of a great flood (Consultant Data, 2013, 2016, 2018). Within SSFL, the outcrops with trace marine fossils are a part of the Chatsworth Formation, which covers almost the entirety of SSFL (Verhoff and Spaulding, 2011). Juan Menendez, Harrington's consultant, stated that his grandmother said there was a very large rancheria at *Potrero de Los Burros*, and he knew of painted caves near there. There also was a place near *El Potrero*, a place with burros (presumably Burro Flats) called *campaña del coyote*. The place had a big stone sitting on top of three other stones, and the coyote would come to the place, go under the rock, and "ring the bell" by hitting the stone from underneath (Harrington, 1986, Reel 106: Frame 220).

Another well-known rock art site in the district is the burro (or horse) pictograph. The image depicts a donkey, burro, or horse, as described by local Native Americans and researchers alike. The following discussion of the burro pictograph is summarized from Knight (2016b):

> The burro and the pictographs near the burro are not part of site CA-VEN-1072. The pictographs, which are visible today, include a burro, another design, and some additional paint that is too faded to see the original artwork.
>
> The burro indicates the pictographs were done after Spanish contact, but no additional information could be gleaned from the paintings. In 2016, additional information was found that indicates the burro and seven additional paintings likely were made by people of Native American or possibly Native American-French or French-Basque descent during the nineteenth century. The rock with the footprints and tracks may be related to this painting.

Harrington recorded at least two oral histories describing the importance of the burro. Harrington (1914-1933, Reel 102: frame 623) recorded the following story about a burro and a rooster, two animals that date after European arrival, which relates both animals to the start of the world. "At the beginning of the world, the burro sang but was not heard, so the rooster sang and that is why he sings now. This is the story that Z heard."

Another story about the importance of the burro was told to Harrington by one of his consultants who identified a rock near Cuesta de Santa Susana, where the Virgin Mary visited with a mule, and the mule left its footprints in soft mud that became the rock. She washed her infant's clothes there (Harrington, 1914-1933). Knight (2017) further discusses the painting of the burro, the naming of Burro Flats, and the importance of the burro to Christian mythology in the draft National Register nomination for the Sky Valley Traditional Cultural Property. He observes that Juan Menendez describes the Potrero del Burro, a singular burro (Harrington, 1986). It is possible that this singular burro refers to the burro that visited the Virgin Mary in Christian mythology or possibly the singing burro, which could be two stories about the same burro.

Cultural Use and Occupation

The district is located in a border area that was occupied and used by several different Native American groups: Chumash, Fernandeño, Kizh/Gabrieleño, and Tataviam. The groups are listed and discussed in alphabetical order only for convenience and organization. Prior to discussion of each of these ethnographically identified groups, a general prehistory of the area describes the residents who likely used and occupied the property.

The Simi Hills are included, generally, in the northern California Bight Chronology (Glassow et al., 2007), which includes coastal and inland areas between the Palos Verdes Peninsula and Point Conception. The district is located interior to the southern extension of the Central Coast, and the Glassow et al. (2007) chronology includes data from studies in the Santa Monica Mountains and the Los Angeles Basin. Because the district is located in a transitional area, information from the chronologies presented in Wallace (1955) and Moratto (1984) are also included in this overview.

The earliest archeological information for occupation in California dates to the Paleo-Coastal period, also referred to as the Paleoindian period, and covers the interval from the late Pleistocene until approximately 8000 BCE. Early archeological data are also included in the Early period (also known as the Hunting period), which covers the interval from the first presence of humans in southern California until post-glacial times (5500-6000 BCE) (Moratto, 1984; Wallace, 1955). Artifacts and cultural activities from this period represent a predominantly hunting culture; diagnostic artifacts include extremely large, often fluted bifaces associated with use of the spear and the atlatl. Populations appeared to have been relatively small and highly mobile, living in temporary camps near readily available water.

Evidence for Paleoindian occupation in California exists in two clusters along the California coast (Glassow et al. 2007; Moratto 1984). One cluster of sites runs between San Luis Obispo and Santa Barbara and includes sites found in the Channel Islands. The second cluster is reportedly located in San Diego County (TKC and SRI, 2005). Clovis-like fluted projectile points have been found along the California coast and inland, often as isolated finds that cannot be dated with complete accuracy. Likely, the projectile points date between 11,500 and 9000 BCE (Erlandson et al., 2007). Closer to SSFL, a fluted projectile point, which has been associated with the Clovis culture, was found at the Farpoint archeological site (Stickel, 2008).

The Millingstone period, also called the Early Archaic, dates from the early Holocene and covers a wide variety of topographic and environmental zones. Sites occur near remnant pluvial lake basins, fossil stream channels, springs, or seeps, and in upland areas and coastal plains. Between 7000 and 6500 BCE, coastal and inland populations expanded, and the artifacts associated with the more permanent sites are markedly different from the earlier period (Glassow et al., 2007).

Wallace's Millingstone period extends to approximately 3000 BCE (Wallace, 1955). A Millingstone site located in the vicinity of the SSFL may date prior to 5000 BCE (Glassow et al., 2007). Large Millingstone sites with deep middens and a wide range of artifact types appear to correlate with stable water sources. The groups of this period are described as hunters and

gatherers with specialized bifacial projectile points, well-made scrapers, knives, and many other tools designed for subsistence-related tasks (for example, food processing). Groups with coastal territories used marine resources such as shellfish, fish, sea lions, and dolphins for food, shelter, clothing, and ornaments (TKC and SRI, 2005).

Artifacts recovered from the Santa Monica Mountains dating to this period include collections with a high number of plano-convex core tools, also called scraper planes. Projectile points are found in lower numbers at these sites, perhaps indicating some specialized resource collection or production (Glassow et al., 2007).

Among the more enigmatic artifacts from this period are discoidals and cogged stones. Discoidals are round to ovoid ground stones with flat or slightly convex faces and edges; cogged stones are discoidals with serrated edges resembling the teeth on gears. Both types of artifacts appear sometime around 4000 BCE and are dated to the Millingstone period. Their use remains unclear (Moratto, 1984). Millingstone period settlements were larger and occupied for longer periods of time than those of the Early period, and mortuary practices included both flexed and extended burials as well as reburials. Grave offerings were few, although rock cairns were sometimes placed over the bodies (Wallace, 1955).

Wallace's Intermediate period dates between 3000 BCE and 500 CE (Wallace, 1955). Glassow et al. (2007) note the addition of the mortar and pestle to the archeological record around 4000 BCE. At about the same time, the number of projectile points increased significantly in excavated site deposits. There is no corresponding increase in the remains of large game at sites, so it is not clear if there was a shift in subsistence strategies or manufacturing strategies (Glassow et al., 2007). Wallace's Intermediate period also is marked by the appearance of the mortar and pestle (although the mano and metate continued in use) and small projectile points (Wallace, 1955).

Changes in technology are possibly associated with shifts in subsistence strategies and resources. The increased dependence on the mortar and pestle is generally attributed to a rise in acorn processing over small seed harvesting. Settlements became more sedentary during this period. Burial customs began to show greater complexity and elaboration as variability among grave goods likely reflects differences in wealth and status. The most substantial residential bases dating to this period have been found in interior locations along drainages that provided good access routes to the coast (Glassow et al., 2007). Intermediate period burials were generally by interment in a flexed position, face down, although a site in the San Fernando Valley contained both reburials under stone cairns and cremations (Elsasser, 1978; Wallace, 1955). Analysis of the artifact assemblage recovered from early excavation investigations at SSFL suggests that occupation of the Burro Flats Site has been ongoing for approximately 7,000 years (King, 2012). The village or rancheria later named *Huwam/Hukxa'oynga*, located in the vicinity of the SSFL, may have had a Middle Holocene occupation component (Romani, 1981).

Glassow et al. (2007) identify the start of the transition from the Middle Holocene cultures to the Late Holocene, around 2000 BCE. Populations increased and several important new technologies were developed, including the plank canoe and the bow and arrow. Most data presented are concentrated along the coast. For sites further inland, the Late Prehistoric period includes the time between 500 CE (Wallace, 1955; Moratto, 1984) and the start of the Historic period in 1769. The Late Prehistoric period, both along the coast and inland, is marked by an increase in population size and cultural complexity (Glassow et al., 2007; Lebow, 2006; Moratto, 2004). The increase in population is represented by larger material assemblages and by the diversity of items and the rise in use of non-utilitarian objects. A rise in use of non-utilitarian artifacts often indicates craft specialization, associated with larger and more sedentary populations.

Notable artifacts from this period include Desert Side-notched points, Cottonwood points, bifacial bead drills, bedrock mortars, hopper mortars, and steatite disk beads. Late period sites are more abundant inland and are frequently characterized by midden deposits associated with bedrock mortars (Glassow et al., 2007). Cremation was a common method of burial in the Los Angeles Basin during the Late period, and elaborate mortuary customs with abundant grave goods were common. Other cultural traits diagnostic of the Late Period include increased use of the bow and arrow, steatite containers, circular shell fishhooks, asphaltum (as an adhesive), bone tools, and personal ornaments of bone, shell, and stone (Bean and Smith, 1978; Elsasser, 1978:56; Moratto, 1984:159; Wallace, 1955:195).

Chumash, Fernandeño, Kizh/Gabrieleño and Tataviam are primarily lingual divisions, as Native Americans in the area around SSFL were associated with specific villages and familial lines, rather than larger tribal groups. Languages of the Fernandeño and Gabrieleño—including the historically named Kizh (Hale, 1846)—are closely related. Native Americans living in the area often identify with more than one of these groups, and the boundaries of the groups' original lands are ambiguous and may have fluctuated over time. Specifically, the Fernandeño and the Tataviam, originally two distinct lingual groups, combined into one group, the Fernandeño Tataviam, having banded together and intermarried after secularization of the Mission (Consultant Data, 2016).

Villages in the immediate area included *Huwam/Hukxa'oynga* (*El Escorpión*) and *Momonga*. El Escorpión was among the larger villages in the San Fernando Valley and was one of the villages written in the old registers of the Mission San Fernando. Seventy-five people from this village were baptized at the Mission San Fernando, and many of these people possessed characteristically Chumash language names. By the end of the 1700s, mission records show that familial ties and marriages between the residents of El Escorpión were most numerous among the following Chumash speaking villages: *Ta'lopop, Hipuk, Shisholop*, and *Ta'apu*. Similar, albeit fewer, ties were identified at the following Fernandeño speaking villages: *Momonga, Giribit*, and *Komixroyvet* (McLendon and Johnson, 1999). Researchers have suggested that because of the multiple village names and the above connections, that the villages closest to SSFL and in the Simi Hills may have represented a bilingual population (Johnson, 1997; Romani, 1981).

Chumash

The Chumash people occupied the territory between San Luis Obispo (San Luis Obispo County) and Malibu (Los Angeles County) and east to the San Joaquin Valley, and included three of the Channel Islands (Santa Barbara County) (Gamble, 2008) (**Figure 2**). Their territory ranged from the coasts and islands to the interior and mountains. The abundance of resources within ethnohistoric Chumash territory supported large trade networks that webbed into south central California (King, 1971).

The Chumash economic and procurement activities and advances in technology produced great wealth and possibly allowed for population increase. The largest villages of the pre-contact Chumash reportedly contained 1,000 members (Moratto, 1984) and possibly as many as 2,000 members (Gibson, 1981). The various Chumash groups together occupied a region consisting of approximately 9,600 square miles. A significant percentage, nearly seventy percent of the population estimated at time of contact, appear to have occupied the coastal region (McLendon and Johnson, 1999). This would indicate that at contact, thirty percent of the Chumash population occupied an inland area of more than several thousand square kilometers, including the Simi Hills (Arnold, 2004). A Chumash village survey by Kroeber documented forty-one villages on the coast and twenty-five villages in the interior (Cook, 1976). The total Chumash population at contact may have been as high as 25,000 people (Gibson, 1981).

John Wesley Powell used the term Chumashan to describe several groups who spoke related languages along the coast and on the nearby islands in 1891. These languages, while distinct and separate, were related to each other and not related to the neighboring languages of Fernandeño, Gabrieleño, Kitanemuk, Tataviam, or Yokuts (McLendon and Johnson, 1999).

The seaworthiness of their fishing vessels allowed the Coastal Chumash to obtain marine resources, and the Chumash were master plank canoe, or *tomol*, builders (Gamble, 2002). Plank canoe building is credited with establishing the socio-political power the Chumash held among their neighbors (Gamble, 2002; McCawley, 1996). Additionally, the Chumash constructed a tule reed balsa, a lighter-weight watercraft used along the coastline or in calm waters, possibly inland. Fages noted that the Chumash used tridents made of bone with barbs and fishhooks for fishing. Rivers were fished for trout, spine backs, *machuros*, and turtles (Fages, 1971). Along with the ability to procure marine resources, control of waterways provided the Chumash with a command of transportation and goods distribution to the interior, resulting in the Chumash controlling various trade networks (Gamble, 2002). Plank canoe ownership appears to have been limited to the higher status Chumash. Building a plank canoe was an expensive endeavor, both in time and in materials. The owners of the canoes, in part, controlled trade between the mainland and the islands, likely acting as middlemen between goods manufacturers and village leaders, or *wots* (Gamble, 2008).

The Chumash moved seasonally, primarily in the summer, to optimize their resource use. Reports show that they had several permanent villages, confining the seasonal camps to temporary occupancy during resource procurement, harvesting, and hunting (Arnold, 2004; King, 1971). Fages described Chumash villages consisting of family houses, shaped like half

globes with doors on the east and west sides and an opening in the ceiling at the middle of the structure (Fages, 1971). Chumash villages had neat rows of houses and streets, and they were well organized. Bigger houses, with spacious rooms and raised beds, were built for more important individuals. Another early European explorer, Crespí, described buildings large enough to house up to 60 individuals. Large, open plazas with circular enclosures were noted by early explorers. Researches have suggested these areas were either dancing areas or cemeteries. Villages also usually contained at least one sweat lodge (Gamble, 2008). Fages estimated at least one village contained about 600 men considered able to bear arms. To the Spanish, the village chief appeared to function primarily as a military commander (Fages, 1971).

Fages described the Chumash's mother-of-pearl inlay work decorating the sides and rims of stone mortars and various other utensils. The Chumash also adorned cloaks and headgear with shells and small stones using a knife and punch. A bone awl was made from the shinbone of a deer. Men used a tongue-shaped flint knife, sharp and double bladed, affixed to a handle with mother-of-pearl inlay.

Fages noted that there were at least eight bitumen springs used within a two-league area (approximately seven miles) around the San Luis Obispo Mission. These springs produced a thick, black liquid called *chapopote* by the local Chumash, used to caulk small watercraft and to pitch vases and pitchers made for holding water. Fages' expedition observed that the residents of each village had distinctive patterns painted on their bodies, each village had its own chief, and villages located even short distances apart spoke different languages (McLendon and Johnson, 1999).

The Chumash had a strict hierarchy that recognized higher status for different positions in the villages. Only the chief could have multiple wives (Fages, 1971; McCawley, 1996). An interdependent relationship probably existed between those who specialized in craft production and the elites who managed the distribution of goods (Arnold, 2004). Chester King (1971) reported that the Chumash economy was a market economy in which shell beads were the exchange medium. Reciprocal ceremonial exchange also was employed during feasts and celebrations. Open intervillage exchange also was likely (Gamble, 2008).

Large Chumash villages had an *'antap* society, a prestigious organization of twelve members that oversaw religious, ceremonial, and other business of the village. Chiefs and their families were required to join this group. Other members of the *'antap* included the *'altip'atishwi*, the village herbalist, specifically, the keeper of the poisons; the *'alchuklash*, the village shaman, who also practiced astrology and studied astronomy; and the *shan* or *san*, assistants. Members of these *'antap* societies used deer tibia whistles during their religious ceremonies (Gamble, 2008).

The '*alchuklash* was responsible for observing celestial forces and how they affected the natural world (Hudson and Underhay, 1978). An example of the '*alchuklash's* responsibilities would be to relate the results of the gambling game between Sun and Sky Coyote on the eve of the winter solstice. The winner of the game would indicate whether the following year would be prosperous or arduous (Hudson and Underhay, 1978). The '*alchuklash* also was responsible for curing the

sick and naming children based on what heavenly bodies were visible in the sky when the child was born. Shamans also participated in puberty rites and advised the village leaders, or *wots*, as to when and where to harvest and hold meetings and rituals (Hudson and Underhay, 1978).

Fernandeño, Gabrieleño, Kizh

The Fernandeño language belongs to the Takic sub-family of the Uto-Aztecan language stock. The Fernandeño referred to the Gabrieleño as *shivaviatam*, which translates to the people who lived on the San Gabriel and Santa Ana Rivers (King, 2003). This indicates that the Fernandeño appear to be distinct from Gabrieleño. Johnson (1962) also noted that Fernandeño was distinct from Gabrieleño. Harrington's consultant, Juan Menendez, stated that although there are differences in the Fernandeño and Gabrieleño languages, the two languages were quite similar (Harrington, 1986). Despite recognized lingual differences (Kroeber, 1925; Harrington, 1986), the Fernandeño are often grouped in discussions of the Gabrieleño (Bean and Smith, 1978). According to Menendez, the Fernandeño traditional territory included the Tujunga and Mujunga Mountains (Harrington, 1986).

Kizh, also included in the following discussion of the Gabrieleño, was used to describe the Gabrieleño local community around the mission at present day Whittier Narrows during the nineteenth century by ethnologist Horatio Hale (Hale, 1846) and described both the language and the people (Consultant Data, 2016). Kizh territory included the San Fernando Valley, the San Gabriel Valley, and the San Bernardino Valley (Consultant Data, 2016; Salas-Teutimes et al., 2013). Kizh spellings of place names end with '-*nga*' (Consultant Data, 2016).

The Gabrieleño, whose name comes from the Mission San Gabriel, include the speakers of a language that belongs to the Takic sub-family of the Uto-Aztecan language stock. Tongva is another name that some of the tribal members prefer to use (King, 2003). Principal villages associated with this language group typically ended in *gna* or *na,* and the chief of each village or "Lodge," as called by Hugo Reid (Dakin, 1939:221), would use the same base as their name and follow this with *ic*.

