View looking north in the citrus orchard of the hill and its coastal scrub habitat.

SOURCE: EDS 2010

Figure 3-3
Site Photographs

and annual grasslands greatly reduces wildlife biodiversity and habitat value. However, a variety of wildlife species do occur in these habitats, and many bird species forage in this habitat type.

RUDERAL/DEVELOPED

Approximately 12.5 acres (14%) of the Study Area (11100, 12000) can be classified as ruderal or developed areas, and consist of disturbed or converted natural habitat that is now either in a weedy and barren (ruderal) state, recently graded, or urbanized with pavement, landscaping, and structure and utility placement. Vegetation within this habitat type consists primarily of nonnative weedy or invasive ruderal species or ornamental plants lacking a consistent community structure. Ornamental species sighted in the Study Area include iceplant (*Mesembryanthemum*), oleander (*Nerium oleander*) and palms (*Washingtonia* and *Phoenix*). Weedy species sighted include wild oat (Avena fatua), black mustard (*Brassica nigra*), yellow star thistle (*Centaurea solstitialis*), jimsonweed (*Datura stramonium*), long-beak filaree (*Erodium botrys*), fennel (*Foeniculum vulgare*), castor bean (*Ricinus communis*), and common cocklebur (*Xanthium strumarium*). The disturbed and altered condition of these lands greatly reduces their habitat value and ability to sustain rare plants or diverse wildlife assemblages. However, common, disturbance-tolerant species do occur in these lands.

RIPARIAN

Approximately 12 acres (13%) of the Study Area's eastern and southern boundaries consists of riparian habitat; the southern property boundary along the San Luis Rey River corridor is indeterminate. The natural community types are a combination of Southern riparian forest (61300) and specifically, Southern cottonwood willow riparian forest (61330). The codominant canopy trees are cottonwood (*Populus fremontii*) and willows (*Salix gooddingii*, *S. lasiolepis*, and *S. lucida*); other characteristic riparian trees include sycamore (*Platanus racemosa*) and non-native trees such as Eucalyptus (*Eucalyptus*). Understory vegetation includes elderberry, blackberry, and poison oak mule fat; invasives such as giant reed (*Arrundo donax*) and tamarisk (*Tamarix* sp.) are also prevalent. The Cowardin classes are riverine wetland and palustrine forested wetland (Sawyer and Keeler-Wolf 1995). This type of habitat is important to many wildlife species.

COASTAL SCRUB

Approximately 8.7 acres (10%) of the Study Area can be classified as Diegan coastal sage scrub (32500). The largest patch of this community type occurs as a habitat island on the steep southern and eastern sides of the hill in the center of the Study Area; another patch occurs in the northeastern corner of the Study Area between the orchard and the riparian corridor of the unnamed drainage. Diegan coastal sage scrub consists California sagebrush (*Artemisia californica*), laurel sumac (*Malosma laurina*), sages (*Salvia* spp.), mule-fat (*Baccharis salicifolia*), California buckwheat (*Eriogonum fasciculatum*), California buckwheat (*Eriogonum fasciculatum*), and some cacti (*Opuntia* spp.). This type of habitat is important to many wildlife species. Granitic outcrops at the highest points of the

hilltop provide breaks in the scrub cover for reptiles to bask and birds to perch; woodrats have established nests in cracks in the boulders.

OAK WOODLAND

Approximately 1.7 acres (2%) of the Study Area Coast can be classified as coast live oak woodland (71161). The dominant canopy tree is coast live oak (*Quercus agrifolia*); understory vegetation includes laurel sumac, blue elderberry, blackberry, and poison oak (*Toxicodendron diversilobum*). The remaining patches of oak woodland within the Study Area are highly fragmented and isolated; these patches are not sufficiently large to function as high-quality oak woodland habitat, which sustains a rich assemblage of wildlife species.

WATER RESOURCES AND AQUATIC COMMUNITIES

An informal delineation of any and all water resources within the Study Area was also conducted during the field survey. Three water resources were detected: the reservoir on top of the hill, the San Luis Rey River, and an unnamed tributary drainage.

The reservoir is cement lined and copper sulfate is used to discourage algal or plant growth. The perimeter is fenced. This feature does not provide habitat for wildlife and is not considered to be jurisdictional under the Clean Water Act. The San Luis Rey River is an intermittent drainage, with wide washes and braided channels. Within the Study Area, a 3,200-foot segment of this river meanders in and out of the southern boundary of the Study Area. During the September 2009 site visits, no standing water was present. Reports by others indicate that much of this river's flow is hyporheic; hyporheic flow, or groundwater, sustains regenerating riparian gallery forest and riverine wetlands within the channel. The high water mark is readily evident, and the riverbed is depressed approximately 10 feet below the river terrace above. The San Luis Rey River channel width is indeterminate and highly variable. The riparian zone width varies as follows: 430 feet wide at the I-15 bridge; 620 feet wide in the middle of the southern boundary of the Study Area; and 360 feet wide at the confluence with the unnamed tributary.

The unnamed tributary at the east edge of the property is an ephemeral drainage with a variable channel width and riparian zone. The eastern boundary of the Study Area is defined as the middle of this channel; this eastern boundary is an approximately 1,400-foot long segment. The high water mark is readily evident. The channel width and riparian zone width varies as follows: the channel is approximately 60 feet wide and the riparian zone 210 feet wide at the confluence with San Luis Rey River; the channel is approximately 50 feet wide and the riparian zone 160 feet wide at the Pankey Road Bridge; and the channel is about 40 feet wide and riparian zone 110 feet wide at the Highway 76 bridge.

Just downstream and beyond the southwestern corner of the Study Area, the tributary Keys Creek joins the San Luis Rey River.

The USFWS National Wetland Inventory maps several wetland features within, and adjacent to, the Study Area. Two freshwater ponds are indicated on these USFWS maps; the northern pond is obviously the cement-lined pond on top of the hill; the southern pond could not be found within the existing citrus orchard. Freshwater forested/shrub wetlands and riverine wetlands are also mapped in the river channels of the San Luis Rey River and its unnamed tributary. The formal wetland delineation also detected numerous freshwater forested/shrub wetlands and riverine wetlands, all of which were found inside the high water marks of the of the San Luis Rey River and its unnamed tributary. No vernal pools or other isolated wetlands were identified within the Study Area. The conditions within the Study Area—the sloping topography and the modified contours from intensive agriculture—make it highly unlikely that any wetlands other than riverine wetlands exist within the Study Area.