Similar to the mainland Chumash, the territory of the mainland Gabrieleño was composed of inland valleys and coastal plains (**Figure 2**). Gabrieleño villages were scattered from Topanga Canyon (Los Angeles County) in the north to El Toro (Orange County) in the south. Villages were also located on Santa Catalina and San Clemente Islands (Los Angeles County), on San Nicolas Island (Ventura County) in the Channel Islands, and in the San Gabriel (Los Angeles County) and San Bernardino (San Bernardino County) inland valleys in the east (McCawley, 1996). Kizh, also included in discussion of the Gabrieleño, was used to describe the Gabrieleño local community around the mission at present day Whittier Narrows during the nineteenth century (Hale, 1846). The Kizh have described their territory to include the San Fernando Valley, the San Gabriel Valley, and the San Bernardino Valley (Consultant Data, 2016; Salas-Teutimes et al., 2013).

Pre-European contact population numbers are difficult to assess because of discrepancies in the record. In 1852, a Scottish-born Los Angelino, Hugo Reid, who had married a Gabrieleño

woman, published a series of letters about the Gabrieleño. Reid believed there were as many as sixty-eight villages attributed to the Gabrieleño. Twenty-eight of these were in Los Angeles County (Dakin, 1939; McCawley, 1996). Mission baptismal records (1797-1834) indicate an average population of ninety members per village.

Subsistence strategies of the Fernandeño and the Kizh/Gabrieleño often are included in discussions referring to the Gabrieleño, which were similar to the Chumash strategies, incorporating seasonal procurement of resources, both terrestrial and marine. Throughout the year, individual Gabrieleño families would move to temporary encampments for hunting, harvesting, and collecting. Depending on the season and resources that could be harvested, travel would occur through various ecological zones. In the interior, where primary habitation was thought to take place in the summer, deer and rabbit were significant resources for the Gabrieleño, who were expert hunters. Men hunted large and small game including deer, rabbits, sea mammals, and fish. Women collected plants, including acorns and chia (McCawley, 1996). In spring and summer, temporary camps would be established to gather roots, seeds, and bulbs; in the fall, acorns and wild seeds were gathered as staples in the diet. In coastal areas that were less exposed to the elements, wintertime villages were occupied. Satellite or temporary campsites would be erected near the shore to collect shellfish and other marine resources.

In addition to being expert terrestrial hunters, the Gabrieleño were adept at maritime subsistence and procurement and built planked canoes called *ti'ats* (*te'aat*) (McCawley, 1996) that were sealed with pine pitch or asphaltum. The Gabrieleño hunted sea otters and other marine mammals with harpoons (Langenwalter et al., 2001).

Fiber rope and thread were made from nettles and then made into nets, fishing lines, and thread. Needles, fishhooks, and awls were made from bone or shell. Granite was the preferred material for mortars and pestles. Baskets were made of split rushes. Bitumen or pitch was plastered on the outside of baskets for water proofing (Dakin, 1939).

Among the Gabrieleño, boys traveled between villages carrying messages between chiefs. The Gabrieleño currency, strung shell beads—thick, rounded shells approximately 15 mm in diameter—were used when bartering was not possible. A *pucú ponco* consisted of a length of strung shell beads measured from the knuckles of the left hand to the point of the middle finger, back to the wrist, back to the middle finger, and then to one inch above the wrist.

Barter and trade were conducted between the interior and the coastal communities. Items traded to the interior included shell money, fish, sea otter skins, and soapstone pots, with the soapstone acquired from the Native Americans of Santa Catalina Island. Items traded from the interior included deerskins and seeds (Dakin, 1939). One major interior trading route was between the Santa Susana Hills and the Los Angeles River (Consultant Data, 2016). Kizh abalone and other shell pieces were used and prized as jewelry by the Hopi and other Pueblo Indians (Consultant Data, 2016; Keoke and Porterfield, 2005).

Distribution of settlements did not fall into a consistent pattern throughout the Fernandeño, Gabrieleño, or Kizh/Gabrieleño territory. This was in large part a result of the diverse ecological zones within Gabrieleño territory, composed of coastal areas, islands, valleys, and foothills. Larger settlements were created in a pattern, and the archeological record in Southern California contains abundant data regarding large village site distribution and function. Villages were placed where there was access to varying types of environments and resources. Then, a system of satellite camps stemmed from main villages, established for the specific procurement of resources. The usage of these satellite campsites was in direct response to population and village size, as well as distance from the main village to the campsite (Earle and O'Neal, 1994).

The Gabrieleño had a patrilineal lineage system. Consultants indicated the Kizh/Gabrieleno also had a patrilineal lineage system (Consultant Data, 2016). Members of the lineage were given access to diverse resources held by the families within their lineage, allowing the Gabrieleño to exploit multiple ecologies. The heavily hierarchical Gabrieleño social system included elites, commoners, middle class, poor, and slaves. The elites were the only ones able to access religious items. The middle class supported the elites. Each village was led by a chief. The chief had up to three wives; all other men in the village had one wife. Reid wrote that the chief's oldest son was called *Tomear* and his oldest daughter was called *Manisar* (Dakin, 1939). Consultants indicated *Tomear* refers to the chief himself (Consultant Data, 2017). Each village may have contained 500 to 1,500 huts, as witnessed and recorded by Hugo Reid in his letters from the mid-1800s (Dakin, 1939).

Among the Gabrieleño, the *A-hubsu-voi-rot* were the seers and medical men in the village. They both cured and created disease through a variety of methods, including herbal remedies and ceremonies. They also could make it rain, consult with the spirits, change themselves into animals, and foretell the future. Fever could be cured by ingesting tobacco, which grows wild in the area and would cause vomiting. Herbs would be administered, and the seer would perform a song to aid in curing the fever. The seers also were responsible for collecting the poison that was put on arrow tips (Dakin, 1939:236).

Tataviam

Of the three groups who occupied the area in pre-contact times, the Tataviam are the least known of all Native California groups (Johnson, 2006; Los Angeles County, 2008). The written information that survives references the Tataviam in generalizations and comparisons to their neighbors. Population estimates are less than 3,000 at the time of European contact, and there is no way to verify that information. These numbers are approximations, and no reliable data exist (Johnson, 2006).

Little was recorded about the Tataviam culture during Spanish exploration and later missionization in the 1770s as the Tataviam appeared to have intermarried with other groups and moved to new locations when Europeans settled near the Santa Clara River. Mission records and other historical documents often failed to distinguish the Tataviam as an individual group when multiple tribes and languages were encountered; often, ethnic affiliation was not distinguished or a topic of comment. Many of the Tataviam were relocated to the San Fernando Mission during

historic times and were assimilated with other groups into an indistinct neophyte culture (Native Languages of the Americas, 2009; Regents of the University of California, 2010).

In the opinion of some Tataviam, including Native American consultants interviewed for this project, Tataviam have been in the area at least 2,500 years, if not longer. It is possible they separated from the Serrano because of a dispute over resources (Consultant Data, 2016). The extent of Tataviam territory is under debate. Their core area was identified in the early 1900s as stretching from Piru (Ventura County) to Soledad Canyon (Los Angeles County), over much of the upper Santa Clara River Valley (Bright, 1975) (**Figure 2**). Johnson and Earle (1990) tentatively identify Tataviam speakers as far north as Quail Lake, near the intersection of Interstate 5 and Highway 138, on the western end of Antelope Valley. Generally, Tataviam territory included areas from the Santa Clara River to Piru Creek, from the Liebre Mountains to the Santa Susanna Mountains, and into the westernmost parts of the Antelope Valley (primarily Los Angeles County, also eastern Ventura County) (Higgins, 1996; Johnson and Earle, 1990).

Less is known about the Tataviam language. C. Hart Merriam wrote down several Tataviam words, noted as Alliklik Chumash, which Bright proposed has many similarities to the Ventureño branch of the Chumash language (Bright, 1975). Later research identified Tataviam as a Takic branch of Uto-Aztecan stock, closely related to the Serrano (Johnson and Earle, 1990; Solis, 2008). The "People Who Face the Sun," as the Tataviam refer to themselves (Consultant Data, 2016), could have migrated into the Santa Clara River area approximately 1,500 years ago and were possibly an offshoot of the Serrano, although there is some debate on this point (Solis, 2008). A. L. Kroeber suggested that the three languages spoken at Mission San Fernando, according to the friars in 1811, were Serrano and Gabrieleño, and possibly Chumash (Kroeber, 1908). This list of languages easily could represent the modern groups, which remain in the area.

The Tataviam were hunter-gatherers who alternately occupied permanent villages in winter and temporary campsites used for resource gathering of plant foods such as acorns, seeds, berries, yucca, and piñon nuts, and for hunting deer and rabbit during the spring, summer, and fall months (Solis, 2008). Permanent villages consisted of familial dwellings. A *ki'j* was dome-shaped with small saplings or branches affixed to a willow frame and covered with bulrush or cattails. Villages also had a sweat lodge, a *Sehé*, which consisted of a dug out area with a frame similar to the *ki'j*. Sweat lodges were used as meeting places and for dances (Solis, 2008). Johnson and Earle (1990) identified and confirmed several Tataviam villages through genealogical research and review of Harrington and Kroeber's early interviews with local Native Americans, including *Cuecchao*, *Piru, Tochonanga, Siutasegena*, and *Tochaborunga*.

Several Native American villages, or settlements, near SSFL have been identified by consultants and in the ethnographic and archeological record. These villages were the basic political groups in the area. Residents identified themselves by the village names, rather than by the terms given to them by the Spanish, such as Chumash or Fernandeño (Gamble, 2008). Many had at least two names in two different languages, which were used by the residents of the villages, according to mission registers. El Escorpión, the name given to the village situated closest to SSFL, was called *Huwam* in Chumash and *Hukxa'oynga* in Fernandeño (Romani, 1981; McLendon and Johnson,

1999). It is assumed that the village may have had residents who spoke at least these two languages and possibly identified with both the Chumash and the Fernandeño cultures. *Momonga*, which may have been referred to as Las Piedras by the Spanish, possibly had a bilingual population (Romani, 1981).

Located farther from SSFL was the village of *Ta'apu*. Mission records indicate that the residents of this village had kinship ties to both El Escorpión and *Momonga* (Ciolek-Torello et al., 2006), although, according to Juan Menendez, this village likely was occupied by Ventureño Chumash (Harrington, 1986). Menendez's mother, Espíritu, spoke Ventureño Chumash and Gabrieleño. Menendez was familiar with both languages (Harrington, 1986).

The Spanish explorer Juan Rodriquez Cabrillo encountered what was later identified as the coastal Chumash in the 1540s. Cabrillo noted a Chumash village near the ocean with large houses that were similar to houses he had observed in New Spain and many canoes (Cabrillo, 1542). The earliest accounts of the first contact with the various Native American communities in the San Fernando Valley and nearby Simi Hills date primarily to the Spanish and Mission period, which began in 1769 with the founding of the El Presidio Real de San Diego. The Portola expedition passed into the San Fernando Valley in 1769, and the Spanish explorers wrote about a village or villages that exhibited similarities to Channel villages (Romani, 1981). The recorders noted similarities in the arrangement of the village and buildings, in the political structure of multiple chiefs, and with specific items, including wood flutes.

In the mid-1800s, Hugo Reid recorded what the Gabrieleños told him of the arrival of the first Spanish in Los Angeles County. Reid's original letters were published in 1852. Reid married a Gabrieleño woman before 1839 and gathered the material presented in his letters from her and her relatives. His information is otherwise undated. His letters include descriptions of the first sightings of Europeans told by older members of the group.

> The Native Americans were at first afraid of the Spaniards on their horses. The women hid and the men put out their fires. They were impressed with the Spaniards' ability to create fire with flint. They also observed one of the Spaniards shoot a bird and kill it and decided that the Spaniards were mortal like them because they killed as the Native Americans did.

A second encounter described to Reid was more violent.

> The Spaniards took some of the women on threat of violence to the entire community. The women had to purify themselves through sweating and drinking herbs when they returned to their village.

Any presents received from the Spaniards consisting of durable goods were used. Food was always buried and not consumed. For a time, any white child born among the Native Americans was strangled and buried (Dakin, 1939; Salas Teutimes et al., 2013).

According to ethnohistoric accounts, settlements near SSFL included *Huwam* (also known as *Hukxa'oynga* in Fernandeño/Gabrieleño and called *El Escorpión* by the Spanish) (McLendon and Johnson, 1999). The village of *Momonga* is also near SSFL. El Escorpión was mentioned by the Santa Barbara Presidio Journal, which recorded in September 1783 that "it was decided to postpone an attack on Conejo and Escorpión Rancherias, who have stolen cattle" (Bancroft, 1884:566). Several Native American consultants indicated that a village site likely was located near the rock art at the Burro Flats Site, a village not identified by name on archival maps or in the ethnographic record (Harrington, 1986; Knapp, 1977). The name *Jucjuaynga* was given to the site at Burro Flats by Kizh consultants (Salas Teutimes et al., 2013, Consultant Data 2018).

Once removed from their villages, Native Americans pressed into the missions were taught new occupations that benefited the mission, taking on the roles of vaqueros, tanners, shoemakers, carpenters, blacksmiths, cooks, servants, fishermen, brick- and tile-makers, tallow melters, and saddle makers. Industrial-sized soap works and large spinning and weaving rooms were built at the missions. Native Americans were kept at their assigned tasks and subdued by physical punishment (Dakin, 1939). Physical punishment was also used as a deterrent for running away from the mission. Many perished because of ill treatment and the introduction of European diseases (McCawley, 1996; We Are California, 2008). Mainland Chumash settlements started disappearing once the missions were established. The collapse of society occurred on the islands even earlier than on the mainland. Rapid migration of Chumash island communities appears to have occurred between 1814 and 1816, largely caused by depopulation, recruitment to the missions, the collapse of the trade routes between the mainland and the islands, and negative impacts to resources.

In 1784, Francisco Reyes applied to Pedro Fages, the Mexican governor, for a grant to El Encino in the San Fernando Valley, which abuts the Simi Hills. Although no record of this grant was found, Reyes stayed in the area, built a house, and grew crops. When missionaries from San Buenaventura arrived in the San Fernando Valley in 1795, looking for a place in the seventy-five miles between San Buenaventura and San Gabriel to construct a new mission, they reportedly found Reyes (Ciolek-Torello et al., 2006). Reyes relinquished the Encino Rancho to the missionaries who built the San Fernando Rey Mission in 1797 (Robinson, 1979) and relocated.

In notes from the original reconnaissance in 1795, Friar Vicente de Santa Maria of Mission San Buenaventura observed many Native Americans at the location eventually selected for the mission. They took care of the corn, beans, and melons, which belonged to Reyes. They also were the cattlemen, irrigators, bird catchers, foremen, and horsemen (Engelhardt, 1927). Later that same year, Friar Vicente de Santa Maria noted the "pagans" in shoes, with sombreros and blankets, serving as muleteers to the settlers and rancheros (Engelhardt, 1927). As Johnson (1997) points out, by the time Mission San Fernando was founded, the lifestyle of Native Americans there already had changed significantly. The traditional hunting and gathering economy of the local Native Americans was supplemented with crop growing, and many were spending their days working for the owners of the ranchos.

Mission San Fernando was officially founded on September 8, 1797, at the village site of *Achoicominga*. Village residents, as well as other Native Americans within the San Fernando Valley, became known as Fernandeños. Mission registers indicate that the first ten children baptized on the day the mission was established were originally from villages other than *Achoicominga* and included speakers of several different languages. The friars' own observations suggest that the people from *Achoicominga* were likely Chumash and Tataviam, and all were native Valley residents. Three languages were noted by the friars as the primary languages spoken at the mission: Gabrielino, Tataviam, and Chumash. A fourth language, Serrano, was also spoken (Engelhardt, 1927).

Establishment of the missions resulted in the removal of many Native Americans from their traditional areas to the mission lands and the subjugation of the Native Americans by the mission system. Families were broken up, and communities were dissolved. For the first three decades of the Mission period, the friars concentrated on the Native Americans who lived immediately around the missions. This included all of the communities that traditionally lived in the Simi Hills (Cook, 1978). Native American groups located farther from the mission lands were able to retain their traditional lifeways longer than the Native American groups located directly within the missions' spheres of influence.

Missions San Gabriel Arcángel, San Fernando Reyes, and Buenaventura created a sphere of influence that impacted all of the cultures involved in this study. An account from a Russian otter hunter who spent time captive at Mission San Fernando described Native Americans living in terrible conditions. The Russian crew and the Aleuts captured with them, who unwillingly crewed the Russian ships, were made to work in the fields alongside the Native American neophytes. One night, some of the Native Americans left the mission. Several soldiers arrived at the mission shortly thereafter and hunted down the runaway neophytes. The neophytes who had run away were punished in various ways: Some were beaten with sticks and some were beaten with leather straps. One of the neophytes, identified as a chief, was sewn into the skin of a recently dead calf and tied to a stake. He died quickly and his corpse was left on the post (Tarakanoff, 1815).

By the late 1700s, economic conditions at the missions were quite poor, and the friars decided to supplement their agriculture with traditional Gabrieleño subsistence methods. Revolts and protests among the neophytes were common (Bean and Smith, 1978). In 1785, a Kizh/Gabrieleño shaman led a revolt against the friars of the Mission San Gabriel, in the Los Angeles Basin. The shaman, Toypurina, was also a daughter of a Kizh/Gabrieleño chief. The Spanish, via the missions, were actively eradicating native cultures, their languages, and their religions; breaking apart families; and moving Native Americans from their traditional lands to the missions as slave labor for the Spanish. "Toypurina recognized all of this and the severity of her peoples' plight. This is why she organized and led a revolt against the brutal conquering system" (Salas Teutimes et al., 2013:32).

Toypurina enlisted at least six villages, possibly more, to aid in the revolt. In October 1785, Toypurina, assisted by Nicolas José—a high-ranking and well-respected Gabrieleño—and at

least two Gabrieleño chiefs—Chief Temejasaquichi of *Juvit* and Chief Ajiyivi of *Jajomovi*—led Kizh/Gabrieleño warriors into the Mission San Gabriel. The attack did not succeed in freeing neophytes inside the mission or in ridding the area of the Spanish. Toypurina was sent by the Spanish to the mission farthest from San Gabriel, Mission San Carlos Borroméo de Carmelo, forcibly divorced from her Gabrieleño husband, and remarried to a Spanish soldier (Salas Teutimes et al., 2013).

In the 1790s, the Spanish government awarded land grants to soldiers and other Spanish Californios (*Ventura Weekly*, 2005), and these vast tracts of land were used for livestock and farming. In 1795, the Pico family was granted 45,729.6 ha (113,000 acres) in the area later known as Simi Valley, and the rancho was named El Rancho Simi (Simi History, n.d.). As in other parts of California, use of large areas of land for herds negatively impacted the local flora and fauna and, as a result, the Native Americans who lived in the area. In the early 1800s, much of the Chatsworth area was abandoned, largely as the result of the rapid spread of smallpox among native populations (Knapp, 1977). The Santa Monica Mountains contained the last heavily populated areas of unconverted Native Americans in 1804 (McLendon and Johnson, 1999). By 1810, nearly all of the Tataviam had been removed to the Mission San Fernando and baptized (King and Blackburn, 1978). Disease remained the main cause of declining populations.

Mexico became independent of Spain in 1821. In 1824, the Mexican government passed the Colonization Act in an effort to raise much-needed funds by selling unoccupied lands in California. This law invited immigrants to settle in Mexico, including California (Texas State Historical Association, 2012). Since much of the land in California belonged to the twenty-one missions, it could not be sold by the Mexican government. Unoccupied lands were often part of traditional Native American territory.

Through the Secularization Act of 1833, the Mexican governor placed the mission land in California under civil jurisdiction. The Act, which relegated the missions to retain only enough acreage for the church and its associated buildings and land to support those who lived on mission property, effectively ended the Mission period in California. Native Americans who had lived at the missions were to receive their share of the land, gardens, and stock when the missions were secularized. Rather than carrying out this edict, the Act was abolished, mission lands were confiscated, and most Native Americans did not receive anything (Dakin, 1939). The following years were marked by the proliferation of cattle ranching throughout the region, as the Mexican governor, Pío Pico, granted vast tracts of land to Mexican and some American settlers.

The proliferation of herd animals on traditional Native American lands greatly changed the landscape of California as non-native grasses and other non-native species were rapidly spread by cattle ranching and sheep herding (Moratto, 1984). Ranchos, and the grazing of horses, sheep, and cows on the traditional aboriginal lands is largely credited with the destruction of native California flora and the destruction of traditional plants and native animal habitat (Douglass and Stanton, 2010).

In 1842, Jose de la Guerra y Noriega acquired the Pico family's Rancho Simi (California State Military Museum, n.d.). De la Guerra y Noriega was one of the most prolific landowners and claimed more than 500,000 acres (202,343 ha), with ownership of land extending from the southern end of San Luis Obispo County to the southern end of Ventura County (California State Military Museum, n.d.). Other ranchos located in the San Fernando Valley and started in the same decade include El Escorpión, El Encino, Tujunga, Cahuenga, and La Providencia.

Consultants mentioned two places important to their families and history during interviews (Consultant Data, 2013, 2016, 2018). El Escorpión consisted of approximately 1.5 leagues (about five and a quarter acres) and was located on the far west side of the valley, reaching into the Santa Susana Mountains. Chijuya Odon, a Native American, probably lived on the El Escorpión rancho from 1836 until his death in the 1880s. His daughter Espíritu and her son Juan Menendez lived in the Leonis Adobe in Calabasas (McLendon and Johnson, 1999). This area contained the known village closest to the Burro Flats Site. The second place mentioned was the Rancho El Encino that consisted of 4,460 acres (1,805 ha) and was originally granted to Native Americans, Ramon, Francisco, and Roque. Although they sold the rancho to Vicente de la Osa, the grantee of La Providencia, in 1849 (Ciolek-Torello et al., 2006), this area is revisited in the modern era by consultants and remains important. It is located outside SSFL.

Following the signing of the Treaty of Guadalupe Hidalgo in 1848, the United States took possession of California. Between 1848 and 1860, the state of California was overrun with emigrants from other parts of the United States, particularly after the discovery of gold in 1849. Land where precious metals were found was valuable. More Native Americans were moved off this land or killed outright and groups whose traditional lands were located in mining districts were nearly obliterated (Cook, 1971a).

From the mid- to late 1800s, the U.S. Government did little to assist struggling Native Americans. The Bureau of Indian Affairs was largely corrupt and, although the government spent time and money moving many Native Americans to reservations, tribes in California typically were left alone and neglected.

More than 10,000 Native Americans were captured and removed from their homes under the California Indenture Act of 1850 (Castillo, 1978). Native Americans and gold miners frequently and violently clashed over land. Three Indian agents were sent to California to attempt to negotiate peace between the numerous miners and the local native populations. From 1851 to 1852, eighteen treaties were proposed to set aside land and provide aid in the form of farm animals, agricultural equipment, seed, clothing, and the like if the Native Americans would relinquish claims to their traditional lands. The U.S. Senate refused to ratify the treaties, as the California legislature objected (Heizer, 1978a). The lands ceded were not specified. Tribes were not clearly described. The names on the treaties that can be identified include sixty-seven tribelets, forty-five village names, fourteen duplicates, and thirteen unidentifiable or personal names. None of the promises made to the Native Americans were ever fulfilled (Heizer, 1978a). The treaties were kept secret, never formally ratified, for fifty years (Johnston-Dodds, 2002).

Violent confrontations between miners and Native Americans did not stop, and the native populations were further decimated (Heizer, 1978a).

The California legislature passed a bill in 1927 that authorized the attorney general to bring suit against the United States for the eighteen broken treaties. The California Indians' Jurisdictional Act became a law in 1928 and a case was filed (K-344). The suit was filed on behalf of the Indians of California, as defined by the Act. In 1944, the U.S. Court of Claims awarded the Indians of California over $17 million for the eighteen reservations promised in 1851-1852. The government deducted money for services provided and delayed payment; funds were not completely distributed until 1971 (Stewart, 1978). One consultant noted that the only money they ever received from the government was a payment from this settlement (Consultant Data, 2016).

Ethnicity of the Native American villages of the Simi Hills after secularization was quite different from before the Europeans arrived. Writing in the mid-1800s, Hugo Reid observed that Native Americans who were originally from as far away as Santa Ynes and San Diego lived in scattered groups in the Los Angeles area (Dakin, 1939). Some Native American settlements appear to have been continuations of the earlier pre-Mission communities, and, notably, people from El Escorpión in Mission times appeared to be descended from people who lived at El Escorpión before the mission was established (Johnson, 1997).

Many Native Americans from the San Fernando area stayed near the mission; others, particularly those with Tataviam ancestry, moved closer to the former mission rancho of San Francisco Xavier, northeast of the project area in Valencia, and closer to their ancestral lands. Many Castac Chumash, Kitanemuk (Native Americans from the Tehachapi Mountains and Antelope Valley, north of SSFL), and Yokuts moved to the Tejon area, north of the Simi Hills. Santa Monica Mountains Chumash moved down the Santa Clara River valley to Saticoy and Mission San Buenaventura (King and Blackburn, 1978).

Despite the original intent of the Secularization Act, many Native Americans never received the land promised. Others received land, only to lose it when those grants were not recognized by the Mexican government. Maria Lipas, a local Native American woman, took in Native Americans who had nowhere else to go and let them stay on her property (Consultant Data, 2016). One of the consultants said that a great-grandfather, Mario Ortega, a neophyte well known and liked by the friars at the mission, was given a plot to plant in the El Encino Grant, a part of the Los Encinos Rancho. Their grandfather talked about roaming the hills. He lost the land, though. In 1843, many Native Americans, living in and near the Simi Hills, combined efforts to protect Mission Indian lands, which were rightfully theirs (Consultant Data, 2016).

Following mission secularization, descendant communities formed that were largely continuations of the settlements established near the missions during the Mission Period (McLendon and Johnson, 1999). Many members of the local Native American community lived on the El Escorpión grant. Edberg (1985) noted that *Huwam* may have been a viable village as late as 1850. Chijuya Odon passed on land received after secularization to his daughter, Espíritu. This land was a part of the El Escorpión grant, located near SSFL. In 1860, Espíritu's husband

Miguel Leonis, a Basque settler, built several adobes on the site of the old village at El Escorpion. In 1861, Joaquin Romero, who also owned part of the El Escorpión grant, sold his part (Escorpión Viejo) to Leonis. Espíritu lost the land that had originally been hers when Miguel Leonis passed away. Although Espíritu eventually won in court her right to her land, many years passed between the judgment in her favor and the restoration of the land to her. She died shortly after gaining her land back. In 1880, Native Americans were still on the land in the U.S. census, the last census showing them in this location. At the end of the nineteenth century, many Chumash descendants of mission residents lived at El Escorpion and the old mission vicinity in the San Fernando Valley (McLendon and Johnson, 1999).

The treatment of Native Americans remained poor. Multiple consultants mentioned Rogerio Rocha and the eviction of him and his wife from their house during a rainstorm (Consultant Data 2016, 2018). Rogerio Rocha was a Fernandeño silversmith and blacksmith and a Fernandeño captain (Consultant Data, 2016). His father was also a previous Fernandeño Coalition captain and was Tataviam.

From the *Los Angeles Herald* (*Los Angeles Herald*, 1896), an associate of Rocha said, "The day that was selected to eject Rogerio Rocha was such a day as Monday afternoon. The rain was pouring down in perfect sheets. That was the time these philanthropists selected to have the old Indian and his bed-ridden wife moved from under their roof." Sheriff's deputies carried Rocha's wife outside and laid her down in the road, in the rain, and left her there. All of the Rochas' personal possessions and their livestock, primarily chickens, were dumped into the road. Senator Refugio F. Del Valle told the Herald that the reason Rocha was forcibly removed was due to the presence of a good spring on his land. MacClay secured the water rights and land and removed the Rochas. Rocha's wife died several days after the eviction (*Los Angeles Herald*, 1896).

By 1900, the remaining Native Americans had been pushed off the land by various court cases and claims against the original land grant, although Espíritu and her son, Juan Menendez, remained close to the area, at the Leonis Adobe in Calabasas.

By the middle of the nineteenth century, population estimates of all Native Americans in California totaled around 100,000 (Cook, 1978). Post-secularization communities were varied, and generally, conditions for Native Americans did not improve. In California, although reservations were established, much of the native population was left where they had lived when the missions were secularized. One Native American consultant noted that their family stayed around the San Fernando Mission (Consultant Data 2016). Another consultant said that when her great-grandmother died in 1889, her grandmother, who was four years old, was adopted by a non-Native American woman in Santa Barbara where her grandmother had been born. The woman adopted Chumash orphans. More than one consultant related that their ancestors had married outside the Native American community. One consultant noted that his grandmother's birth certificate, from sometime around the turn of the last century, says "Caucasian." Native American birth certificates were deliberately not labeled "Indian," and there were only two other options, "Caucasian" and "Negro" (Consultant Data, 2016).

The detrimental effects of the Mexican occupation of California to the Native American community were numerous. Large herds of stock animals in the Native Americans' environment consumed the resources that native species depended upon and hastened the spread of invasive species by moving the pods and seeds of the invasive species in their coats. Spanish punitive expeditions of the previous period hunted fugitive neophytes and destroyed villages, and the number of these types of expeditions rose during the 1840s, causing an even further decline in Native American populations (Cook, 1971b).

In broad strokes, the start of the American period was possibly more detrimental to the local native communities than the mission system. Prior to the discovery of gold, estimates of Spanish and Mexican occupants of California range around 4,000 persons (Cook, 1971b). Stock animals, including cattle, sheep, and horses, numbered approximately 152,000, 200,000, and 20,000, respectively, in 1822, and grew to 1 million, 1 million, and 200,000, respectively, in 1860.

Huge increases in stock animals further negatively impacted the local environment. In 1848, California became part of the United States and, shortly thereafter, gold was discovered in the state. Americans poured into the state by the thousands. Americans' history with Native Americans was primarily an outwardly contentious one. Unlike the Spanish, who had sought to use Native American labor to conserve the Spanish labor pool, the Americans segregated or exterminated Native Americans. Under Spanish rule, Native Americans could own property or testify in court. This was not the case in American courts. Americans could not be brought to trial for the crime of killing a Native American (Cook, 1971b). The sheer number of non-native settlers who occupied the traditional lands of the Native Americans, post-1848, meant that the native populations were further marginalized. One of the primary results of this influx was that Native Americans were forced to adapt to their new environment and lost much of their old social structure in the process (Cook, 1971b).

The California Constitutional Convention convened in 1849 to write California's constitution. Native Americans were denied the ability to vote under this constitution. The state constitution was never amended to allow Native Americans the right to vote and, after 1870, when the Fifteenth Amendment was ratified, Native Americans still were not able to vote in California until the passage of the Citizenship Act of 1924 (Johnston-Dodds, 2002).

In 1850, the Act for the Government and Protection of Indians was passed by the California state legislature. This act allowed white landowners to apply for the removal of Native Americans from lands in the white landowner's possession. The Act also allowed a person to obtain a Native American child as an indentured servant. A Justice of the Peace would determine if the child were obtained legally and without coercion, and could issue a certificate that left the child as a servant until the child reached adulthood.

The Act also allowed a white person to pay for a convicted Native American's fines and court costs in return for a bond that put the Native American in servitude to the payer. Work was compelled until the fine was discharged. The Act also allowed for the arrests of Native Americans on charges of vagrancy. If found to have been vagrant, the Native American was

hired out to the highest bidder for a term not exceeding four months. This Act put all decisions on a Justice of the Peace and did not allow for appeals to other courts. Native Americans were only allowed to put their complaints before a Justice of the Peace. Several amendments were made to this Act, including allowing Native Americans to be considered competent witnesses and lengthening the amount of time a Native American could be an indentured servant. The first of these amendments proved to be generally useless, as Native Americans were not allowed to be witnesses in court under other laws and, although the sections that dictated how Native Americans became indentured servants were repealed in 1863, the system appeared to have continued. Many Native Americans were caught in this system, not because they had been convicted of anything, rather because they were kidnapped and sold when they were children (Johnston-Dodds, 2002).

The Land Act of 1851 established a Board of Land Commissioners to review these records and adjudicate claims, and the board charged the U.S. Surveyor General with surveying confirmed land grants. In order to investigate and confirm titles of California, American officials acquired the provincial records of the Spanish and Mexican governments that were located in Monterey. Those records, most of which were transferred to the U.S. Surveyor General's Office in San Francisco, included land deeds and sketch maps (Gutierrez et al., 1998).

From 1852 to 1856, the Board of Land Commissioners established the validity of grant claims. The commissioners rejected many of the original rancho claims, which then became public domain and fair game for squatters. Although the claims of some owners eventually were substantiated, many of the original owners lost their land to the United States. Unsurveyed land boundaries created a loophole for squatters to occupy plots on the fringes of land grants. The squatters who occupied the land eventually came to own those plots through squatters' rights (Gutierrez et al., 1998). These claims frequently resulted in a loss of traditional lands for Native Americans.

Between 1850 and 1859, the governors of California sent the California militia on several expeditions against Native Americans in California. From 1850 to 1852, the state government spent nearly $850,000 on these expeditions, ostensibly to protect the lives and property of California citizens (Johnston-Dodds, 2002). The Sebastian Military Reserve at Tejon was established in 1853, and many San Fernando Native Americans moved to the area. The Sebastian Reservation closed in 1864. Some Native Americans left; some stayed on, working for the rancho's new owner, Edward F. Beale (Johnson, 1997). Juan Menendez told Harrington that his grandmother said there was a very large rancheria at Potrero Los Burros and that he knew of painted caves near there (Harrington, 1986). This evidence placed at least some Native Americans in the area of Burro Flats in the late 1800s.

In 1887, the Dawes Severalty Act was signed into law by President Grover Cleveland. The Dawes Act, also referred to as the General Allotment Act, divided Native American reservations that were held communally into small, privately owned units held by private individuals. The Act also changed the legal status of Native Americans from tribal members to private individuals. Tribal affiliations were dissolved, and tribal sovereignty was all but destroyed. The main idea

behind the Act was Native American assimilation into mainstream American culture. The Act was detrimental to Native American communities, and many Native Americans, living away from their former homelands and confined to reservations, were cut off from any government support. Native Americans who received land were expected to farm or ranch on the land and, if they were unable to succeed at this endeavor, the land reverted to the government and was frequently then offered for sale, often to white settlers.

Leftover land from the original allotment was considered surplus and sold off to non-native people. Between 1887 and 1900, approximately sixty million acres of Native American land was sold off to non-native people. The Act also provided for the creation of the federally funded assimilation schools for Native American children. Although the Act did not apply to some groups of Native Americans, notably those in Oklahoma, none in California were exempt from the Dawes Act (1887).

Native American education programs were established in California, including a day school, a boarding school, and a public school that allowed Native American attendance. The schools were viewed by tribal elders as a threat to their culture and as an attempt to assimilate the younger generation into American culture. Many Native Americans did not want their children attending these schools. The boarding schools were designed to assimilate Native American children into mainstream America. These boarding schools were traumatic to Native American children because they were separated from their families, forced to assimilate into American culture, forced to abandon their traditional ways of life, and were susceptible to disease, which was common at the schools (Castillo, 1978).

By the turn of the twentieth century, the Native Americans in the SSFL area and the Simi Hills were scattered and living in small groups, not concentrated in any area. No reservations were designated for the local communities around SSFL. The local languages were no longer spoken and, by the early 1900s, the last Tataviam speaker passed away. Many Native Americans decided to claim they were not Indian to avoid both the prejudices towards and the laws written against Native Americans (Cook, 1978).

In April 1900, Charles A. Bell, an American, acquired a large tract of land near what became SSFL. Bell was a rancher, and he hired local Native Americans to work for him. Charles Bell told Harrington that every stream that came down from the mountains north of his ranch had a Native American rancheria at the mouth (Harrington, 1986). Bell's house and barns overlooked a canyon that started at Burro Flats and was separated by a narrow ridge from Los Virgenes Canyon, located to the west and coinciding with the location of Bell Canyon. Early records refer to this canyon as Los Escurpiones.

The Great Depression and World War II had further negative impacts on local Native American populations. There was a lack of work during the Depression, and Native Americans had a harder time finding work. Native Americans were not popular and were discriminated against (Consultant Data, 2016). One consultant said that his uncles got into construction and his dad was a plasterer. He also relayed that, in spite of prejudices, his dad instructed officials to put

"Indian" on his children's birth certificates. His dad's birth certificate also says "Indian," which the consultant said was unusual for the period (Consultant Data, 2016). Under Indian Commissioner John Collier in the 1930s, tribes were offered the chance to re-establish corporate governments under certain regulations, the Dawes Act was repealed, and allotments were stopped. Several California groups attempted to organize under these new policies.

Native Americans fought during World War II, and many of the reservations' economies improved. Compared to non-Native Americans, incomes were still low (Castillo, 1978). One consultant recounted that between the Great Depression and the middle of the last century, many Native American people were assimilated into mainstream culture. This was the beginning of the real disconnect of the spiritual side of the Native American cultures (Consultant Data, 2016). One consultant noted that his father, who had been a soldier during World War II, was heavily discriminated against because he was a Native American (Consultant Data, 2016).