3.4.3 PROTECTED NATURAL COMMUNITIES OR WILDLIFE HABITATS

HISTORIC OR REGIONALLY-OCCURRING SPECIAL-STATUS COMMUNITIES/HABITATS

One special-status community/habitat was reported by CNDDB (CDFG 2009) within the Study Area: Southern Cottonwood Willow Riparian Forest. The following special-status communities/habitats were reported by the CNDDB within a 10-mile radius of the Study Area: Southern Cottonwood Willow Riparian Forest, Southern Riparian Forest, Southern Willow Scrub, and Southern Riparian Scrub.

SPECIAL STATUS COMMUNITIES/HABITATS DETECTED DURING FIELD SURVEYS

One special-status community/habitat was detected within the Study Area during field surveys by Natural Investigations Co. in September 2009: Southern Cottonwood Willow Riparian Forest. See Exhibit 3 in Appendix A, Biological Assessment for location of riparian areas.

POTENTIAL JURISDICTIONAL WATER RESOURCES

Three water resources were detected within the Study Area: the reservoir on top of the hill, the San Luis Rey River, and an unnamed tributary drainage. The reservoir is cement lined and copper sulfate is used to discourage algal or plant growth. The perimeter is fenced. This isolated feature does not provide habitat for wildlife and should not be considered to be jurisdictional under the Clean Water Act or California state laws. The San Luis Rey River and the unnamed tributary drainage are expected to be jurisdictional under Clean Water Act and California state laws. No development is planned within these channels or within their larger riparian areas.

WILDLIFE CORRIDORS, NURSERY SITES, OR NESTING BIRDS

Wildlife movement corridors link remaining areas of functional wildlife habitat that are separated primarily by human disturbance particularly the freeway, but natural factors such as rugged terrain and abrupt changes in vegetation cover are also possible. Wilderness and open lands have been fragmented by urbanization, which can disrupt migratory species and separate interbreeding populations. Corridors

allow migratory movements and act as links between these separated populations. Within the region several wildlife corridors exist: the San Luis Rey River channel and associated riparian zone is a very high quality corridor; the north-south trending mountain ranges, including Monserate Mountain and Lancaster Mountain are wildlife corridors, but busy roadways (primarily I-15 and SR 76) pose formidable barriers. Bridge crossings on SR 76, such as the bridges at Pankey Road and Rice Canyon Creek, allow north-south wildlife movement under SR 76. East-west wildlife movements are blocked by the I-15 corridor, except under the bridge crossing of the San Luis Rey River.

No fishery resources exist in the area because streams carry water only seasonally. However, San Luis Rey River is designated as a possible recovery zone for steelhead trout. No nests or nesting birds were noted during the field survey. However, Least Bells' Vireo may occur in the riparian creek. Several gray squirrel nests were noted in oak trees on the western border of the Study Area. The riparian zone of the San Luis Rey River is considered high quality bird nesting habitat.

PROTECTED TREE RESOURCES

The riparian zone of the San Luis Rey River corridor contains regenerating gallery forests; aerial photography dated 1946 of the Study Area shows this riparian forest extending out to the boundaries of the 100-year floodplain. Aerial photography dated 1953 shows this riparian forest (and adjacent coastal scrub) completely eradicated; wildfire or overgrazing, or a combination of both, is the inferred cause. Isolated mature specimens of cottonwood still occur within the Study Area's agricultural areas, but do not constitute woodland habitat. Isolated patches of coast live oak woodland are found at the edge of the 100-year floodplain within the Study Area and vicinity. No development is planned within coast live oak woodland. No local governmental tree ordinances were identified that would have jurisdiction over the Study Area.

DRAFT HABITAT CONSERVATION PLAN COVERAGE

The entire Study Area is located within the draft MSCP Northern County Subarea Plan and is designated as a Pre-Approved Mitigation Area, and has been given preliminary habitat rankings, summarized in the following table. However, the purpose for the designation appears limited to use of the Arroyo Road Model rather than actual field surveys. Much of the land proposed as "high" and "very high value" in the MSCP is currently under agricultural use. **Table 3-4** shows the preliminary habitat rankings for the project site.

TABLE 3-4
PRELIMINARY HABITAT RANKINGS

Draft MSCP Rank	Acreage
Agriculture	11
Low	1
Medium	7
High	35
Very High	36
Total	90

Source: Natural Investigations, 2009a.

"Critical Habitat" is a term within the ESA defined as specific geographic areas that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The Study Area is adjacent to, but not inside, the current Critical Habitat boundaries for the California gnatcatcher (USFWS 2009). The entire Study Area is located within designated Least Bell's vireo Critical Habitat (USFWS 2009). However, only a portion of the site has the constituent elements for Least Bell's Vireo critical habitat. The riparian zones within the Study Area are designated Critical Habitat for the southwestern willow flycatcher (USFWS 2009). The majority of the Study Area also falls within "Excluded Essential Habitat" for the arroyo toad (USFWS 2009), a designation that allows for reinstatement of critical habitat if existing habitat conservation plans fail to preserve habitat for the species.

3.5 CULTURAL RESOURCES

3.5.1 BACKGROUND

PREHISTORIC OVERVIEW

Paleoindian Period (ca. 9500-6500 B.C.)

In southern California the San Dieguito Complex and a later La Jolla Complex were initially defined by Malcolm Rogers based on his research and numerous excavations that began in the late 1920s (M. Rogers 1939, 1945). Similar assemblages were then subsumed under the San Dieguito Complex, and later described as the Western Pluvial Lakes Tradition (WPLT) (Wallace 1962; Warren 1968; Bedwell 1970). Characteristics that distinguish San Dieguito/WPLT from Archaic and Late Prehistoric assemblages include location on or near the shores of former pluvial lakes and marshes or along old stream channels; a dependence on hunting, fowling, and collecting vegetal products; a general absence of ground stone artifacts; and a flaked stone industry that included percussion flaked foliate (leaf-shaped) knives or points, Lake Mojave and Silver Lake points, lanceolate bifaces, and chipped stone crescents (Moratto 1984:93; Warren 1967:174–177; Warren and True 1961:251–254).