During the 1950s, attempts were made to provide better schools for Native Americans with Title 1 intended to provide money for education. Title 1 funds proved hard to track because corruption during implementation was widespread. Federal and state Native American education generally focused on assimilation (Castillo, 1978). Native Americans living in the areas around SSFL remained scattered into the 1950s. One consultant said that while some of his family remained near the Mission San Fernando, his family moved many times in the 1950s and 1960s, following work (Consultant Data, 2016).

In the latter half of the twentieth century, the local Native American community began working to revitalize and reconnect with their culture. In 1967, Rudy Ortega Sr., a local Native American leader of the Fernandeño Tataviam, was contacted by Rocketdyne about the cave and rock art at Burro Flats. Mr. Ortega Sr. was the head of a group within the Native American community of people whose ancestors had been either of Fernandeño and/or Tataviam ancestry and had become one group, the Fernandeño Tataviam. Rocketdyne contacted Ortega regarding the rock art because he was known to the Bureau of Indian Affairs and local City of Los Angeles agencies as Native American. A small group of local Native Americans were able to visit the area in 1968, 1969, and 1972. On the first visit, one member of the group performed a blessing of the area (Consultant Data, 2016).

In the late 1990s, access to another important site, the Cave of Munits (Bat's Cave), located near SSFL, was cut off from the native community. Although the site was not accessible to the public, the fencing around the site was frequently cut through, and the local public freely visited the site. In the late 1990s, the security and the fencing were increased and there was no access to the site (Crosby, 1996). The Cave of Munits is reported to be the residence of a Chumash or Fernandeño shaman. It is also located next to an unusually large field of Datura plants, a plant used in various ceremonies (Consultant Data, 2013, 2016, 2018).

Access to the Burro Flats Site has continued sporadically since the 1960s. One consultant discussed how any work or visits to the rock art at Burro Flats had to be arranged through Rocketdyne (Consultant Data, 2013). NASA allows Native Americans to visit the rock art site at

Burro Flats by official request, and visitors are accompanied. No one goes up there alone, and group size is limited so that entire groups may not be onsite at the same time (Consultant Data, 2018). Even with some access, parts of the site remain partitioned off and are out of bounds (Consultant Data, 2013). Consultants also noted that solstice ceremonies would involve many groups. Solstice ceremonies were several days long and people would attend to support the ceremonies, setting up a base camp. In the present day, usually each group visits independently for only a single day and no one stays overnight (Consultant Data, 2018).

One consultant discussed attending pow wows at a park near SSFL many years ago. The pow wows, the consultant said, were arranged by a Native American who was Chumash and Gabrieleño. The park belonged to Rocketdyne, though, and eight or nine years prior to the 2013 interview, Rocketdyne stopped allowing the pow wows. It was a convenient place to hold the pow wows. Attendees would camp overnight, with pow wows sometimes starting on Friday and ending on a Sunday. They would celebrate, dance, and honor the spirit of the ancestors. There was good spiritual energy at the pow wow and a positive connection (Consultant Data, 2013, 2016).

Physical Characteristics

The district is part of a continuous portion of the Simi Hills that is open and undeveloped. Several locations featured in Chumash, Fernandeño, Gabrieleño, and Kizh myths exist and are located in the Simi Hills. Some are accessible by the public; some are unknown to the general public and remain accessible; some have limited access; and some are completely inaccessible by the Native American community. Locations remain extant, and some consultants said that they still represent sanctity and are still places of power, which are not truly understood (Consultant Data, 2013, 2016, 2018). These places still look very much as they did before the Europeans arrived. They have not been torn out or built over, and they are a part of the local Native American identity that has endured into the twenty-first century.

The Burro Flats Traditional Cultural Property, per the Native American community, includes all of SSFL, specifically, the natural landforms including rockshelters, caves, high peaks, natural water such as Bell Creek, outcrops containing fossils, and the Potrero del Burro (the Burro Flats Landform), as well as any flora or fauna living on SSFL. A place near El Potrero was called the *campaña del coyote*, which is a collection of large stones associated with Coyote (Harrington, 1986, Reel 106: Frame 220). This area is not formally recorded. The TCP also includes any formally recorded archeological sites and trails within SSFL.

The Burro Flats Cultural District includes 119 contributing resources, including one previously listed site (Burro Flats Site, CA-VEN-1072). These are prehistoric archeological sites, including the Burro Flats Site, which contain features or artifacts important to the local Native American community.

The majority of the lithic sites are solely open-air scatters. One scatter is associated with milling features, one was found with a hearth, and another was found near a natural water catch basin. Other site types include rock art sites, one milling site, and one quarry site. One of the rock art

sites is a major occupation site and an ethnographic village site with both a summer and a winter solstice viewing location, a mourning area, a trail, midden, and milling features.

Several consultants discussed the number of caves found around SSFL and within the Simi Hills. Several caves and rockshelters with rock art are recorded in the area. Rock art within these caves is the written history of the local Native American community (Consultant Data, 2013; Salas Teutimes et al., 2013). During the interview process, one consultant discussed a small cave located on SSFL property. He noted that the mountains at SSFL are the highest in the area and that there are a lot of caves. Spiritual people went into the caves after important ceremonies such those for solstice, mourning, and harvest (Consultant Data, 2016). When the consultant visited SSFL in April 2015, there was only a small amount of rain because of the drought, and the area was dry. At 2:00 p.m., the temperature of the cave was about forty degrees. That morning, there was a small amount of snow on the ground. The lower areas were hot, and the high point was much cooler (Consultant Data, 2016).

Vegetation includes several biotic communities including Venturan coastal sage scrub, chaparral, oak woodland, and the riparian woodlands. The SSFL area, located in the Simi Hills, consists primarily of the chaparral community, and several plants found in this specific area are not found elsewhere, despite the prevalence of the chaparral community in the Los Angeles-Ventura area. The Humboldt lily, which can reach up to ten feet tall, is described by the Kizh as showing the Creator's blessing over the area. It only grows in certain areas in their origin story, and the plant is associated with the mourning ceremony, which is practiced to send off the souls of the deceased (Matt Teutimes, pers. comm., 2016). Humboldt lilies were noted blooming in 2019, primarily on the west side of the creek that runs through the SSFL (Phil Reid, pers. comm., 2019a).

The landscape of the SSFL was described as sacred by more than one consultant. Other plants found on the SSFL specifically mentioned by consultants include bay trees, which have healing properties, including the ability to heal souls ceremonially. Old growth oak trees represent a staff of life. Datura was used in ceremonies. Sage was discussed by multiple consultants. Sage from a sacred place such as the Burro Flats Site was likened to holy water from the Vatican. One consultant noted that during one of the winter solstice celebrations, the scent of sage from nearby sage plants rose twice during prayers. Mugwort, which loves water and grows around large rocks, is an anti-inflammatory and brewed into tea to be used by women for their monthlies (Consultant Data, 2016, 2018). Several local creeks have headwaters at SSFL.

Animals native to the area include mule deer, bobcats, mountain lions, coyotes, gray foxes, eagles, condors, turkey vultures, hawks, California quail, owls, bats, and ring-tailed cats. Historically, bears also inhabited the area. Although not native, burros are mentioned in ethnographic accounts describing the area (Harrington, 1986). Consultants have indicated that all of the flora and fauna found within SSFL should be included in the cultural district.

Several consultants also discussed human made trails, which cross SSFL and should be included in the district. Not many trails are recorded; only one footpath is recorded within SSFL. The following is summarized from Consultant Data (2016) concerning trails through SSFL:

> These locations served as travel and trade routes to what we know today as the SSFL. The Santa Susana site was also known for its water resources. Many of the river ways connected to this site supplied the villagers and wildlife with fresh spring water. This ridgetop mesa was a vantage point to escape from the low-lying valleys for the purpose of ceremony and seasonal gatherings. I believe this place was a centralized Sacred Site for the people of the North, East, West, and Southern Chumash. The passes or gateways to and from these regions were once utilized as native trails and now serve as our roadways and hiking trails. North of SSFL is the Tejon Pass, where Interstate 5 leads to Bakersfield. This is just one of many routes that cover our area and connected us to the people of the North, the Kawaiisu and Yokuts.

Other natural features specifically described in stories, and therefore part of the TCP, include the rockshelters and caves located within the Chatsworth Formation and a rock described by Juan Menendez, a consultant for Harrington, as the *campaña del coyote*.

Appearance During Periods of Occupation or Use

One Native American consultant commented on the number of resources in the area; all examples of the natural features the community has indicated should be included in the TCP:

> There was plenty of water, shelter, and wild game to survive the many changing seasons to come during their occupation. This location had all of the resources to survive: Oak trees, deer, quail, rabbit, and fresh spring water, wells, etc. The area provided sandstone rockshelters, hunting blinds, Tule grass and all of the provisions to build an apa (hut-like dwelling). For other provisions, they often traded with other neighboring tribes. I have witnessed and counted as many as seven bucks grazing in the tall grass in the meadow on a warm spring day. It is said that this area may have been a migration corridor for the wildlife, because of the natural springs and grassy meadows. The oak trees provided acorns for the bread and shade for the hot summer months. (Consultant Data, 2016)

Other consultants concur that the area looks similar to how it would have looked when their ancestors occupied the area (Consultant Data 2016, 2018).

Current and Past Impacts

SSFL was utilized for ranching in the 1800s. During the 1920s and into the 1940s, the Simi Hills and the SSFL area were used by Hollywood as movie locations. Several films were made at Burro Flats. Crash Corrigan, a western actor, set up a movie ranch in the area. Films were made here, and an old west ranch was created for visitors (Vincent, 2016). One Native American consultant noted that his first memory of visiting this area was a trip to Crash Corrigan's movie ranch. He said that he still has a photo of his sister from about 1942, when she was six years old (Consultant Data, 2016). In the 1930s, Henry Silvernale bought over 1,000 acres in the area and

raised cattle on the land. Interviews conducted through the local historical society in Chatsworth with the descendants of Henry Silvernale and Orrin Sage indicated that no one still alive remembers Native Americans visiting or working in the area during the 1930s and 1940s (Knight, 2016a), despite knowing members of the community of Native American descent (Knight, 2019).

Into the 1940s, the area on which SSFL is located was still used for ranching (NASA, 2017), and disturbances to the area were likely minimal. After World War II, North American Aviation Inc. (NAA), a predecessor company of Boeing, purchased land that was then developed for rocket engine testing. In 1954, NAA purchased 838 acres (339 ha) from Henry Silvernale and Elizabeth Hall, which later became part of NASA's Areas I and II (NASA, 2011). Much of the site was then fenced and access to the area became restricted. Over the course of its use as a testing and development facility, NASA and other agencies and private companies have made extreme changes to the landscape at SSFL to carry out their various missions. Roads, buildings, infrastructure, and testing facilities have altered the landscape, particularly in the test stand areas.

One consultant interviewed in 2013 worked at the Rocketdyne facility as an archeological monitor during the 1950s for the installation of the Alfa, Bravo, and Coca test stands. He was on site for construction in the bowl area and for the construction of the pillboxes on the hillside, built to house the cameras to photograph rocket testing. He also worked as a monitor for pipeline installation and the cleanup inside in the control halls. The consultant said that no one was really interested in the Native American resources or knowledge at the time (Consultant Data, 2013).

Sites located in the undeveloped or partially developed areas with minimal disturbance retain remarkable integrity based on surface observations, likely in part because of the limited access to the area. Several consultants compared the use of SSFL (specifically the Burro Flats solstice site) by their ancestors to Rocketdyne's and, subsequently, NASA's use of the area. They observed that the area had been used prehistorically for celestial observations and used in the modern era for the exploration of space (Consultant Data, 2013, 2016).

Activities at SSFL have included the research, development, and testing of liquid-fueled rocket engines and components since 1948. DOE conducted nuclear energy and liquid metal research in Area IV of SSFL.

The district was impacted by the Woolsey Canyon Fire that broke out in November 2018, burning approximately 80 percent of the total area of the NASA-administered area. The Boeing and DOE areas were similarly impacted. Damage from the 2018 wildfire is similar in nature to the damage caused by a wildfire in 2005.

Vegetation in the TCP includes several biotic communities, including Venturan coastal sage scrub, chaparral, oak woodland, and the riparian woodlands, bisected by a riparian corridor. These plant communities have adapted to the periodic burning that is part of the natural environment. The 2018 wildfire removed most of the understory in the chaparral-oak woodland along the waterway in the TCP. The fire severely impacted the entirety of the oak woodland in

the riparian corridor and many of the trees, which were stressed by drought prior to the fire. The fire reduced the oak woodland, which reduces the integrity of setting and feeling in those areas. Many other TCP resources, particularly the rock outcroppings and the features of the landscape associated with the solstice sites, did not sustain damage, and they retain their integrity and continue to convey the significance of the TCP (Reid, 2019b). The grasses began to regrow within weeks of the fire passing through the area. The understory has started to regenerate, and acorns have begun to sprout new oak trees.

Fifty-eight noncontributing resources are located within the boundary of the TCP. These resources include nine sites: five historic era archeological sites, three test areas (Alfa, Bravo, and Coca), and a remnant of Building 2206, which was left in place at the request of the Santa Ynez Band of Chumash Indians; forty-two buildings: fifteen Department of Energy (DOE)-owned buildings (located on the Boeing-owned portion of SSFL), six test stands, and three control houses (two test stands and one control house in each of the test areas), and other affiliated buildings; and seven structures, including dams, spillways, and electrical substations (NASA, 2014a, 2018, 2019). The noncontributing buildings and structures occupy a small fraction of the district, and removal of many of them is anticipated. The community has indicated that the presence of these noncontributing resources does not affect the overall integrity or significance of the cultural district (Consultant Data, 2013, 2016, 2018).

The proposed demolition and cleanup activities on the NASA-administered portion of SSFL are detailed in an environmental impact statement prepared to analyze the impacts of NASA's remedial actions at SSFL (NASA, 2014b). Structures within the Alfa Test Area, Bravo Test Area, and Coca Test Area would be demolished as part of the cleanup activities in accordance with the 2014 Programmatic Agreement. The Alfa Test Area contains seven extant resources. Structures were constructed in 1954 and 1955 and the Alfa Test Area is the first cluster of static test stands in operation for Air Force Plant 57 at SSFL. The Bravo Test Area contains five extant resources. Structures were built in 1955 and 1956. The Coca Test Area contains nine extant resources. Structures were originally constructed in 1955 and 1956 and then, between 1962 and 1964, some facilities were modified and redesigned (ACI and WR, 2009; NASA, 2019). None of these resources contributes to the significance of the TCP. Demolitions that have taken place as part of the NASA cleanup activities have not reduced the integrity of the TCP.

Proposed demolition and remediation activities by DOE in Area IV and the Northern Buffer Zone of SSFL are detailed in a Record of Decision, posted to the Federal Register on September 27, 2019 (84 FR 188). The remaining fifteen DOE-owned buildings (located on the Boeing-owned portion of SSFL) in these areas are slated for demolition and are included in the tally of noncontributing resources as present at the time of nomination.

Previous Investigations

The majority of previous investigations conducted at SSFL were archeological studies. Many of these were specifically investigations of the solstice site, observations related to solstice events, and recordation of the rock art associated with this site (Corbett and Guttenberg, 2015; Corbett et al., 2012, 2015; Fenenga, 1973; Knight, 1995, 2001, 2012, 2016; Krupp, 1983, 2014; La Monk,

1953; Romani, 1981; Romani and Larson 1985; Romani et al., 1988; Rozaire, 1959). Research conducted in the SSFL area and surrounding Simi Hills focuses primarily on archeological explorations and includes the works by John Romani (1978, 1981; Romani and Larson, 1985; Romani and Tartaglia, 1978), Al Knight (2012, 2016a, 2016b), Chester King (1971, 2000, 2003, 2012), and Bob Edberg (1985). Dr. Edwin C. Krupp, a noted expert on indigenous astrological sites and the head of the Griffith Observatory, has written about the solstice sites at Burro Flats (Krupp, 1983).

The Kizh/Gabrieleño requested that interpretations of the art at the site by Edberg (1985) and information about the solstice events at the site by Krupp (1983) be included in this document. John Johnson of the Santa Barbara Museum has conducted extensive research on familial lines among Native American communities from mission records and has traced familial lines to specific villages in the region (Johnson, 1997, 2006; Johnson and Earle, 1990; McLendon and Johnson, 1999). The early accounts form the foundation of what is known of Native Americans in California prior to the establishment of the Missions. Ethnographers working in the nineteenth century and early twentieth century were able to record additional information directly from Native American recollections and collected stories that had been preserved, despite the impacts of the European explorers, the Mission system, and the subsequent influx of non-native settlers in the latter half of the nineteenth century.

As previous studies in the SSFL area focused on archeological sites and the landscape, a study that focuses on the modern native perspective of the project area with the incorporation of memory culture had not been completed prior to 2017. Much of the data in this nomination was obtained during an ethnographic study completed in 2017 (Lawson et al., 2017).

Several ethnographic accounts were reviewed for this nomination. The first accounts of Native Americans in California were written by early explorers and were limited to accounts of coastal groups. Juan Rodríguez Cabrillo's expedition recorded limited information about the early coastal Chumash. Editors Rose Marie Beebe and Robert M. Senkewicz collected several early writings related to California history, particularly about the Native American experience in early California, and published the writings in 2001. These accounts include a translated official account of Cabrillo's 1542 voyage, which provided the earliest observations of Chumash groups.

Other early accounts of the local Native American groups were written when European explorers first crossed into the San Fernando Valley. Don Gaspar de Portola searched Alta California for suitable mission sites in 1769. A member of his party, Pedro Fages, recorded information about Native Americans, specifically the Chumash, as the exploration party traversed Southern California. Miguel Costansó and Juan Crespí, members of the Portola expedition, kept diaries. Translations and reprints of these documents are available from a variety of sources. Pedro Fages' "The Chumash Indians of Santa Barbara" is included in *The California Indians: A Source Book* (Heizer and Whipple, 1978). Between 1838 and 1842, ethnographer Horatio Hale recorded ethnographic information about multiple cultures traveling with an exploring expedition within what later became the United States under the command of Charles Wilkes, US Navy. Hale's observations were published in 1846 in Volume VI (Hale, 1846).

In 1846, Alfred Robinson translated Friar Geronimo Boscana's *Chinigchinich*, an account of the culture and religion of the Native Americans living near San Juan Capistrano. The friar died in 1831, and the Chinigchinich document was found among his possessions (Boscana, 1846).

In 1908, A. L. Kroeber published *A Mission Record of the California Indians from a Manuscript in the Bancroft Library*, an annotated version of a California missions' survey completed by the Spanish government in 1811 (Kroeber, 1908). Both are available online. An account of Mission San Fernando in 1815 by a Russian trapper who spent time as a captive at the mission was included in Beebe and Senkewicz's collection of writings (2001).

Hugo Reid was a Scottish-born immigrant who lived in Los Angeles County in the 1800s. Reid married a Gabrieleño woman and recorded information from the local Native American community, including descriptions of their celebrations, lifeways, customs, myths, and religion. His letters are available in several places, including in a series of newspaper articles printed after Reid's death, available in numerous sources, including Susanna B. Dakin's *A Scotch Paisano in Old Los Angeles: Hugo Reid's Life in California, 1832 to 1852* (1939) and Robert F. Heizer's edited collection, *The Indians of Los Angeles County: Hugo Reid's Letters of 1852* (Reid, 1968).

C. Hart Merriam recorded information about the San Fernando Gabrieleño, the Alliklik (also called the Tataviam), and the Chumash from the San Fernando Valley between 1898 and 1938. Information in the Merriam papers related to the California Indians (1850-1979), specifically the Gabrieleño and the Fernandeño, also referred to as the Tongva, primarily includes vocabulary and brief descriptions of villages. The handwritten and typed notes are available online (Merriam, 2014).

Edward D. Castillo wrote about the effect of early exploration on Native Americans (Castillo, 1978). Friar Zephyrin Engelhardt wrote about the missions in the early 1900s, including the Mission San Fernando (Engelhardt, 1912, 1927). Constance Goddard Du Bois, working in the early 1900s, wrote several accounts of the Luiseño communities, located south and east of Gabrieleño territory. Although primarily about Native Americans outside SSFL and the Simi Hills area, her 1908 manuscript, *The Religion of the Luiseño Indians of Southern California*, provides some additional information about the Luiseño's neighbors, the Gabrieleños (Du Bois, 1908).

J. P. Harrington appears to have begun working with Chumash consultants in 1912 (Blackburn, 1975). María Solares, a Chumash speaker who had lived in Chumash villages, specifically in the Santa Ynez Valley, spent a significant amount of time with the Yokuts, Native Americans from the Central Valley, and had visited Tejon. Numerous consultants noted that their older relatives, including parents, aunts, uncles, and grandparents, had spent time in Tejon, sharing stories (Consultant Data, 2013, 2018). Fernando Librado, another of Harrington's Chumash consultants, was originally from Santa Cruz Island; he lived in and around Ventura for much of his life and spoke Ventureño Chumash. Myths that could be related to physical features in the Simi Hills are available in Thomas C. Blackburn's *December's Child*, an anthology of myths collected by

Harrington, several of which are told by María Solares and Fernando Librado. In 1916, Harrington recorded interviews with two local Native Americans: Juan Menendez and Séptimo López. Juan Menendez was the son of Espíritu, whose father lived at El Escorpión near Burro Flats. Juan Menendez's wife, Juana, also contributed to the interviews. At the time, Juan Menendez stated that he did not retell the stories as well as his mother did (Harrington, 1986).

Séptimo López, also called Séptimo Morada, lived in the ruins of the Mission San Fernando and ran a wagon hauling business between the San Fernando Valley and Ventura. He is the son of the last family that lived at the mission (Johnson, pers. comm., 2013). Harrington's Reels 102, 103, 104, 105, and 106 are available online as scans of his original notes (Harrington, 1986).

A. L. Kroeber published information about the Gabrieleño (1925:621-635), the Alliklik (also called the Tataviam) (1925:555, 577, 613-614, 883), and the Chumash (1925: 550-568). *California*, in Volume 8 of *Handbook of North American Indians* (Heizer, 1978a), includes articles about the Interior Chumash (Grant, 1978:530-534), the Tataviam (King and Blackburn, 1978:535-537), and the Gabrielino (Gabrieleño) (Bean and Smith, 1978:538-549).

S. F. Cook studied and published several articles about Native American demographics, including *The Population of the California Indians 1769-1970* (1976), *Migration and Urbanization of the Indians of California* (1971a:551-561), and *Historical Demography* (1978: 91-98) S.F. Cook also wrote about the Native American experience in American culture (Cook, 1971b:561-571).

Documents that contain information about government policies and treaties with Native Americans in California include Johnston-Dodds' legal summaries of early California laws and policies regarding Native Americans (Johnston-Dodds, 2002) and Heizer's *Treaties* (Heizer, 1978b:701-704)

INTEGRITY

Consultants indicated that although the district has been used for various scientific purposes since the 1940s, overall integrity is still excellent. The use of SSFL by the government and Boeing resulted in keeping the area in a state similar to when the consultants' ancestors used and occupied the area. Within SSFL boundaries, there is excellent preservation of several rock art sites and little graffiti. This area has the largest association of related sites in the eastern Ventura County and western Los Angeles County region and the sites are in generally good condition. Overall, the landforms appear unchanged, despite extreme soil movement during the construction of the test stands and other buildings throughout SSFL. Some areas of the Burro Flats Site (CA-VEN-1072) have been disturbed (Consultant Data, 2013, 2016, 2018).

The district retains all aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. The summer and winter solstice sites are still used by Native American descendants for ceremonial purposes. Consultants have indicated that they would use other areas of the district, if allowed to do so.

Location
The cultural district is located within an open area of the Simi Hills, and the locations of the important places within the district have not changed since cultural use of the area began. The district retains excellent integrity of location.

Design
Elements of design may be represented by extended associations between separate, temporally related archeological sites and the landscape. The summer and winter solstice sites, still used by Native American descendants for ceremonial purposes, retain integrity of design. Although several examples of rock art found within the district have faded over time, they are still observable with the unaided eye and more so with the aid of new technology (Corbett et al., 2015). The Burro Flats Painted Cave is one of the best-preserved examples of polychrome rock art in California. The various examples of rock art throughout the district retain their integrity of design.

The summer solstice site, the winter solstice site, and the mourning area are located in close proximity to each other. These three areas are related to the practice of the beliefs of the local community both prior to the arrival of Europeans and in the modern day.
Some of the caves and rockshelters may have been deliberately selected for use because of the direction that the opening faces. The rockshelter at the winter solstice faces southwest to catch the sunrise on and around the winter solstice. A burro painting is found in a cave/rockshelter with an opening facing east, possibly a deliberate choice, and possibly related to the story of the singing burro, who sings at the start of the world.

The relationships of the sites to each other and between the sites and the surrounding landscape remain intact. The TCP's integrity of design, as conveyed by the consultants, is also intact.

Setting
The natural environment played an important role in the formation of the archeological deposits and informs the prehistoric use of the district. Consultants have stated that the district retains integrity of setting because these structures are no longer in use, many have been removed, and the SSFL property has not been developed by large housing tracts or industry. Additionally, SSFL does not allow public access. The access has been restricted since the 1940s, meaning the area is quiet, and the atmosphere is calm. Many consultants shared that they can still feel their ancestors in this area (Consultant Data, 2013, 2016, 2018).

Materials
The materials used to create the cave paintings and the solstice ceremonial sites remain intact. While some paintings have faded, many are still visible with the naked eye. The rocks, outcroppings, and caves used by the communities are extant. Consultants have indicated that the important physical properties of the TCP largely include what is still found in the district, including archeological remains, landforms, specific flora and fauna, and year-round water. As these are extant, the TCP retains its integrity of materials.

Workmanship
The TCP contains a winter solstice site and a summer solstice site. Both sites are in use, and the events witnessed around both locations likely remain unchanged since the sites were originally created. One of the recorded archeological sites in the district is associated with the story of Gavilan. Additionally, extant rock art is found throughout the district. The workmanship of the rock art is plainly evident to the human eye and more so with scientific instruments. Consultants have stated that the district retains integrity of workmanship.

Feeling
The Burro Flats Painted Cave is one of the best-preserved examples of pre-historic rock art in California. The archaeoastronomical nature of the winter and summer solstice observatories and the surrounding areas provide a powerful sense of California's prehistoric past. Based on consultant data collected as part of an ethnographic study, respondents affirmed the importance of the Burro Flats Site in their lives. "The Burro Flats Site and the greater landscape surrounding SSFL have a continuing cultural and historical importance to the heritage of all of the consultants who participated in this ethnography and, therefore, to the local Native American community" (Lawson et al., 2017). The district demonstrably retains its integrity of feeling.

Association
Consultants stated that their communities are trying to recapture and rebuild the practices of their ancestors. The consultants discussed gaps in their collective memory due to the missions and U.S. government programs, which disrupted and destroyed their culture and lament that many of the Native American communities in California have lost much of their oral history. Various consultants described the natural beauty and resources of Burro Flats and talked of it as a "gateway" between the past and present, largely because the solstice celebrations can occur in the same place as they did for their ancestors (Consultant Data, 2016, 2018).

In summary, consultants have stated that the Burro Flats Cultural District is sufficiently intact and retains sufficient integrity to convey the significance of the important historic events that occurred there.

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [X] A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B. Property is associated with the lives of persons significant in our past.
- [ ] C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D. Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

- [X] A. Owned by a religious institution or used for religious purposes
- [ ] B. Removed from its original location
- [ ] C. A birthplace or grave
- [ ] D. A cemetery
- [ ] E. A reconstructed building, object, or structure
- [ ] F. A commemorative property
- [ ] G. Less than 50 years old or achieving significance within the past 50 years

Areas of Significance
(Enter categories from instructions.)
ETHNIC HERITAGE: Native American
RELIGION
ARCHAEOLOGY: Prehistoric
ART

Period of Significance
Creation to Present (Oral Tradition)
5000 BCE to Present (Scientific)

Significant Dates
N/A

Significant Person
(Complete only if Criterion B is marked above.)
N/A

Cultural Affiliation
Fernandeño Tataviam Band of Mission Indians
Gabrieleño Band of Mission Indians, The
Kizh Nation, The
Ventureño Chumash of Simi Valley

Architect/Builder
N/A

Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations.)

Burro Flats Cultural District is a Traditional Cultural Property eligible for the National Register of Historic Places at the local level of significance under Criterion A in the areas of Ethnic Heritage: Native American and Religion for its association with ceremonial solstice events. The previously listed Burro Flats Site (CA-VEN-1072) within the district is the only one of its kind in the region, where both winter and summer solstice observations were made and are still made. The TCP is eligible in the area of Archaeology: Prehistoric for the association of archaeological sites and natural features described in stories important to the history of the local Native American community. The district is also eligible in the area of Art for its remarkable examples of prehistoric Native American rock art that possess high artistic value and are important representatives of the aesthetic and possibly religious values of the Native American groups who created them. Based on oral tradition, the period of significance dates from creation of the world to the present. Archaeological study dates the artifact types excavated from CA-VEN-1072 to approximately 5000 BCE. The district satisfies Criteria Consideration A: Religious Properties as a clearly defined property whose importance has been documented ethnohistorically.

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

In the SSFL vicinity, the local Native American community consists of people who were removed forcefully from their traditional culture for multiple generations. The celebration of the solstices practiced prior to the arrival of Europeans in southern California is known from ethnographic evidence. The Native American community has identified the Burro Flats Site (CA-VEN-1072) as an important location for the celebration of both the summer and winter solstices. Beginning in the 1940s, access to SSFL was restricted, thus limiting the access by the general public to the area. Since the 1970s, the solstice ceremonies have seen a resurgence in the local community, and the solstices are again practiced at this site. The ability to celebrate the solstices at this site is considered a vital part of the revitalization of the local Native American culture (Consultant Data, 2013, 2016, 2018). The TCP is associated with the cultural practices of the local Native American community, is important to the history of that community, and is instrumental in maintaining the community's cultural identity.

The district is demonstrably important to several Native American Groups—including Barbareño, Ineseño, and Ventureño Chumash; the Fernandeño Tataviam Band of Mission Indians; the Gabrieleño Band of Mission Indians; and the Kizh Nation. The Burro Flats Site is the only location in the region where both winter and summer solstice observation sites are in evidence. The presence of these observatories at Burro Flats makes this an important ceremonial site in the Simi Hills area, still in use, and necessary to the revitalization of the local Native American culture. Physical places within the district are mentioned specifically in oral histories and stories of the area, which describe events important to the identity, history, and beliefs of the local Native American community.

The TCP is located in a continuous portion of the Simi Hills that is open and undeveloped. Several locations featured in Chumash, Fernandeño, Gabrieleño, and Kizh myths exist and are located in the Simi Hills. Some are accessible by the general public, some are unknown to the general public and remain accessible, some have limited access, and some are completely inaccessible by the Native American community. These places remain extant, and some consultants said that they still represent sanctity and are still places of power, which is not truly understood (Consultant Data, 2013, 2016). These places still look very much as they did before the Europeans arrived; they have not been torn out or built over. They are a part of the local Native American identity that has endured into the twenty-first century.

Ethnohistory of Burro Flats Cultural District Traditional Cultural Property
Several events important to local Native American history occurred within the TCP, including events related to the creation of the world and events related to a great flood. The boundaries also encompass various locations where supernatural beings visited or lived. Several landforms were used by the ancestors of the local Native American community, likely for ceremonial purposes.

Consultants describe the area as significant, both as a place that can be used for education and as a spiritual place. The Simi Hills have cultural significance because there are stories about the hills, and there are oral traditions that talk specifically about the Simi Hills. These stories are culturally important and have been preserved despite attempts to remove the Native Americans from the area throughout the years. The landscape, discussed in these stories, is still there and will continue to be there forever (Consultant Data, 2013). The area also reminds consultants of their ancestors (Consultant Data, 2016). Several of the consultants offered interpretations of the rock art of the area and of the ceremonies that likely occurred at sites with this art. Burro Flats, in particular, was used by their ancestors to mark and celebrate the summer and winter solstices. Even if they do not know exactly how their ancestors celebrated the solstices and used the area, they can continue to use this area for the same celebration even if it is not practiced in exactly the same way (Consultant Data, 2016).

The following are physical places within the TCP that were identified by consultants, archival research, and the oral history associated with those places.

Juan Menendez, Harrington's consultant, stated that his grandmother said there was a very large rancheria at Potrero Los Burros, and he knew of painted caves near there. There was also a place near El Potrero, a place with burros (presumably Burro Flats), called *campaña del coyote*. The place had a big stone sitting on top of three other stones, and the coyote would come to the place, go under the rock, and "ring the bell" by hitting the stone from underneath (Harrington, 1986, Reel 106: frame 220). This story is particularly interesting because Burro Flats is associated with the winter solstice, as is Sky Coyote. Coyote, often depicted as an old man, is either a culture hero or a trickster, possibly representative of man who can be wise or foolish, good or evil, rash or careful. His apparent old age does not affect his agility, and he is not really a part of the highborn elite (Blackburn, 1975).

Suntree (2010) proposed that Story #30, the myth of the Coyote and the Centipede from Blackburn's collected Chumash myths, may be the basis for the central imagery of the rock art painting of the winter solstice main panel at Burro Flats. This story and several others were recorded by Harrington in the early 1900s. Schupp (1983) notes a correspondence between the tale of 'Khra'wiyawi and the myth of the Coyote and the Centipede. This is of interest, as the 'Khra'wiyawi is definitely associated with the Simi Hills. The son of the chief, 'Khra'wiyawi, who dies at the hands of Munits, a locally recognized evil shaman, is dismembered and his flesh removed, leaving only bones, which the saddened villagers collect after Munits throws them out of the cave. It is also possible that Munits is consuming the boy in a ritual cannibalism, as Coyote once ate Wiyot's (the first person) heart in Juaneño mythology (Boscana, 1846). Edberg (1985) also notes the presence of several centipede motifs on the main panel at Burro Flats. During interviews for the ethnohistory (Lawson et al., 2017), some consultants requested that Edberg's interpretations of the main panel at the solstice site be included (Consultant Data, 2016). The myth of Coyote and Centipede is summarized as follows:

> This story occurred when animals were still people. Boys used to spend all their time trying to climb a smooth pole to see who could do it best, and Centipede always won. The other boys got angry at Centipede and so they complained to old man Coyote. Coyote agreed to take action. After dark, he put his takulšoxšinaš (downy cord) at the pole's base to bewitch it. The following day, only Centipede could climb the pole, but the higher he climbed, the taller the pole grew under Coyote's spell. Centipede climbed and climbed. He encountered strong winds, which nearly blew him off the pole. He came to another area with strong winds, but above him, he could see a door into the sky. He reached the door, but when he entered the doorway, the pole shrank away. Centipede was stuck. Then, he heard the buzzing of giant mosquitos, which stung him and sucked away his blood until all that was left of Centipede was bones. Meanwhile, Coyote felt sad about the spell he cast on Centipede, and he told everyone that he would go look for Centipede. Coyote climbed the pole, passing the windy places, and went through the doorway. He found Centipede singing sadly that he was nothing but bones. Coyote cured Centipede but although Centipede appeared mostly as before, he was now a very ugly color. Coyote and Centipede searched for a way back down to the ground. Coyote convinced Slo'w, the Eagle, to transport them back to the earth. On the way down, though, Eagle caught the tip of his wing on the pole and Coyote crashed to the ground breaking into bits. Centipede gathered all the pieces together and joined them to revive Coyote. Coyote was fine, but Centipede stayed the ugly color he had become. (Blackburn, 1975:202-204)

Juan Menendez also discussed a rock, likely on Bell Creek, where one could see footprints of the Savior (El Señor) made when the earth was new. This story is quite similar to the footprints of a burro in the rock on Cuesta de Santa Susana, made when the rock was still mud. The Virgin Mary traveled via this burro and stopped to wash her infant's clothing at this location. It may be that these are the same locations (Harrington, 1986). Knight (2017) describes the rockshelter with the burro painting, located within SSFL. Another story of a burro relates that the burro sang at the beginning of the world and was not heard, and so the rooster sang (Harrington, 1914-1933). Any of these stories may be related to the painted burro within the TCP. Interestingly, all

these stories about the creation of the world include persons and animals that postdate the arrival of the Europeans and likely evolved as a result of missionization.

Several consultants discussed the number of caves found within the Simi Hills. Rock art within these caves is the written history of the local Native American community (Consultant Data, 2013; Salas Teutimes et al., 2013). Some caves and rockshelters may simply hold a position, among sacred mountains or springs, associated with a particular settlement, or may be positioned in a way amenable to astrological observation (Hudson et al., 1977). The elevations of the Simi Hills are also closer to the Creator (Consultant Data, 2013, 2016). The Chumash understood "mountaintops [to be] … locations at which power may be concentrated" (Hudson and Underhay, 1978:40). This was reiterated by consultants for this project, when discussing caves found throughout SSFL (Consultant Data, 2016). Harrington (1914-1933) recorded another great flood story, a Juaneño story told to Harrington by one of his Gabrieleño consultants. According to this version, when the water rose, it never covered the tops of the highest mountains. Several consultants noted the high peaks in the immediate area above Bell Canyon are within the TCP (Consultant Data, 2016, 2018).