Radiocarbon dates from the C. W. Harris site (CA-SDI-149), the local type site for definition of the San Dieguito and initially investigated by Malcolm Rogers, established that occupation on the San Dieguito River some 15 km from the current coast occurred between 7430 and 6140 B.C. Radiocarbon dates from

the Rancho Park North Site A (SDM-W-49), which has large quantities of shellfish remains and is located about 3.5 km southwest of Batiquitos Lagoon, established that occupation occurred between 6410 and 5970 B.C. (Kaldenberg 1976). Excavated in 1974, SDM-W-49 clearly demonstrates a heavy reliance by people near the coast on marine resources. Based on these finds, plus research at other sites, the two cultures initially identified by Malcolm Rogers, the San Dieguito and La Jolla, are now interpreted as functional variants of one system during the Paleoindian Period (Bull 1987; Gallegos et al. 1987).

For southern and central California, the economy during the Paleoindian Period was a diverse mixture of hunting and gathering, with a major emphasis on aquatic resources in many areas (e.g., Erlandson and Colten 1991; Jones 1991). There is now less emphasis on big-game hunting behavior as the hallmark of the Paleoindian Period. There are at least 75 coastal sites in central and southern California that date to more than 7,500 years ago (Erlandson and Colten 1991). In addition, dates from two archaeological sites on the Northern Channel Islands near Santa Barbara are the earliest evidence for human occupation in southern California. Human remains from the Arlington Springs site on Santa Rosa Island date to approximately 13,000 years ago and the Daisy Cave site on San Miguel Island is dated to 10,000 years ago (Erlandson 1991:10; Johnson et al. 2002).

Archaic Period (ca. 6500 B.C.–A.D. 500)

The onset around 6500 to 6000 B.C. of a warm and dry period termed the Altithermal, which lasted for some 3,000 years, coincides with a change in subsistence patterns. During the Archaic Period, subsistence practices are more diversified and focused on gathering activities, with a greater emphasis on plants and small animals. Coastal sites demonstrate a reliance on plant resources, fish, and shellfish. For the first time, milling stones occur in large numbers, and their frequency increases near the end of the period. Milling stones are typically shaped and include handstones (manos or mullers) and associated relatively flat implements associated with a horizontal motion for grinding small seeds (mutates or slabs). People practiced a mixed food procurement strategy that was adapted to local and regional environments, referred to as the Encinitas Tradition (Warren 1968).

During the Archaic Period, inland sites in northern San Diego County are usually called the Pauma Complex, and sites near the coast with shell middens are part of the La Jolla Complex (True 1958; Warren 1968; Meighan 1954). The assemblages from both complexes are dominated by grinding implements, and have a variety of stone tools, including Pinto series projectile points. Pauma sites were interpreted as expressing a more sedentary lifestyle, but recent research suggests the inland Pauma Complex sites likely represent seasonal components within an annual subsistence round by La Jolla Complex populations (True and Pankey 1985; Smith et al. 1996). The La Jolla components at CA-SDI-149 and SDM-W-49 have been dated between 4600 and 2600 B.C., and ages from other sites have extended the La Jolla period from about 6500 B.C. to approximately 500 B.C.

Along the coastline, occupation during the Archaic Period in today's San Diego County depended on the availability of marine and terrestrial resources. The abandonment around 3,000 years of coastal sites in the central part of the county has been attributed to the sedimentation of coastal lagoons and the resulting deterioration of fish and mollusk habitats, as documented at Batiquitos Lagoon (Miller 1966; Gallegos et al. 1987, 1992). Exploitation of marine resources continued along the northern and southern county coastline, including within Camp Pendleton, where larger drainages remained open to the ocean (Byrd 1998).

Late Prehistoric Period (A.D. 500–Historic Contact)

The Late Prehistoric Period was a time of complex and ongoing change in material culture, burial practices, and subsistence focus. These changes most likely reflect both in situ cultural adaptations in response to shifts in environmental conditions as well as influences from outside the area. In the cultural ecological scheme developed by Warren (1968), the period is divided into three regional patterns: the Yuman Tradition in the San Diego region; the Takic or Numic Tradition in the Los Angeles and Orange Counties region; and the Chumash Tradition mainly in the region of Santa Barbara and Ventura Counties.

Diagnostic characteristics of the Yuman Tradition in the San Diego region include Colorado River pottery, the introduction of cremation in the archaeological record, and small triangular and triangular side-notched points. The projectile points are similar to those characteristic of the Archaic Period in the desert regions in the Great Basin and Lower Colorado River. The combination of new traits suggests there was a strong influence from the desert region. This influence extended southward to approximately Agua Hedionda Lagoon and northward to near today's Los Angeles/Ventura County line (excluding the Chumash). Yuman-speaking (formerly referred to as "Diegueño-speaking") people, who were apparently not displaced by the Takic migration, inhabited the region south of the lagoon. During the Late Prehistoric Period, there was also an expansion of trade networks and an increased emphasis on the collecting and processing of vegetal resources.

Similar changes (small triangular arrow points, pottery, and introduction of cremation) in Los Angeles and Orange Counties are considered the result of a major migration of Takic-speaking people (Uto-Aztecan language group) from inland desert regions to the east. Formerly referred to as the "Shoshonean wedge" (Warren 1968), this Takic or Numic Tradition appears to have lasted several centuries. To avoid confusion with ethnohistoric and modern Shoshonean groups who spoke Numic languages, the term "Shoshonean wedge" is no longer used (Heizer 1978:5; Shipley 1978:88, 90). The Gabrielino/Tongva, Juaneño/Acjachemen, and Luiseño—the modern Takic-speaking groups in the region—are considered the descendants of the prehistoric Uto-Aztecan, Takic-speaking populations that settled along the California coast during this period or perhaps somewhat earlier

The mortar and pestle was introduced during the Late Prehistoric Period, probably from the north. This set of milling implements was essential to processing acorns, which became a dietary staple. Along with a shift in environmental conditions, the availability and storage capability of acorns had a profound impact on indigenous Californians. Settlement increased away from the coastal regions to upland areas with favored oak species, in concert with a decrease in the availability of marine resources as a result of sea level stabilization and consequent lagoon and estuary siltation.