The following written excerpt was provided by a Native American consultant for this project. In it, the term "shelters" refers to the numerous rockshelters throughout the Simi Hills. The geology of the area is such that the hills have many rockshelters. The rock art described by the consultant may or may not be extant:

> The Santa Susana site was chosen by the Native Chumash people because of its location and resources. I think that the leader of the tribe would look at the landscape and its surroundings and assess whether or not the resource could provide enough for a family to grow. This site sits on a[n] apex of four directions that met the needs of the other surrounding tribes and was utilized as part of the trade routes from the Malibu Coast to the Mohave Desert and Mexico to Utah. This site has one of the most intact Ceremonial paintings in California, the Burro Flat Paintings. These Shaman drawings are the Rembrandts of the art world and have survived hundreds of years of climate change. We are blessed that it is still here. It is our responsibility as Keepers of the Land to protect what Mother Earth has left behind and share it with those who care. The significance of the site is the Spirit and Unity of the Indigenous People. (Consultant Data, 2016)

A cave on SSFL property with a possible vulva feature may be associated with the story of Gavilan, who follows his deceased wife to the Land of the Dead, only to lose her again. The local Native American community refers to one recorded archeological site on SSFL as a site consistent with the oral history of Sparrow Hawk (Consultant Data, 2018). The vulva feature may have been enhanced (Guttenberg et al., 2013). Another cave that echoes this story is located in the Chatsworth area. Both sites contain a feature that resembles a vulva and appears to have been deliberately altered. Versions of the following story were provided by consultants of different groups during their interviews for the ethnohistory (Lawson et al., 2017). The following was told by Menendez to Harrington in the Fernandeño Reel 106:

> This is the legend of Sparrow Hawk, or Gavilan, and his wife. Koo-neet (Sparrow Hawk)'s beloved wife died and she was burned on a pyre. When the corpse was consumed, Sparrow Hawk saw a small whirlwind of ashes swirl and move away. He knew that this was the spirit of his dead wife and he followed the spirit across the sea to the land of the dead. The girl took pity on her grieving husband and agreed to return to him to the land of the living provided he would hold a ceremony when they arrived back home that would last for nine days. During that time, he was not allowed to touch her or she would leave him forever. Sparrow Hawk promised to follow all of her instructions. For eight nights he kept his word, but finally on the last night, he could not restrain himself any longer. He took hold of her. She said to him in anger "What do you want with me?" she demanded, "Is this what you want?" She then pulled out her vulva and flung it at him. The organ struck a rock and imprinted itself on a stone. The woman disappeared forever, but her genitals remained imprinted in the stone in the hills above Chatsworth. (Harrington, 1986, Reel 106: frames 233-240).

This retelling is notable because European influence on the story is not apparent, indicating it may be older than the oral histories incorporating European events or animals. Both caves may have been modified to illustrate the story of Gavilan and his wife, as those interviewed indicated this oral history was very important to them (Consultant Data, 2018).

Religious Context
The following is a summary of the local religious belief systems, as well as perspectives collected from consultants.

The Chumash *'antap* organization was similar to the Yivar organization among the Fernandeño. Both groups appeared to recognize the sun as a central figure of worship. Both groups practiced solstice rites. Bullroarers and deer bone whistles were used during ceremonies (Romani, 1981). By the time the Franciscans were well established, local Native Americans had learned to keep sacred rituals and ceremonies secret and out of sight of the priests. Some ceremonies, such as fall harvest, or Hutash (Earth, or goddess), and winter solstice were still celebrated, albeit shifted or superimposed by a Christian holiday. The Chumash, as well, revered Kakunupmawa, which in Ventureño Chumash meant, "the radiance of the child born on the winter solstice" (Blackburn, 1975:97). Members of the *'antap* and Yivar had important duties, including tracking the solstices via the rising and setting of the sun to aid in calendrical issues, and facilitating the toloache (Datura) trance rituals associated with sun ceremonies, cave use, and the creation of cave paintings (Hudson and Underhay, 1978:30).

The Chumash *'alchuklash* were believed to be able to make rain or stop storms (Williamson, 1987). Two consultants relayed the following regarding a solstice celebration.

The Kizh refer to their belief system as the Yovaar Religion. The Yovaar refers to a large circular enclosure used for worship. The Kizh/Gabrieleño worshiped a Great Spirit—a principal Creator God, named Quaoar, the giver of life, and recognized another manifestation of the Creator named Chinigchinich (Robinson, 1846). Other supernaturals that were recognized were

Tamet (Sun Father, also called Ta' a met) and Chukit (Earth Mother) (Boscana, 1846; Dakin, 1939). The name Qua-o-ar was not frequently used and when it was used, it was said in a slow voice. Another name, more commonly employed, was Y-yo-ha-rivg-nain, roughly translated as the "Giver of Life" (Dakin, 1939:227). Each village had at least one shaman or spiritual leader who was in charge of religious ceremonies and events:

> Our religion was a sacred belief system that provided us with a bond between ourselves and the Spirit world, a bond between us and our natural world, a bond between our different communities (villages), and a bond between our peoples and other peoples. The bonds were sustaining and long lasting. (Salas Teutimes et. al, 2013)

The Kizh/Gabrieleno recognized five worlds, where the middle world was occupied by people (Boscana, 1846).

The Chumash recognized three worlds, including the middle world where people lived, an upper world, and a lower world. Two giant serpents held up the middle world and when they moved, earthquakes occurred. The upper world was held in place by Slo'w, the eagle (Blackburn, 1975).

Edberg (1985) also included information about both the three worlds and the five worlds in his analysis of the rock art at Burro Flats and suggested that the concentric circle motifs framed by the two anthropomorphic figures at the main panel of Burro Flats may have represented these worlds. Edberg also noted that the Fernandeño also may have recognized the three-tiered worlds, similar to the Chumash (Edberg, 1985). Hudson and Underhay (1978:40) cite Harrington's unpublished interview with a Kitanemuk consultant who described the *'antap* rituals associated with this mountainous area, which was thought to be the center of the Middle World in Chumash belief: "You hear bullroarers, [instruments], and [shouting]—dogs barking—many people in there—it is like a fiesta. And in a cave [underground], the 'ichunash [sacred deer bone whistles used by the *'antap*] are kept" (Bean, 1976: 415).

Some rock art, likely painted by the *'alchuklash*, appears to represent astronomical phenomena (Romani, 1981). Circles, divided into parts, have been suggested to represent the sun. A completely black circle and a completely black circle surrounded by a white border may represent a solar eclipse. The moon has been drawn as a red or black crescent. Small bodies with many rays may represent stars, and stars and constellations have been represented in sand paintings as dots or circles. Cupules have been suggested to show stars or constellations. Circles with rays and tails are thought to represent comets; two of these symbols are found at Burro Flats. Sun and other celestial symbols are believed to be represented on the main panel at this site (Romani, 1981).

The sand dollar was symbolic of the sun and its imagery was important to the winter solstice. It had a sun shape, and the design on a sand dollar resembled rays of sunlight. As such, it also figured in stories of the sun's travels during the day. The sun followed a cord that ran around the world, taking care not to break it, and rested three times a day in a sand dollar hole (Williamson, 1987). The Chumash symbol for the setting sun was the hole in the top of a sand dollar.

According to Harrington's notes (Hudson and Underhay, 1978:51), his consultant Fernando stated that the "[the sand dollar] was called chakwitil loka kakunupmawa, 'the shadow of the child of the winter solstice.'" Hudson and Underhay (1978:52) summarize that "Fernando also related (Blackburn, 1975: Narrative #11) that the spirits of the dead follow the sun, entering (as does the sun) the sand dollar to rest during their daily travels."

Solstice Traditions in the Region

Researchers Romani and Larson (1985), McCawley (1996), and Krupp (1983, 2014) have described the solstice site (Burro Flat Site [CA-VEN-1072]) as an astronomical observatory and have associated it with the celebration of the winter solstice. This interpretation from an archaeoastronomical context is well established and accepted in the archeological community (Gilreath, 2007), as well as within the local Native American community (Consultant Data, 2013, 2016, 2018).

The following summary of solstice celebrations was provided for the ethnohistory by a member of the local Native American community (Lawson et al., 2017):

> Winter and summer solstices were a time to celebrate, a time to gather and welcome dawn (the breath of the rising sun), a time for song and dance, a time to celebrate a new day a new life and the setting of the Sun. Chumash people and many other cultures around the world would congregate and hold these special events. These events range from celebrating a new birth to the passing of a[n] elder. Marriage between a neighboring villager and a young woman of the tribe and young boy passing into Manhood would be celebrated. They even had sporting events where a wooden ball and a stick was used striking the ball across a[n] open field.

Winter Solstice

One ethnographic account of tracking the winter solstice is noted in Blackburn (1963). An old man living near Saticoy, during the early 1900s, would watch the sun in late December and track the winter solstice and new year by noting when the sun passed mountain peaks that could be seen from his house. He would then notify everyone that the new year had begun.

Another practice, dating to the late 1800s to early 1900s, the Chumash remained inside on the day of the winter solstice. The short days could indicate Sun was angry and, on the shortest day, Sun could take them and consume them. The shamans would perform rituals to aid the sun's rebirth for another year (Blackburn, 1975). The winter solstice ceremony was held to entice the sun, which was at its southernmost position, to start moving back north (Hudson and Underhay, 1978). Rain prayers also were made at this time.

Debts were settled so that the new year would start fresh. The ritual of erecting the sunstick, a wooden shaft with a painted stone disc set atop the shaft, was one of the most important aspects of the solstice ceremony (Romani, 1981). These sunsticks were hand-held, the stone disc measuring approximately four centimeters (cm) in diameter, and the shaft approximately twenty to twenty-five cm long. These sunsticks likely were used by the Chumash, the Gabrieleño, and

the Tataviam. Four sunsticks were found in Bowers Cave, north of the district, in the late 1800s (Bowers, 1885). This discovery is important to the current study because it shows sunsticks were likely still in use post-Missionization and were used by at least some of the people who also visited Burro Flats. During the winter solstice ceremony, the sun priest and two helpers would erect the sunstick. The sunstick was used to release supernatural power. Hudson and Underhay (1978:63) argue that sunsticks may have been used in these contexts to record the angle of the sun in the sky at certain periods. Blackburn (1974; cited in Hudson and Underhay, 1978:63) notes that on the second day of the winter solstice ceremony, "[the sun priest or paha's] 12 *'antap* assistants were 'Splendors of the Sun,' or 'Rays of the Sun.' It was on this day that these officials erected a sunstick to 'pull' the sun back toward earth again."

At the end of winter solstice ceremonies, "[t]he people then gathered with the feathered poles, in preparation for their erection at various Chumash sun-shrines. These shrines were located on mountain tops … such locations were held to be places of concentrated supernatural power throughout much of native California" (Bean, 1976:415). Unlike the sunsticks, which were used only at solstice celebrations, the feathered poles would remain up during the entire year (Romani, 1981). The priest could use them to make predictions about the upcoming year. The twelve *'antap* would dance and everyone would leave, returning that night to make offerings to the sun (Hudson and Underhay, 1978). The ceremonies continued for two days. Dancing and dramatizations of the soul's journey along the Milky Way to the land of the dead were activities performed at the ceremonies (Hadingham, 1984). Funerary rites were performed at the winter solstice, including the Dance of the Widows (Romani, 1981). The public ceremony occurred sometime between December 20 and December 26 and lasted five to six days.

The following excerpt from Krupp (1983:130) describes the winter solstice event at Burro Flats:

> As our vigil began, the dawn grew brighter. The upper ledges caught the sun, and a golden sheet of light gradually edged down the ridge. At about 7:35 a.m., Pacific Standard Time, the first direct sunlight fell upon the "window" and produced a momentary image of a bright white triangle of light. It cut across a set of five concentric rings, painted in white, and pointed toward the center of the rings. Gradually, as the sun rose higher, the image shrank back from the rings to the base of the panel. For the rest of the day, sunlight remained below this prepared rock surface and all of its most prominent paintings.

Researchers later observed that this phenomenon can be seen days before and days after the solstice but not during the rest of the year (Krupp, 1983). Krupp (1983) also noted that the viewing area at Burro Flats was small and that the shaman likely waited for sunrise alone, or with only a few others, as there was no room for a large gathering.

Consultants have indicated the year-round water located near the solstice site is important (Consultant Data, 2018). Hudson et al. (1977:65) note that:

> Another aspect of sun ritual associated with winter solstice involves water symbolism. Chumash astrologers were operating under the belief that rain was a gift from the sun. The pipe doctor's prayers illustrate this quite well, as do the rituals performed at sacred springs. One example… from the "Deer-urine Spring," a shrine used for curing purposes. Its water was called "Tears of the Sun," and its use required shaman-priests to make offerings and prayers to the sun.

Summer Solstice
Consultants described attending the summer solstice celebration and ceremonies at the SSFL.

Current Solstice Practices in the Region
Representatives of the Chumash, Fernandeño, Gabrieleño, Kizh, and Tataviam peoples have begun to access and use the SSFL for ceremonial purposes during the summer and winter solstices.

Solstice Ceremonies at Burro Flats
The winter solstice is marked by sunlight and warmth, while the summer solstice is marked by a shadow and shade, or coolness from the summer sun (Salas Teutimes et al., 2013). At the winter solstice, a dagger of sunlight shines through an opening in the rock at sunrise and runs along a series of paintings, specifically five concentric circles within the rock art panel at the Burro Flats Site Painted Cave main pictograph panel. This occurs around the winter solstice for approximately four days.

The community agrees that the physical environment accurately reflects the period and association for which the TCP is significant. Based on consultant data collected as part of the ethnographic study, respondents affirmed their association with Burro Flats: "The Burro Flats Site and the greater landscape surrounding SSFL have a continuing cultural and historical importance to the heritage of all of the consultants who participated in this ethnography and, therefore, to the local Native American community" (Lawson et al., 2017). The site is still used for summer and winter solstice celebrations, indicating its living association with local tribes. The Burro Flats Site demonstrably retains its integrity of association.

In summary, Burro Flats is significant as a Traditional Cultural Property under Criterion A for its association with events important to the history of local Native American communities. The TCP includes extant places from oral traditions that can be visited by Native American communities. Because so much of the original landscape has been modified outside of these hills and so much of the original Native American culture was impacted by European immigration and United States population expansion, any remaining areas that can be visited and where people can go to conduct ceremonies or teach about their ancestors are extremely valuable to the Native American community. The TCP is important to the revitalization of the local community and the preservation of their culture.

9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

Advisory Council for Historic Preservation. 1966 (amended 2004). Title 36 *Code of Federal Regulations* Part 800, Protection of Historic Properties: Section 106. http://www.achp.gov/regs-rev04.pdf. Accessed November 9, 2011.

Archaeological Consultants, Inc. & Weitze Research. 2009. *Revised Historic Resources Survey and Assessment of the NASA Facility at Santa Susana Field Laboratory, Ventura County, California.* Ms on file with National Aeronautics and Space Administration, George C. Marshall Space Flight Center, Huntsville, Alabama.

Arnold, Jeanne E., ed. 2004. "Organization of Island Chumash." In *Foundations of Chumash Complexity*. The Cotsen Institute of Archaeology at UCLA, Los Angeles, California.

Bancroft, Hubert Howe. 1984. The Works of Hubert Howe Bancroft. *Volume XVIII: History of California.* Vol.1, pp. 1542-1800.

Bean, Lowell J. 1976. "Power and Its Applications in Native California." *Native Californians: A Theoretical Retrospective*, ed. Lowell John Bean and Thomas C. Blackburn. New Mexico: Ballena Press. Pp. 407-420.

Bean, Lowell J., and Charles R. Smith. 1978. "Gabrielino." *California*, Vol. 8 of *Handbook of North American Indians*, ed. Robert F. Heizer. Washington D.C.: Smithsonian Institution. Pp. 538-549.

Beebe, Rose Marie, and Robert M. Senkewicz, eds. 2001. *Lands of Promise and Despair: Chronicles of Early California, 1535-1846*. Santa Clara University.

Benson, Arlene. 1980. "California Sun-Watching Site." *Archaeoastronomy*. 3(1):16-19.

Blackburn, Thomas C. 1963. "A Manuscript Account of the Ventureño Chumash." *Archaeological Survey Annual Report, 1962-1963*. Los Angeles: University of California Press. Pp. 133-158.

Blackburn, Thomas. 1974. "Ceremonial Integration and Social Interaction in Aboriginal California." In *'Antap California Indian Political and Economic Organization*, ed. by Lowell J. Bean and Thomas F. King. Ramona, California: Ballena Press Anthropological Papers No. 2. Pp. 93-110.

Blackburn, Thomas C. 1975. *December's Child: A Book of Chumash Oral Narratives*, comp. J.P. Harrington. Los Angeles: University of California Press.

Boscana, Geronimo. 1846. *Chinigchinich: A Historical Account of the Origin, Customs, and Traditions of the Indians at the Missionary Establishment of St. Juan Capistrano, Alta-California*, trans. Alfred Robinson. http://www.sacred-texts.com/nam/ca/bosc/index.htm. Accessed September 8, 2016.

Bowers, Stephen. 1885. "Relics in a Cave." *Pacific Science Monthly.* Vol. 1. pp. 45-47.

Bright, William. 1975. "The Alliklik Mystery." *The Journal of California Anthropology*. Vol. 2, No. 2. pp. 228-230.

Cabrillo, Juan Rodríquez. 1542. Ensenada and San Diego. In Lands of Promise and Despair, Chronicles of Early California, 1535-1846, ed. Rose Marie Beebe and Robert M. Senkewicz. University of Oklahoma Press. pp. 30-37.

California Environmental Quality Act. 2002. Statutes and Guidelines. http://www.ceres.ca.gov/ceqa/. Accessed April 2, 2011.

California State Military Museum. n.d. "Californians and the Military: Jose de la Guerra y Noriega, Military Commander of Santa Barbara." http://www.militarymuseum.org/delaguerra2.html. Accessed August 2, 2011.

Castillo, Edward D. 1978. "The Impact of Euro-American Exploration and Settlement." In *California*, Vol. 8 of *Handbook of North American Indians*, ed. Robert F. Heizer. Washington D.C.: Smithsonian Institution Press. pp. 99-127.