For San Diego County, archaeologists have defined two different cultural complexes during the Late Prehistoric: the Cuyamaca Complex in the south (focused on the Cuyamaca Mountain area), and the San Luis Rey Complex in the north (True 1966, 1970; True et al. 1974, 1991). Compared with the San Luis Rey Complex, the Cuyamaca Complex has a steatite industry, a wider range of ceramic forms, and cremations placed in urns, plus higher frequencies of ceramics, flaked stone tools, side-notched projectile points and grinding implements. These characteristics suggest a tie with Colorado River cultures; they are also similar to the culture of the ethnohistoric Yuman-speaking Kumeyaay. In contrast, the San Luis Rey Complex appears to represent the ancestors of the Takic-speaking Juaneño and Luiseño, who inhabited northern San Diego County during the ethnohistoric period.

The San Luis Rey complex is generally divided into two phases within northern San Diego County, San Luis Rey I and II, based upon the presence of ceramics, rock paintings (pictographs), and cremation urns during phase II (Meighan 1954; True et al. 1974). San Luis Rey I, the pre-ceramic phase, appears in the archaeological record by approximately 1000 B.C. The ceramic phase, San Luis Rey II, appears around A.D. 1200 and lasted until approximately 100 years ago. After contact, European goods, such as glass beads and metal knives, are present in phase II assemblages (True et al. 1974; True and Waugh 1982). Grinding and lithic tools characteristic of San Luis Rey I include small triangular points, portable shaped or unshaped slab metates, shaped or unshaped manos and pestles, and non-portable bedrock milling features. Bone awls, cremations, and stone and shell ornaments are also prominent in San Luis Rey I assemblages. Around A.D. 1200, pottery cooking and storage vessels, cremation urns, and polychrome pictographs signify the phase II. True et al. (1974) suggest increased population sizes and increased sedentism likely influenced the fluorescence of rock art during San Luis Rey II. Projectile point types are dominated by the Cottonwood Triangular series, but Desert Side-Notched, Dos Cabazas Serrated, stemmed, and leaf-shaped points also occur. An increase in dependence on storable acorns as a dietary staple may have allowed for the relative increase in sedentism and population size.

Settlement during San Luis Rey I has been characterized as having a high yearly residential mobility with small temporary camps (True and Waugh1982). During phase II, settlement is characterized as more territorial and situated along drainage systems, with permanent winter villages/camps in the western foothills and summer camps in the mountains. Acorns and other nuts were exploited at the upland summer camps at bedrock milling stations, and the lowland villages were at least partially dependent on marine resources (True 1993:17).

Recent research at several Late Prehistoric Period sites along the lower Santa Margarita River drainage within Marine Corps Base Camp Pendleton (York 2005:63–67) shows that the settlement pattern is analogous to that described by True and Waugh (1982) for the upper San Luis Rey River drainage system. The settlement pattern along the Santa Margarita River drainage shifted from near coastal sites to inland river valleys during the San Luis Rey II phase. This shift coincided with a decline in the availability of coastal lagoonal resources and an increase in the exploitation of plant resources and the use of the bow and arrow to hunt large mammals (Rosenthal et al. 2001:194; York 2005:62–63).

ETHNOGRAPHY

The Luiseño occupied the project area during the historic period (Bean and Shipek 1978; Kroeber 1925). Luiseño is a term derived for the Native Americans administered by the Mission San Luis Rey, and later applied specifically to the Payomkawichum ethnic nation who resided in the region near the mission. Payomkawichum means the "western people" and applies to the people administered by the mission and to closely related, coastal Luiseño who lived north of the mission. At the time of European contact, Luiseño territory included the northern half of San Diego County and western edge of Riverside County. Along the coast, their territory extended from Agua Hedionda Creek northward to Aliso Creek, and inland to the Palomar Mountains at the south and east of Santiago Peak toward the north (Bean and Shipek 1978:550–551). Their northern neighbors were the Juaneño (Acjachemen), who spoke a Luiseño dialect; their eastern neighbors were the Cahuilla. The Cupeño, whose small territory was restricted to the San Jose de Valle at the headwaters of the San Luis Rey River, bordered the Luiseño on the southeast. To the south was the Ipai division of the Kumeyaay (called the Diegueño by the Spanish). Many contemporary Juaneño and coastal Luiseño identify themselves as descendents of the indigenous people who lived in the local area, termed the Acjachemen Nation.

Like the language spoken by their Cahuilla and Cupeño neighbors, the Luiseño language derives from the Cupan group of the Takic language branch, a part of the Uto-Aztecan linguistic family (Mithun 2001:539–540). Ipai and other Kumeyaay dialects (Kamia [also referred to as Kumeyaay], and Tipai) of lower San Diego County, Imperial County, and northern Mexico belong to the California-Delta Yuman division of the Yuman-Cochimi language family that originated within the American Southwest (Mithun 2001:304, 577).

The Luiseño inhabited permanent villages with 50 to 400 people, but also during certain seasons resided in camps that included many fewer people. Village social structure revolved around lineages and clans. Smaller villages generally included a single lineage, whereas larger villages were clan-centered with people from multiple lineages. Each clan/village owned a resource territory that was politically independent, but maintained ties to other nearby clans through economic, religious, and social networks. Village structures included a ceremonial enclosure (*vamkech*), a semi-subterranean sweat lodge, and menstrual huts. Luiseño nuclear families resided in dome-shaped dwellings (*kish*) made of willow poles

covered with interlaced tule reeds. The chief's residence was generally larger than the others to accommodate his large family, ceremonial regalia, and ceremonial food-processing activities. The chief's home and the ceremonial enclosure were generally located in the center of the village. During acorn harvest season, people stayed in simple lean-tos that were constructed in the upper foothills.
Socio-political structure among the Luiseño was similar to the neighboring Juaneño/Acjachemen. There were three hierarchical social classes: an elite class that included chiefly families, lineage heads, and other ceremonial specialists; a "middle class" of established and successful families; and a third class composed of disconnected families and war captives (Bean 1976:109–111, 1978:677–681; Bean and Shipek 1978:555–556; Boscana 1933:29, 41, 47–48, 56, 65, 67, 70, 84). Leadership focused on the *not* or *nota* (clan chief) who conducted community rites and regulated ceremonial life along with a council of elders (Bean and Shipek 1978:555; Kroeber 1925:686; Boscana 1933:41, 43, 84). The council, composed of lineage heads and ceremonial specialists, decided matters of community significance. Their decisions were implemented by the *nota* and his staff. Economic and warfare powers also fell within the control of the hereditary village chief, and Luiseño politics were dominated by intra- and inter-lineage maneuvering both within and between villages.

Luiseño religious, ceremonial, and mortuary practices were very similar to those of the neighboring Juaneño/Acjachemen. *Chinigchinich* was the center of Luiseño religion, and religious observations were performed in a brush-enclosed *wamkech*. Puberty initial rites for young men and women seemingly were identical for the two groups. Like that of their neighbor, Luiseño mortuary practices included cremation and burial of the dead (Kroeber 1925:641–643, 675–677). Specific individuals were tasked with managing the cremations and compensated for their services. The death of high rank individuals, and perhaps less influential individuals, was commemorated on the first anniversary.

The primary Luiseño food staple was the acorn (Bean and Shipek 1978:552). Other plant resources (e.g., pine nuts, seeds, berries, greens, prickly pear, fruits, yucca, tubers, and mushrooms), fish, shellfish, waterfowl, and terrestrial and marine mammals supplemented the diet. Villages were situated nearreliable sources of water to facilitate daily leaching of milled acorn flour and to provide potable water. Large and small game included deer, antelope, jackrabbit, rabbit, ground squirrel, mice, and wood rat. Waterfowl and birds included quail and duck; trout and salmon were obtained from rivers and creeks. Marine resources (e.g., sea mammals, fish, crustaceans, and shellfish) were a major source of dietary protein for the Luiseño who lived near the coast.

Implements for hunting included the bow and arrow, snares, nets, and curved throwing sticks (Bean and Shipek 1978:552–553). Fishing implements included nets and shell and bone hooks. Traps and pits were used for hunting, and during community deer drives deer-head decoys were employed. A variety of woven tools were used for harvesting plants, such as seed beaters, carrying baskets, and storage baskets. Stone manos and metates were used for grinding hard seeds, while mortars (sometimes constructed of

hard woods) and pestles were used for grinding acorns. Clay pots were used for storage as well as for cooking.

Direct European contact with the Luiseño initially occurred in July 1769 with the arrival in San Diego of the Spanish expedition led by Gaspar de Portolá. Eight missions and forts were founded north and south of Luiseño territory during the ensuing six years. Mission San Juan Capistrano was founded in 1776 near the Luiseño. Mission San Luis Rey was established in 1798 within Luiseño territory, and the proselytizing among the Payomkawichum began in earnest (Engelhardt 1922:8). Unlike many other indigenous groups in California, the Luiseño were not forced to live at the mission. Consequently, their death toll from introduced diseases was not as high and change in their traditional lifeways was less disruptive. Inland Luiseño groups were even less affected by Spanish influence until after establishment by the powerful and populous Mission San Luis Rey of two inland substations, Asistencia de San Antonio de Pala in 1816 and Los Flores Estancia in 1823.

Locally known as the Treaty of Temecula (an interior Luiseño village), several Luiseño leaders signed the statewide 1852 treaty. The treat was, however, never ratified by the U.S. Congress. Reservations were established by 1875 for the Luiseño in the Palomar Mountains and nearby valleys, including Pala, Pauma, Pechanga, La Jolla, Rincon, and San Pasqual (CIAP 2003). Because their lands had already been appropriated as Mexican ranchos, no reservations were established for the coastal Luiseño. The San Luis Rey group is actively petitioning the Bureau of Indian Affairs Office of Federal Acknowledgement to review their request for federal recognition. There were 1,340 enrolled members on four Luiseño reservations in 2003. At present, there are more than 2,000 Luiseño, including non-enrolled but active members of the community. A majority of the 918 enrolled members of the Pala Band of Mission Indians, many of whom trace their ancestry to the Cupeño, live on their 12,273-acre reservation (Pala Band of Mission Indians 2006).

HISTORICAL OVERVIEW

Post-contact history for the state of California generally is divided into three specific periods: the Spanish Period (1769–1822), Mexican Period (1822–1848), and American Period (1848–present) (Grunsky 1989; Schuyler 1978). Although there were brief visits by Spanish, Russian, and British explorers from 1529 to 1769, the Spanish Period in California begins in 1769 with a settlement at San Diego and the first (Mission San Diego de Alcalá) of 21 missions established between 1769 and 1823. The Mexican Period begins with independence from Spain and is marked by an extensive era of land grants, most of which were in the interior of the state, and by exploration by American fur trappers west of the Sierra Nevada Mountains.

The signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican–American War, is the start of the American Period when California became a territory of the United States (Grunsky 1989; Schuyler 1978). The discovery of gold in 1848 at Sutter's Mill near Sacramento and the resulting Gold

Rush era influenced the history of the state and the nation. The rush of tens of thousands of people to the gold fields also had a devastating impact on the lives of indigenous Californians, with the introduction and concentration of diseases, the loss of land and territory (including traditional hunting and gathering locales), violence, malnutrition, and starvation (Castillo 1978:107–113; Cook 1978:98). Thousands of settlers and immigrants continued to pour into the state, particularly after the completion of the transcontinental railroad in 1869.

Spanish Period (1769–1822)

Spanish explorations of the area provide early historical accounts of today's San Diego County. In 1542 Juan Rodriguez Cabrillo claimed the bay for Spain and named the site "San Miguel." Sebastian Vizcaíno surveyed today's Mission Bay and Point Loma in 1602, and named the area for a Catholic saint, St. Didacus (commonly known as San Diego). The Mission San Diego de Alcalá was established in San Diego in 1769. Founded by Friar Junípera Serra, it was the first of the chain of 21 missions to be established by the Spanish and the Franciscan Order paralleling the California coastline between 1769 and 1823. A military outpost, the San Diego Presidio, was built about six miles west of the mission in 1774. The bourgeoning settlement at San Diego became a pueblo by 1835.