Ciolek-Torello, Richard, Donn R. Grenda, Angela Keller, and Anne Q. Stoll. 2006. *A Passage in Time: The Archaeology and History of the Santa Susana Pass State Historic Park, California*. Technical Series 87. Tucson and Redlands: Statistical Research, Inc.

Corbett, Ray, Richard B. Guttenberg, and Devlin A. Gandy. 2015. *Phase I Archeological Survey, Santa Susana Field Laboratory Area II and LOX Area I, Ventura County, California.* Mission Viejo, California: John Minch and Associates, Inc.

Cohen, Chester G. 1989. *El Escorpión: From Indian Village to Los Angeles Park*. Woodland Hills, California: Chester G. Cohen.

Cook, S.F. 1971a. Migration and Urbanization of the Indians of California. In *The California Indians: A Source Book*, comp. and ed. Robert F. Heizer and M.A. Whipple. Berkeley: University of California Press. pp. 551-561.

Cook, S.F. 1971b. "Conflict Between the California Indian and White Civilization." In *The California Indians: A Source Book*, comp. and ed. Robert F. Heizer and M.A. Whipple. Berkeley: University of California Press. pp. 561-571.

Cook, S.F. 1976. *The Population of the California Indians 1769-1970.* Berkeley: University of California Press.

Cook, S.F. 1978. "Historical Demography." In *California*, Vol. 8 of *Handbook of North American Indians*, ed. Robert F. Heizer. Washington D.C.: Smithsonian Institution Press. pp. 91-98.

Corbett at al. 2012. *Final Report Cultural Resource Compliance and Monitoring Results For USEPA's Radiological Study of The Santa Susana Field Laboratory Area IV and Northern Buffer Zone Ventura County, California.* Prepared for: HydroGeoLogic, Inc. 5023 N. Parkway, Calabasas, CA 91302.

Craig, Steven, and Stephen Horne. 2001. Nomination Information, California Sacred Lands Inventory, El Escorpión Traditional Cultural Area, Los Angeles and Ventura Counties, California. Provided by Al Knight. Unpublished Ms on file at CH2M HILL/SCO.

Crosby, Sherry Jo. 1996. "Locked out of Chumash Caves." *Daily News*. April 22.
Dakin, Susanna B. 1939. *A Scotch Paisano in Old Los Angeles: Hugo Reid's Life in California, 1832 to 1852.* University of California Press: Berkeley, Los Angeles, London.
Department of Toxic Substances Control. 2007. Consent Order for Corrective Action. State of California DTSC Docket No. P3-07/08-003.

Douglass, John G., and Patrick B. Stanton. 2010. "Living During a Difficult Time: A Comparison of Ethnohistoric, Bioarchaeological, and Archaeological Data During the Mission Period, Southern California." SCA Proceedings, Vol. 24.

Department of Energy (DOE). 2019. "Record of Decision for Final Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory. California." *Federal Register* Vol. 84, No. 188. September 27.

DuBois, Constance Goddard. 1908. "The Religion of the Luiseño Indians of Southern California." sacred-texts.com. Accessed September 1, 2016.

Earle, David D., and Stephen O'Neal. 1994. *Newport Coast Archaeological Project: An Ethnohistoric Analysis of Population, Settlement, and Social Organization in Coastal Orange County at the End of the Late Prehistoric Period*. Prepared by The Keith Companies, Irvine, California. Ms on file at the South Central Coastal Information Center, California State University, Fullerton, California.

Edberg, Bob. 1985. "Shamans and Chiefs: Visions of the Future." In *Earth and Sky: Papers from Northridge Conference on Archaeoastronomy,* ed. Arlene Benson and Tom Hoskinson. Thousand Oaks, California: Slo'w Press. pp. 65-92.

Elsasser, B. 1978. "Development of Regional Prehistoric Cultures in California." Ed. RF Heizer, pp. 37-57. *Handbook of North American Indians*. Vo. 8 W.G. Sturtevant, General Editor. Washington, D.C.: Smithsonian Institution Press.

Emmick, Jamelon, and James C. Bard. 2008. *Final Cultural Resources Inventory of Santa Susana Field Laboratory NASA Areas I and II, Ventura County, California*. Prepared for the National Aeronautics and Space Administration, George C. Marshall Space Flight Center, Huntsville, Alabama. Ms on file at the South Central Coastal Information Center, California State University, Fullerton, California.

Engelhardt, Zephyrin, Fr, O.F.M. 1912. *The Missions and Missionaries of California*. Vol. 2 of *Upper California*; *Part I: General History*. San Francisco: The James H. Barry Company.

Engelhardt, Zephyrin, Fr, O.F.M. 1927. *San Fernando Rey: The Mission of the Valley*. Chicago: Franciscan Herald Press.

Erlandson, Jon M., Torben C. Rick, Terry L. Jones, and Judith F. Porcasi. 2007. One if by Land, Two if by Sea: Who were the First Californians? In *California Prehistory: Colonization, Culture, and Complexity*, ed. Terry L. Jones and Kathryn Klar. Walnut Creek, California: Altamira Press. pp. 53-62.

Fages, Pedro. 1971. "The Chumash Indians of Santa Barbara." In *The California Indians: A Source Book*, ed. Robert F. Heizer and M.A. Whipple. Berkeley: University of California Press. pp. 255-261.

Fenenga, F. 1973. *Archaeological Survey of the Area of Air Force Plant 57, Coca Test Area, Santa Susana Field Laboratory, Ventura County, California*. Prepared for Rocketdyne Division of Rockwell International.

Gamble, Lynn H. 2002. "Archaeological Evidence for the Origin of the Plank Canoe in North America." In *American Antiquity* Vol. 6, No. 2. pp. 301-315.

Gamble, Lynn H. 2008. T*he Chumash World at European Contact: Power, Trade, and Feasting Among Complex Hunter-Gatherers*. University of California Press.

Gilreath, Amy J. 2007. "Rock Art in the Golden State: Pictographs and Petroglyphs, Portable and Panoramic." In *California Prehistory, Colonization, Culture, and Complexity,* ed. Terry L. Jones and Kathryn A. Klar. Lanham, Maryland: AltaMira Press. pp. 273-298.

Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. "Prehistory of the Northern California Bight and the Adjacent Transverse Ranges." In *California Prehistory: Colonization, Culture, and Complexity*, ed. Terry L. Jones and Kathryn Klar. Walnut Creek, California: Altamira Press. pp. 191-214.

Grant, Campbell. 1976. "Review of Prehistoric Rock Art of Nevada and Eastern California." *The Journal of California Anthropology*. 3(1):153-154.

Grant, Campbell. 1978. "Interior Chumash." In *California*, Vol. 8 of *Handbook of North American Indians*, ed. Robert F. Heizer. Washington D.C.: Smithsonian Institution Press. pp. 530-534.

Gutierrez, R.A., and R.J. Orsi. 1998. *Contested Eden: California before the Gold Rush*. Berkeley: University of California Press.

Guttenberg, Richard, Heather McDaniel, and Ray Corbett. 2013. Site Record for 56-1476. Unpublished Manuscript on file, South Central Coastal Information Center.

Hadingham, E. 1984. "Early Man and the Cosmos." University of Oklahoma Press.

Hale, Horatio. 1846. *United States Exploring Expedition During the Years 1838, 1839, 1840, 1841, 1842, Under the Command of Charles Wilkes, U.S.N.: Ethnography and Philology*. Philadelphia, PA: Lea & Blanchard Publishers. https://archive.org/details/Ethnographyphil00Hale.

Hammond, Norm. 2003. "Solstice Markers at 'House of Two Suns.' " *Archaeoastronomy*. Austin: University of Texas Press. 17:23-30.

Harrington, John P. 1914-1933. Southern California/Basin: Gabrielino, John Peabody Harrington papers, National Anthropological Archives, Smithsonian Institution Reels 102 to 105.

Harrington, John. P. 1986. J. P Harrington's Field Notes, Fernandeño Reel Number 106. Lisa L. Woodward, Data Entry and Coding, Native American Language Center, UC Davis. Scientific Resource Surveys, Inc. (original scans). http://collections.si.edu/search/slideshow_embedded?xml="http://sirismm.si.edu/naa/viewer/Harrington_mf3_r106_Gallery/viewer_Harrington_mf3_r106.xml. Accessed August 2016.

Heizer, Robert F. ed. 1978a. *California*. Vol. 8 of *Handbook of North American Indians*. Washington D.C.: Smithsonian Institution Press.

Heizer, Robert F. ed. 1978b. "Treaties." In *California*, Vol. 8 of *Handbook of North American Indians.* Washington D.C.: Smithsonian Institution Press. pp. 701-704.

Heizer, Robert F. and M.A. Whipple, comp. and ed. 1978. *The California Indians: A Source Book*. Berkeley: University of California Press.

Higgins, Paul. 1996. The Tataviam: Early Newhall Residents. http://www.scvleon.com/newhall/tataviam.htm. Accessed August 3, 2011.

Hudson, Travis, and Ernest Underhay. 1978. *Crystals in the Sky: An Intellectual Odyssey Involving Chumash Astronomy, Cosmology, and Rock Art*. Anthropological Papers No. 10. Socorro, New Mexico: Ballena Press.

Hudson, Travis, Thomas C. Blackburn, Jan Tim Brook, and Rosario Curletti, eds. 1977. *The Eye of the Flute: Chumash Traditional History and Ritual*, as told by Fernando Librado Kitsepawit to John P. Harrington. Santa Barbara Museum of Natural History, Santa Barbara.

Johnson, John. 1997. "The Indians of Mission San Fernando." *Southern California Quarterly*. Vol. 79, No. 3. pp. 249-290.

Johnson, John. 2006. *Ethnohistoric Overview for the Santa Susana Pass State Historic Park Cultural Resources Inventory Project*. Prepared for Southern Service Center, State of California Department of Parks and Recreation.

Johnson, John. 2013. Phone conversation with N. Lawson. July 24.

Johnson, John R., and David D. Earle. 1990. "Tataviam Geography and Ethnohistory." *Journal of California and Great Basin Anthropology*. Vol. 12, No. 2. pp. 191-214.

Johnston-Dodds, Kimberly. 2002. "Early California Laws and Policies Related to California Indians." California Research Bureau, Sacramento, California. https://www.library.ca.gov/crb/02/14/02-014.pdf. Accessed September 8, 2016.

Keoke, Emory D., and Kay Marie Porterfield. 2005. "Trade, Transportation, and Warfare (American Indian Contributions to the World)." Facts on File.

King, Chester. 1971. "Chumash Inter-Village Economic Exchange." In *The Indian Historian.* American Indian Historical Society, San Francisco, California. Vol. 4, No. 1. pp. 31-34.

King, Chester. 2000. "Native American Indian Cultural Sites in the Santa Monica Mountains." Unpublished Ms on file at the South Central Coastal Information Center, California State University, Fullerton, California.

King, Chester. 2003. Japchibit Ethnohistory. Unpublished Ms. on file at Angeles National Forest.

King, Chester. 2012. "Stone, Bone and Shell Artifacts and Antiquity of a Ritual Site in the Eastern Simi Hills." Presented at the Society for California Archaeology, 46th Annual Meeting: Symposium 16, Recent Archaeology in the Western San Fernando Valley and Environs.

King, Chester, and Thomas C. Blackburn. 1978. "Tataviam." In *California*, Vol. 8 of *Handbook of North American Indians*, ed. Robert F. Heizer. Washington D.C.: Smithsonian Institution Press. pp. 535-537.

Knapp, Max. 1977. Record of conversation between Bob Edberg and Max Knapp, a local Valley resident, on September 29, 1977. Provided by the Leonis Adobe Museum.

Knight, A. 2012. "Three Chumash Style Rock Art Sites in Fernandeño Territory." Paper presented at the Society for California Archaeology (SCA). 2012. 46th Annual Meeting: Symposium 16 Recent Archaeology in the Western San Fernando Valley and Environs.

Knight, A. 2016a. Transcripts from oral interviews with Orrin Sage, Marcia L. McGillis, and Sally Ziegler.

Knight, A. 2016b. *Burro Flats Burro Pictograph Site*. Document in possession of author. Used with permission.

Knight, A. 2017. DRAFT U.S. Department of the Interior National Park Service, National Register of Historic Places Registration Form, Sky Valley/ "*Alapay a 'alutiqipin* Traditional Cultural Property. April 10, 2017. On file, NASA, SSFL.

Knight, Albert. 1995. Recent Investigations at Burro Flats (CA-VEN-1072), Ventura County, California. Society for California Archaeology Newsletter 29(5):11-12.

Knight, Albert. 2001. The Rock Art of the Santa Monica Mountains and the Santa Susana Mountains. Unpublished manuscript on file SCCIC CSUF. On file, Santa Barbara Museum of Natural History Department of Anthropology.

Knight, Albert, Bob Edberg, Michelle Covello, and Ray Vincent. 2016. "The West San Fernando Valley Lime Industry and Native American History." July.

Kroeber, A.L. 1908. "A Mission Record of the California Indians from a Manuscript in the Bancroft Library." University of California Publications in American Archaeology and Ethnology. Vol. 8, No. 1. pp. 1-27.

Kroeber, A.L. 1925. *Handbook of the Indians of California*. Bulletin 78. Bureau of American Ethnology, Washington, D.C. Smithsonian Institution Press.

Krupp, E. C. 2014. Letter to Richard J. Keegan Jr., Associate Administrator for Mission Support Directorate, National Aeronautics and Space Administration. May 20, 2014.

Krupp, Edwin C. 1983. *Echoes of the Ancient Skies: The Astronomy of Lost Civilizations*. Oxford University Press.

La Monk, Charles S. 1953. Pictograph Cave at Burro Flats. Archaeological Survey Association of Southern California Newsletter 1(2):8-9.

Langenwalter, Paul E., Matthew A. Boxt, Lawrence M. Boxt, and Theodore T. Miller. 2001. "A Sea Otter (*Enhydra lutris)* Femur with Embedded Projectile Point Fragment from a Late Prehistoric Camp Site in Long Beach, California." *Pacific Coast Archaeological Society Quarterly*. Vol. 37. No. 1. Winter 2001.

Lawson, Natalie, Jennifer Whiteman, Dorothea Theodoratus, and local Native American Communities. 2017. *Ethnographic Overview of the Native American Communities in the Simi Hills and Vicinity*. Prepared for National Aeronautics and Space Administration, George C. Marshall Space Flight Center, Alabama.

Lebow, Clayton G. 2006. "Large Game Hunting and Other Late Holocene Paludal Adaptations at Barka Slough." Proceedings of the Society for California Archaeology. Vol. 19. pp. 197-204.

Los Angeles County. 2008. North Los Angeles/Kern County Recycled Water Project Final EIR. http://dpw.lacounty.gov/wwd/web/Documents/peir_final/3.4%20Cultural_FEIR.pdf. Accessed September 24, 2012.

Los Angeles Herald. 1896. "Rogerio Rocha's History: Old Timer Tells of the Cruel Ejectment, Senator Del Valle's Tale, Indian and His Aged Wife Turned Out in a Storm, Bed Ridden Octogenarian Wife Died a Few Weeks After as a Result of the Exposure." Vol. 45. No. 110. January 29, 1896. CA Digital Newspaper Collection. http://cdnc.ucr.edu/cgi-bin/cdnc?a=d&d=LAH18960129.2.31&srpos=1&e=-------en--20--1--txt-txIN-rogerio+rocha------1. Accessed October 14, 2016.

Luker, John. 2016. Personal communication with N. Lawson. August 18.

McCawley, William. 1996. *The First Angelinos: The Gabrielino Indians of Los Angeles*. Morongo Indian Reservation: Malki Museum Press/Ballena Press.

McLendon, Sally, and John R. Johnson. 1999. *Cultural Affiliation and Lineal Descent of Chumash Peoples in the Channel Islands and Santa Monica Mountains*. Prepared for the Archeology and Ethnography Program, National Park Service, Washington, DC.; Department of Anthropology, Hunter College, City University of New York; and Santa Barbara Museum of Natural History, Santa Barbara. 2 Vols.

Merriam, C. Hart. 2014. C. Hart Merriam papers, 1864-1938. Washington: Library of Congress. http://hdl.loc.gov/loc.mss/eadmss.ms015020. Accessed July 2016.

Montgomery, W.H. (MWH). 2004. "RCRA Facility Investigation Program Report Surficial Media Operable Unit, Santa Susana Field Laboratory, Ventura County, California," Vol. 1. July.

Moratto, Michael. 2004. *California Archaeology*. Rev. ed. Salinas, California: Coyote Press.

Moratto, Michael, ed. 1984. *California Archaeology*. Academic Press, San Diego.

National Aeronautics and Space Administration (NASA). 2008. *Historic Resources Survey and Assessment at Santa Susana Field Laboratory, Ventura County, California. Marshall Space Flight Center.*

National Aeronautics and Space Administration (NASA). 2011. *Santa Susana Field Laboratory−Paleontological Resources Assessment*. Field Laboratory, Ventura County, California. Draft. May.

National Aeronautics and Space Administration (NASA). 2014a. *Final Environmental Impact Statement for the Demolition and Cleanup Activities at Santa Susana Field Laboratory.*

National Aeronautics and Space Administration (NASA). 2014b. *Programmatic Agreement Among National Aeronautics and Space Administration, California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Demolition and Soil and Groundwater Cleanup at Santa Susana Field Laboratory, Ventura County, California.* April 17.

National Aeronautics and Space Administration (NASA). 2014c. Record of Decision Environmental Impact Statement for Proposed Demolition at Santa Susana Field Laboratory Groundwater Cleanup.

National Aeronautics and Space Administration (NASA). 2015. *Archeological Site Boundary Testing Plan for Santa Susana Field Laboratory, Ventura County, California*. Prepared for National Aeronautics and Space Administration, Marshall Space Flight Center, Alabama.

National Aeronautics and Space Administration (NASA). 2016. *Archeological Site Boundary Determinations at NASA-administered Areas I and II, for Santa Susana Field Laboratory, Ventura County, California*. Prepared for National Aeronautics and Space Administration, Marshall Space Flight Center, Huntsville, Alabama.

National Aeronautics and Space Administration (NASA). 2017. *Integrated Cultural Resources Management Plan for Santa Susana Field Laboratory, Ventura County, California, January 2017-2022.* Ms on file at George C. Marshall Space Flight Center, Huntsville, Alabama.

National Aeronautics and Space Administration (NASA). 2018. *Draft National Register of Historic Places Eligibility Evaluation, Burro Flats Archeological District, Santa Susana Field Laboratory, Ventura County, California*.