A second mission in San Diego County, Mission San Luis Rey de Francia, was founded in 1798. In 1818, Mission San Diego de Alcalá initiated a plan for a chain of inland branches, the first of which was Asistencia de Santa Ysabel, located in the mountains east of San Diego near the Native American village of *Elcuanan*. By 1821, the asistencia boasted a chapel, granary, cemetery, and adobe houses, and a population of 600 Native Americans (Quinn 1964). Two other inland substations were established by the powerful and populous Mission San Luis Rey, which is located near present Oceanside. Asistencia de San Antonio de Pala was founded ca. 1816 20 miles inland from San Luis Rey. The second substation, the Los Flores Estancia, was constructed ca. 1823 between Missions San Luis Rey and San Juan Capistrano on the San Pedro Rancho, later called Rancho Santa Margarita y Los Flores, and now MCB Camp Pendleton in northern San Diego County.

Mexican Period (1822–1848)

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population away from the more settled coastal areas where the Spanish had concentrated their colonization efforts. At the same time, the influence of the California missions waned in the late 1820s through the early 1830s. This decline resulted from a combination of outside events and pressures, including increasing hostilities between missionaries and local civilians who demanded mission lands, decimation of the Native American population by introduced diseases, and the influence of private traders in the hide and tallow industry.

Following adoption of the Secularization Act of 1833, the Mexican government privatized most Franciscan lands, including holdings of their California missions. By 1836, this sweeping process

effectively reduced the California missions to parish churches and released their vast landholdings. Although earlier secularization schemes had called for redistribution of lands to Native American neophytes who were responsible for construction of the mission empire, the vast mission lands and livestock holdings were instead redistributed by the Mexican government through several hundred land grants to private, non–Native American ranchers (Langum 1987:15–18). The private Mexican citizens who received the land and their holdings subsequently released their neophyte "workers" to fend for themselves.

During the Mexican Period, the large ranchos became important economic and social centers. During their supremacy (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The non-native population of California increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. The rising California population unfortunately contributed to the introduction and rise of diseases foreign to the Native American population, who had no associated immunities. Large numbers of native peoples in the Central Valley, for example, died from disease between 1830 and 1833, and disease exterminated whole tribes along the American, Merced, Tuolumne, and Yuba Rivers. The Central Valley was hit by a second epidemic in 1837, which further decimated indigenous Californians (Cook 1955).

The project area was part of the Mexican land-grant of Rancho Monserate (alternatively referenced as "Monserrate"). The rancho was granted to Don Ysidro María Alvarado by Governor Pío Pico in 1846 and comprised 13,322 acres (Rush 1965:86). Don Ysidro constructed a small, adobe ranch house on the north side of the San Luis Rey River northeast of the current project. After Don Ysidro and his wife died of smallpox in an 1863 epidemic, their son Tomás inherited the property. Don Tomás and his wife María Ignacia Moreno constructed a ranch house and an adobe chapel on the south side of the river (Pourade 1969). In 1860, the land was appraised at $3,000 and Don Ysidro's personal property was valued at $7,000, including 180 steers, 20 cows, 50 horses, and 100 sheep. Don Tomás increased the herds to 3,000 cattle, 13,000 sheep, and 300 horses within a few years after he inherited the rancho (Pourade 1969:100).

American Period (1848–present)

San Diego County was created in 1850 as one of the original California counties. It encompassed all land between the Pacific Ocean and the Colorado River, as well as a large portion of present-day San Bernardino and Riverside Counties. The town of San Diego was incorporated in 1850 and ten years later, the population of San Diego was 734, with a county-wide population of 4,324. Unless otherwise noted, much of the information on the history of San Diego County was obtained from Pourade (1960, 1961, 1963, 1964, 1965, 1967).

Between 1863 and 1865, southern California was subject to severe droughts, and another drought decimated the cattle industry in 1877. The railroad arrived in San Diego in 1885 (Pourade 1964:165-166). During the 1890s and early twentieth century, a number of dams were built in San Diego County, including Bear Valley (now Wohlford) near Escondido, upper and lower Otay, Morena, and Barrett, all east of San Diego. The secession of Riverside County in 1893 reduced the size of San Diego County. In 1907, the Imperial County secession left San Diego County with its current boundaries.

In the project vicinity between the late 1870s and the 1920s, a rural farming community centered around Monserate School. In 1884, the San Diego Union (4-20-1884) noted that "Dal Higgins and some others are selecting a new road to run from Pala through Smith's, Buck Higgin's, and Wright's Place to the Monserrate neighborhood. Monserrate is at present isolated." This type of settlement was common during this period in San Diego County and typical of most non-urbanized portions of the county east of the Peninsular Ranges. Like other rural farming communities in the county (Van Wormer 1986a, 1986b), settlement within the San Luis Rey River Valley was loosely assembled around a post office, country store, and schoolhouse. The early 1870s saw establishment of the Monserate school district and the donation of labor, land, and money by the farmers to build a schoolhouse. The farmers provided business for local markets and fed the growing urban population in the county.

Farmers in the San Louis Rey River Valley cultivated a variety of produce, and also raised bees and livestock. In 1886, crops in the valley below Pala included corn, pumpkins, alfalfa, sweet potatoes and truck products (San Diego Union 11-11-1886, 3:3-4). By 1889, agricultural products had expanded to include barley, wheat, potatoes, onions, and watermelon, as well as beef cattle (San Diego Union 9-7-1889, 2:1). By the 1890s, a creamery was established near San Luis Rey Mission and many farmers also raised dairy cattle and hogs (San Diego Union 1-1-1896, 19:1-2). Farmstead fields were irrigated via small ditches with water from the San Luis Rey River (San Diego Union 9-9-1874, 3:2).

A military presence in San Diego County was firmly established as a result of World War I, with construction in 1917 of Camp Kearney near San Diego. The purchase of North Island in San Diego Bay, used jointly by the Army and Navy until 1939, was also a result of the war. San Diego Bay was chosen as home for the U.S. Pacific Fleet in 1919, and the U.S. Marine Corps set up a recruit-training depot and a naval training center at Point Loma during the 1910s. A naval air base at Miramar was built in 1939, replacing Camp Kearney.

An aqueduct was constructed in 1944 to bring water to San Diego from the Colorado River; the San Diego Water Authority was formed as a consequence. The Metropolitan Water District took over the San Diego Water Authority in 1946, and the aqueduct opened in 1947. With the continued growth of the county, the 1950s witnessed the opening of Interstate 8, and a near doubling of the population between 1950 and 1960, from 600,000 to over a million (San Diego Historical Society 2006). In 1964, the University of California, San Diego opened its 1,000-acre campus in La Jolla. In 1970, San Diego was

ranked California's second largest city, next to Los Angeles, and by 2000, the population of San Diego County had reached close to three million.

Rancho Monserate was subdivided numerous times during the American Period, and over the years the decreasing acreage was generally used for dairy farming, citrus crops, and floriculture (references in Hector et al. 2009:16–27). Freeman McComber, who also founded Murrieta and was one of the leaders of water companies in Paula and Temecula, purchased the Monserate land in 1885. Upon his death, the land was divided among his heirs, María Ygnacio Alvarado, and H.H. Gird. The McComber lands were purchased by Dr. G.W. Robinson in 1898, and changed hands several more times until it was purchased in 1932 by Charles E. Cooper who called the 5,000 acres Rancho San Luis Rey. Cooper raised thoroughbreds and constructed numerous stables, barns, and outbuildings, including a racetrack. The operation was successful until horse racing was suspended when the United States entered World War II.

Cooper sold his ranch in 1943 to Fred T. Glick, who in turn sold 4,200 acres to Robert and Edgar Pankey in 1946. Approximately 2,500 acres were sold by the Pankey brothers in 1950 to Vern K. Wilt who developed the suburb of Pala Mesa, which is located west of the APE. Edgar Pankey continued to maintain a weekend home on "Pankey Pastures" into the 1960s and Richard Pankey ran a successful ranch on the remaining Pankey acreage.

SPECIFIC FINDINGS

The confidential cultural resources report, which is hereby incorporated into this Draft Environmental Assessment, contains the methodology used and the detailed findings associated with the literature search and field surveys for the project site. The records search for the project indicates that 25 cultural resource studies have been conducted within a 0.5-mile radius of the APE. Four of the studies overlapped portions of the APE; two additional studies were completed adjacent to the APE. The findings revealed that no prehistoric, ethnohistoric, or historic-era cultural resources were newly identified during survey of the previously disturbed APE for this project.

3.6 SOCIO-ECONOMIC CONDITIONS

3.6.1 SAN DIEGO COUNTY

POPULATION

The Pala Gateway project site is located in the unincorporated portion of northern San Diego County. The site is approximately 4.5 miles south of the northern county line and approximately 5 miles from central Fallbrook, which is an unincorporated community in San Diego County. San Diego County has grown over 69% in population from 1980 to January 1, 2009 (California, 2009a). During this period, the County grew from 1,873,300 residents to an estimated 3,173,407 residents. Population in the unincorporated portion of San Diego County was estimated at 489,958 residents in January 2008. This

unincorporated population grew to 499,190 by January 2009, which is a 2% increase (California, 2009a). For the County as a whole, the population is estimated to grow to 3,550,714, which is a 12% increase from January 2009 to 2020. As can be seen from the table below, the Unincorporated portion of San Diego County is expected to receive a higher rate of growth (57%) from 1980-2020 when compared with the State of California (48%) or San Diego County (42%) as a whole.

TABLE 3-5
STATE AND REGIONAL POPULATION

Location	1990	2000	2009	2020	Est % Change 1990-2020
California	29,828,496	33,721,583	38,292,687	44,135,923	48%
San Diego County	2,498,016	2,801,336	3,173,407	3,550,714	42%
Unincorporated County	398,734	442,919	499,190	627,142	57%

Source: California, 2009a. San Diego Association of Governments, 2007. EDS, Inc. 2009

HOUSING

As of 2008, there were an estimated 1,138,388 housing units in San Diego County, of which 165,176 or 14.5% were located in the unincorporated portion of the County. San Diego County was home to approximately 8.5% of all housing units in the State of California as of 2008. San Diego County saw its number of housing units grow by 20% from 1990 to 2008, while the State of California's housing stock grew by the same amount during the same period of time. The unincorporated portion of the County also saw its housing stock increase by 20% during the same period of time. The housing stock in the State and County (as a whole and in the unincorporated portion of the County) has grown since 2000 as has the vacancy rate. The State of California has also experienced this same dynamic.

TABLE 3-6
HOUSING UNIT ESTIMATES

Location	1990 Units	1990 Vacancy Rate	2000 Units	2000 vacancy Rate	2008	2008 Vacancy Rate
California	11,182,882	7.17%	12,245,170	5.83%	13,398,878	5.88%
San Diego County	946,240	6.22%	1,043,606	4.37%	1,138,388	4.40%
Uninc. County	137,545	7.21%	152,910	5.94%	165,176	6.21%

Source: U.S. Census Bureau, 2009. California, 2009b. EDS, Inc. 2009

EMPLOYMENT AND INCOME

As of 2008, there were approximately 2,309,314 people in the County that were 16 years and older. Of that number, approximately 66.2% or 1,528,814 were in the labor force (U.S. Census Bureau, 2009b). Of the total in the labor force, approximately 3.3% were in the Armed Forces, while the remainder were in the civilian labor force. Approximately 6% of the civilian labor force was unemployed in 2008.

With the recession of 2008-2009, we can expect that this number has increased beyond the 6% number. Various sources have cited a current 10% unemployment rate for the County.

Approximately 39% of the civilian work force in the County are employed in the Management, professional, and related occupations. Sales and office jobs comes in second with approximately 25% of the civilian work force, while service jobs employs approximately 18% of the civilian work force. Private wage and salary workers make up approximately 76% of the civilian employment force, while government workers make up 15%. Only 8.6% of workers are self-employed workers in the County.

The largest percent of earners (approximately 18%) earn between $50,000-$75,000 per year. Only 4.8% earn less than $10,000 per year, while approximately 6.4% make more than $200,000 per year. The median household income is estimated to be $63,727, while the mean household income is estimated to be $84,646 (U.S. Census Bureau, 2009b). Approximately 23% of the population receives social security, while approximately 17% of the population receives retirement income.