National Aeronautics and Space Administration (NASA). 2019. *Annual Report for the Programmatic Agreement Regarding Santa Susana Field Laboratory, Ventura County, California*. April 17.

National Environmental Policy Act. 1970. CEQ Tile 40 *Code of Federal Regulations* Parts 1500-1508. http://ceq.hss.doe.gov/nepa/regs/ceq/1502.htm#1502.1. Accessed November 9, 2011.

National Park Service (NPS). 1997. *Guidelines for Completing National Register of Historic Places Forms, Part A: How to Complete the National Register Registration Form*. National Register Bulletin. U.S. Department of the Interior, National Park Service, National Register of Historic Places. Washington, D.C. 1977; revised 1986, 1991, 1997.

National Park Service (NPS). 2002. *How to Apply the National Register Criteria for Evaluation.* National Register Bulletin. U.S. Department of the Interior. National Park Service, National Register of Historic Places. Washington, D.C. 1990; revised 1991, 1995, 1997; revised for Internet 1995, 2001, 2002.

Native Languages of the Americas. 2009. Tataviam Language. http://www.native-languages.org/tataviam.htm. Accessed August 3, 2011.

Regents of the University of California. 2010. Tataviam. Survey of California Other Native Languages. http://linguistics.berkeley.edu/~survey/languages/tataviam.php. Accessed August 3, 2011.

Reid, Hugo, 1968. *The Indians of Los Angeles County: Hugo Reid's Letters of 1852*. Edited and annotated by Robert F. Heizer. Los Angeles, Southwest Museum, 1968.

Reid, Phillip, CH2M HILL. 2019a. Personal communication (email) with Natalie Lawson, PaleoWest Archaeology. June 25.

Reid, Phillip. 2019b. "Post-Fire Cultural Resources Condition Assessment for CA-VEN-1072, NASA Santa Susana Field Laboratory." Unpublished manuscript, on file, CH2M HILL.

Robinson, Alfred, tr. 1846. *Chinigchinich*. Account by Friar Geronimo Boscana. http://www.sacred-texts.com/nam/ca/index.htm. Accessed August 15, 2016.

Romani, J., and D. Larson. 1985. "Astronomical Investigations at Burro Flats: Aspects of Ceremonialism at a Chumash/Gabrielino Rock Art and Habitation Site." In *Earth and Sky*,

ed. A. Benson and T. Hoskinson. Thousand Oaks, California: Slow Press. pp. 93-107. Report VN 1052 on file, California Historical Resources Information System, California State University, Fullerton.

Romani, John. 1978. Bell Canyon: Assessment of the Cultural Resources Located on 280 Acres of Land in Bell Canyon, California. (The Bell Canyon Site Complex). Unpublished Ms on file at the South Central Coastal Information Center, California State University, Fullerton.

Romani, John F. 1981. Astronomy and Social Integration: An Examination of Astronomy in a Hunter and Gatherer Society. Unpublished master's thesis, California State University, Northridge.

Romani, John F., and Louis J. Tartaglia. 1978. Assessment of the Cultural Resources Located on 280 Acres of Land in Bell Canyon, California. (The Bell Canyon Complex). Unpublished Ms on file at the South Central Coastal Information Center, California State University, Fullerton.

Romani, J., Dan Larson, Gwen Romani, and Arelene Benson. 1988. Astronomy, Myth, and Ritual in the West San Fernando Valley. In Visions of the Sky: Archaeological and Ethnological Studies of California Indian Astronomy, edited by Robert A. Schiffman, pp. 109-134. Coyote Press Archives of California Prehistory, Volume 16.

Salas Teutimes, Ernest P., Andrew Salas, Christina Swindall Martinez, and Gary Stickel. 2013. *Toypurina: The Joan of Arc of California*. Kizh Tribal Press. San Gabriel, California.
San Buenaventura Mission. 2006. Mission History. http://www.sanbuenaventuramission.org/history_main.html. Accessed August 2, 2011.

Salas-Teutimes, Ernest P., Andrew Salas, and Dr. Gary Stickel. 2013. Kizh/Gabrieleño: Ethnographic Culture and Project Area Connections. Unpublished Ms provided by Kizh Nation.

Schupp, Leslie. 1983. Second Draft of "Symbolism in the Story of 'Khra'wiyawi Goes About His Death." Provided by Al Knight. Unpublished Ms on file at CH2M HILL/SCO.

Solis, Laurie. 2008. *Tataviam: People Who Face the Sun*. Publisher not noted.

Stewart, Omer C. 1978. Litigations and its Effects. In *California*, Vol. 8 of *Handbook of North American Indians*, ed. Robert F. Heizer. Washington D.C.: Smithsonian Institution Press. pp. 705-712.

Stickel, Gary E. 2008. The Farpoint Site (CA-LAN-451): A Unique Clovis Culture Site of the First Americans on the Malibu Coast. http://farpointsite.blogspot.com/2008/02/farpoint-site-ca-lan-451-unique-clovis.html. Accessed February 15, 2017.

Suntree, Susan. 2010. *Sacred Sites: The Secret History of Southern California*. University of Nebraska Press.

Tarakanoff, Vassili Petrovitch. 1815. *Captivity at Mission San Fernando. In Lands of Promise and Despair, Chronicles of Early California, 1535-1846*, ed. Rose Marie Beebe and Robert M. Senkewicz. University of Oklahoma Press. Pp. 293-297.

Teutimes, Matt. 2016. Personal communication (phone interview) with consultant.

Texas State Historical Association. 2012. Mexican Colonization Laws. http://www.tshaonline.org/handbook/online/articles/ugm01. Accessed June 2018.
The California State Military Museum. 2011. Historic California Posts: Los Angeles Municipal Airport (Mines Field). http://www.militarymuseum.org/MinesField.html. Accessed July 17, 2011.

TKC and SRI. 2005. *Archaeological Evaluation of the Tomato Springs Site (CA-ORA-244)*. Ms on file at the South Central Coastal Information Center, California State University Fullerton, Fullerton, California.

Transcript of Dawes Act. 1887. An Act to Provide for the Allotment of Lands in Severalty to Indians on the Various Reservations (General Allotment Act or Dawes Act), Statutes at Large 24, 388-391, NADP Document A1887. https://www.ourdocuments.gov/doc.php?doc=50&page=transcript. Accessed October 12, 2016.

Ventura Weekly. 2005. History of Ventura County. http://www.venturaweekly.com/history/ventura-county-history. Accessed August 2, 2011.
Vincent, Ray. 2016. Santa Susana Field Laboratory Timeline. Unpublished Ms in possession of the author.

Verhoff, James, and Geof Spaulding. 2011. https://www.nasa.gov/sites/default/files/files/SSFL_FEIS_AppendixJ.pdf Accessed June 26, 2019.

Wallace, William. 1955. "A Suggested Chronology for Southern California Coastal Archaeology." *Southwestern Journal of Anthropology.* Vol. 11, No. 3. pp. 214-230.

We Are California. 2008. "Conquest and Colonization: Spanish Missionaries." http://www.weareca.org/index.php/en/era/1540s-1830s/spanish_missionaries.html. Accessed August 2, 2011.

Williamson, Ray A. 1987. *Living the Sky: The Cosmos of the American Indian*. University of Oklahoma Press.

Previous documentation on file (NPS):

____ preliminary determination of individual listing (36 CFR 67) has been requested
____ previously listed in the National Register
____previously determined eligible by the National Register
____designated a National Historic Landmark
____ recorded by Historic American Buildings Survey #_____
____recorded by Historic American Engineering Record # _____
____ recorded by Historic American Landscape Survey # _____
_X_ Indian Sacred Site Designation (Executive Order 13007)

Primary location of additional data:

_X_ State Historic Preservation Office
____ Other State agency
_X__ Federal agency
____ Local government
_X__ University
_X__ Other
Name of repository: ___NASA; South Central Coastal Information Center, California State University Fullerton_____

Historic Resources Survey Number (if assigned): _____

10. Geographical Data

Acreage of Property __2850 acres_____

UTM References

Datum (indicated on USGS map):

[ ] NAD 1927 or [X] NAD 1983

Verbal Boundary Description (Describe the boundaries of the property.)

The district is located in southeastern Ventura County near the crest of the Simi Hills between the Simi and San Fernando Valleys. The district is bordered by Bell Canyon to the south and by Meier and Runkle Canyons to the northwest.

Boundary Justification (Explain why the boundaries were selected.)

The district contains physical locations of places named in the few remaining myths recorded by early area ethnographers. These places have been visited by the various Native American consultants, and the majority have been recorded as archaeological sites. Culturally important stories and oral traditions talk about the Simi Hills. Consultants indicated the boundary of the TCP coincides with the SSFL boundary because the construction of the field lab and its restricted access has protected this part of the Simi Hills from exposure to human housing developments, vandalism, and other impacts that occur in well-populated places. Because so much of the original landscape has been modified outside of these hills and so much of the original Native American culture was impacted by European and American immigration, any remaining areas that can be visited and where the Native American community can go to conduct ceremonies or teach about their ancestors are extremely valuable.

11. Form Prepared By

name/title: Natalie Lawson
organization: PaleoWest Archaeology
street & number: 27001 La Paz Road, Suite 230
city or town: Mission Viejo state: CA zip code: 92691
e-mail nlawson@paleowest.com
telephone: (714) 628-9666
date: July 2018; Revised April 2019, October 2019, December 2019, February 2020; public version June 2020

Prepared for: National Aeronautics and Space Administration, George C. Marshall Space Flight Center, Marshall Space Flight Center, AL 35812

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** or equivalent (7.5 or 15 minute series) indicating the property's location.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Additional items:** (Check with the SHPO, TPO, or FPO for any additional items.)

Photographs

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photographs with locational information are not included in the public version of this nomination form to protect the sensitive sites.

Index of Figures

Figures and maps with sensitive locational information are not included in the public version of this nomination form.

Figure 1. Location Map

Figure 2. Historic Tribal Boundaries in Relation to Santa Susana Field Laboratory

Figure 3. Approximate Location of Tribal Lands in Southern California

Figure 4. Fernandeño Tataviam Band of Mission Indians Historical Tribal Territory

Figure 5. Kizh Tribal Territory, Northwest Region

Figure 6. Burro Flats Site, Main Panel, camera facing north, D. Gandy, July 11, 2014

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).
Estimated Burden Statement: Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management. U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

Figure 1. Location Map

Map Document: O:\NASA\SSFL\maps\EthnographicStudy\RegionalMap.mxd

Figure 2. Historic Tribal Boundaries in Relation to Santa Susana Field Laboratory

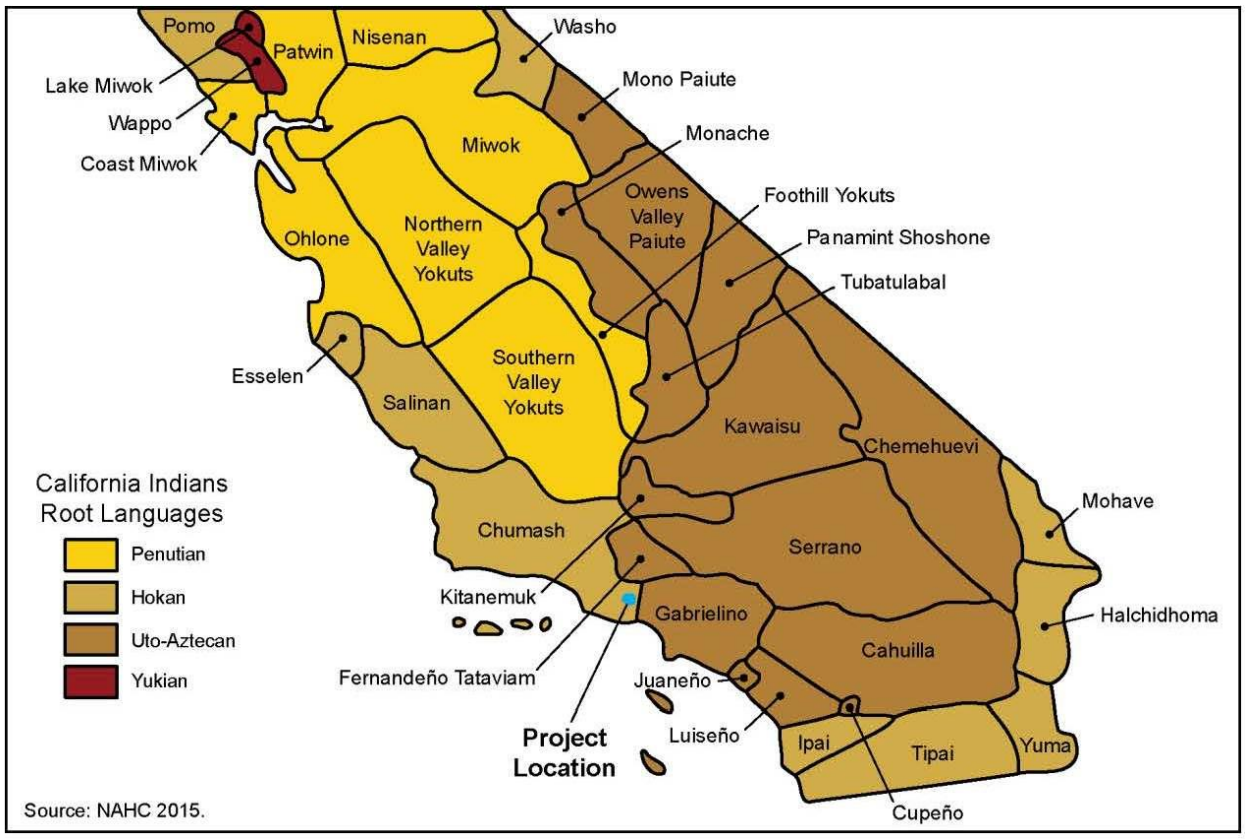

Figure 3. Approximate Location of Tribal Lands in Southern California

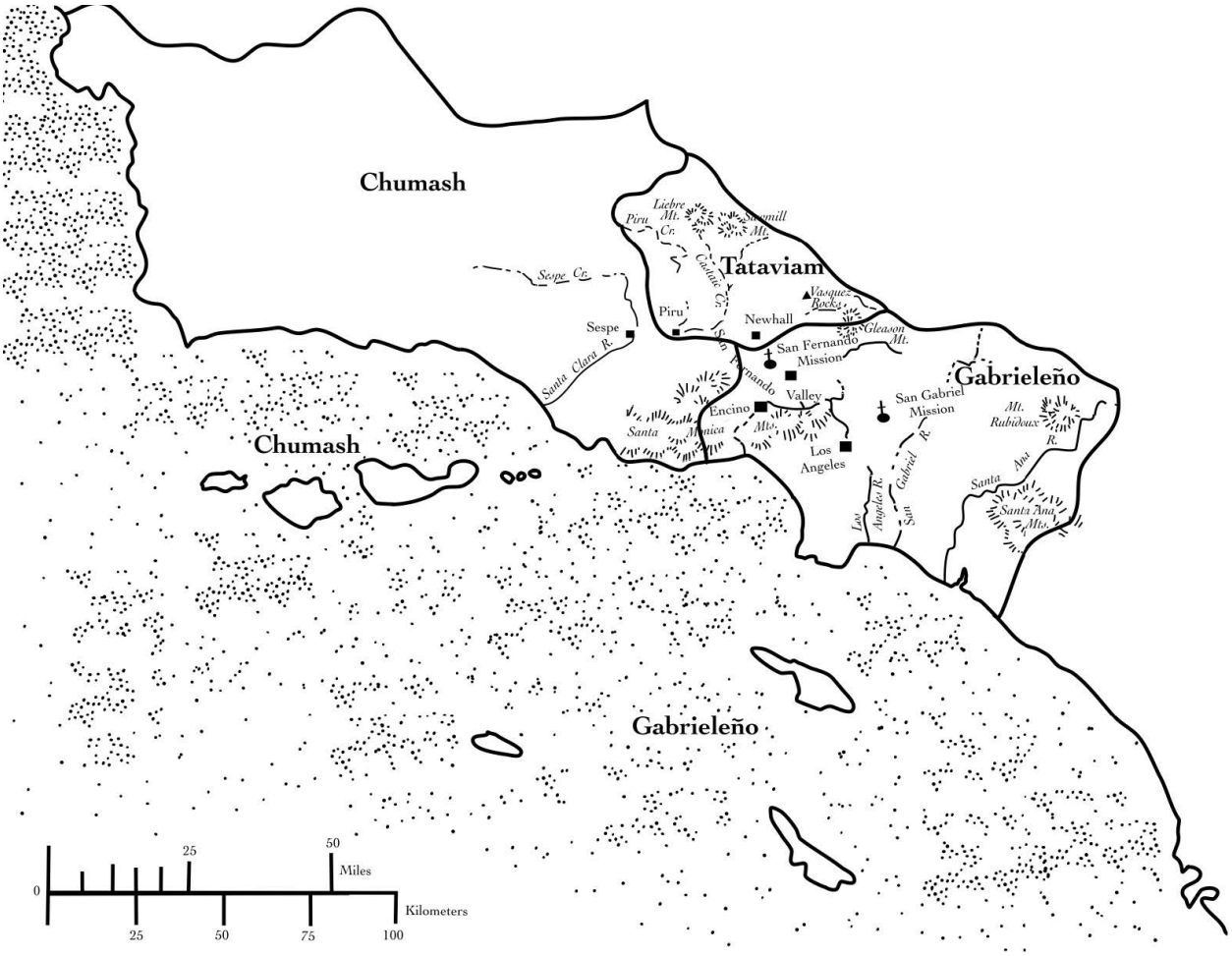

Figure 4. Fernandeño Tataviam Band of Mission Indians Historical Tribal Territory

Fernandeño Tataviam Band of Mission Indians Historical Tribal Territory

Fernandeño Tataviam Band of Mission Indians · California

- Tribal boundaries
- County boundaries
- Interstates
- Highways
- Tribal area

CALIFORNIA — Area detailed

Tribal boundary depicted is based on registered tribal citizens' ancestral villages. Due to kinship networks and social exchange, this hard boundary does not include all of the abundant locations associated with Tataviam cultural resources and ancestry. Therefore, the overlap yellow boundary accommodates the natural mobility of ancestral and contemporary Tataviam people, which are also known to be well associated with the tribe and sensitive cultural resources.

All projects breaking soil within the tribal boundary are subject to Tataviam jurisdiction, whereas any projects occurring within the yellow boundary may be subject to further analysis by other surrounding Tribal Governments.

Figure 5. Kizh Tribal Territory, Northwest Region

Figure 6. Burro Flats Main Panel 07/11/2014, Photographer D. Gandy