3.6.2 SOCIO-ECONOMIC CHARACTERISTICS OF THE PALA BAND OF MISSION INDIANS

The Pala Reservation is home to approximately 1,573 residents in 408 housing units. Of the 1,573 residents, approximately 693 (44%) were identified in 2000 as being American Indian. The Tribe currently has 918 enrolled members that live on their 12,273 acre reservation. The Tribe is governed by an executive Committee composed of six members elected by the General Council, which includes all qualified voters 18 years an older. Elections are held every 2 years in November. The Tribe is organized under Articles of Association approved in July 1961 and later amended in 1973 and 1980.

3.6.3 ENVIRONMENTAL JUSTICE

The U.S. Environmental Protection Agency's (EPA) Office of Environmental Justice offers the following definition of environmental justice:

> *"The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of Federal, state, local, and tribal programs and policies."*

The concept of environmental justice is rooted in the Civil Rights Act of 1964, which prohibited discrimination in Federally-assisted programs, and in Executive Order 12898, "*Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*," issued February

11, 1994. Executive order 12898 was intended to ensure that Federal actions and policies do not result in disproportionately high adverse effects on minority or low-income populations. It requires each Federal agency to incorporate environmental justice into its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects, including social or economic effects, of its programs, policies, and activities implemented both directly and indirectly (for which it provides permitting or funding), on minority populations and low-income populations of the United States (President's Council on Environmental Quality 1997). Additional guidance from the President's Council on Environmental Quality clarifies that environmental justice concerns may arise from effects on the natural and physical environment that produce human health or ecological outcomes, or from adverse social or economic changes.

Environmental justice issues are mandated and regulated at the Federal level, and compliance with NEPA requires analysis of environmental justice effects. As such, environmental justice is considered part of the NEPA process. According to the CEQ's *Environmental Justice Guidance Under the National Environmental Policy Act*, agencies should consider the composition of the affected area, to determine whether minority populations, low-income populations, or Indian tribes are present in the area affected by the proposed action, and if so whether there may be disproportionately high and adverse environmental effects. Communities may be considered "minority" under the executive order if one of the following characteristics apply:

- The cumulative percentage of minorities within the affected environment is greater than 50%, or
- The cumulative percentage of minorities within the affected environment is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

Communities may be considered "low-income" under the executive order of one of the following characteristics applies:

- The median household income for a census tract is below the poverty line, or
- Other indications are present that indicate a low-income community is present within the census tract.

The project site is located within 2000 Census Tract 190.02 within the unincorporated part of San Diego County. The total population for Census Tract 190.02 was 1,584, with approximately 50% male and female. Seventy six percent of the population (1,208 people) in this tract are white, while Hispanics make up approximately 27% of the population (436 people) in this tract, and "some other race" constitutes 16% (254 people). By comparison, whites comprise 66.5% of the population within San Diego County, while Hispanics make up 27% of the County population. "Some other race" constitutes 13% of the population within the entire County. The 2000 census data shows that the median

household income for Census Tract 190.02 was $41,400, well above the household poverty level of $16,500 for a family of three (U.S. Census Bureau, 2009c). The 200 census data for Census Tract 190.02 shows that 19.2% (69 families) are below the poverty level. During this same period, San Diego County had 9% (59,221 families) below the poverty level.

3.7 TRANSPORTATION AND CIRCULATION

This section of the Environmental Assessment presents existing setting information on roadways and existing roadway conditions around the project site. Regional access to the project site is provided by Interstate 15 and SR 76, while local site access is provided via Pankey Road. To get to the site, regional travelers would take the Pala Road/SR76 exit eastward to the Pankey Road exit. A right turn at Pankey Road directs the traveler in a southwesterly direction to the end of Pankey Road, which is at the northeasterly boundary of the project site. Local access can also be provided via Shearer Crossing, which is a local arterial that ties into Pankey road a short distance from the site.

Below is existing roadway descriptions and condition information:

INTERSTATE 15

I-15 is classified as a *Freeway* on the September 2005 San Diego County Circulation Element map. I-15 from Rainbow Valley Boulevard to Escondido Highway (Old Highway 395) is constructed as an eight lane divided freeway with a center divider. The travel lanes are generally 12 feet in width and the shoulder is generally 10 to 12 feet in width. The posted speed limit is 70 MPH along I-15 in the vicinity of the project site (LOS Engineering, 2009).

STATE ROUTE 76

SR 76 to the west from S. Mission Road to I-15, SR 76 is classified as a *Prime Arterial with bike lanes* and from I-15 to Pala Mission Road, SR 76 is classified as a *Major Road with bike lanes* on the September 2005 San Diego County Circulation Element map. SR-76 from Via Monserate to Old Highway 395 is generally constructed as a two-lane un-divided roadway (one travel lane of approximately 12 feet in each direction) with a shoulder width ranging from two to eight feet (total pavement width ranges from approximately 28 feet to approximately 40 feet). From Old Highway 395 to I-15 southbound ramps, SR-76 is constructed within approximately 76 feet of pavement with a center two way left turn lane of approximately 12 feet, two travel lanes in each direction for approximately 24 feet, and a paved shoulder in each direction of approximately eight feet. From I-15 southbound ramps to I-15 northbound ramps, SR-76 is constructed within approximately 56 feet of pavement with one travel lane of approximately 13 feet in each direction, a back to back left turn lane of approximately 14 feet, and a shoulder of approximately eight feet for each travel direction. From I-15 northbound ramps to Pala Mission Road, SR-76 is constructed within approximately 28 feet with one travel lane of approximately 12 feet in each direction and a shoulder of approximately two feet in each direction.

Speed limit signs of 55 MPH were observed on the segments between Melrose Drive and North River Road. Additionally, several horizontal alignment signs from the Manual on Uniform Traffic Control Devices (MUTCD) are posted along SR-76. (LOS Engineering, 2009)

SR 76 from the I-15 NB Ramp easterly a distance of approximately 1.4 miles is currently being widened from 2 to 4 lanes. This widening was completed by the end of 2009. SR-76 has two identified widening projects that include the Caltrans SR-76 Middle Project (from approximately Melrose Drive to S Mission Road) and the Caltrans SR-76 East Project (from approximately S. Mission Road to the I-15 NB Ramp). On 10/24/08, the SANDAG Board approved the redistribution of funds between SR-76 corridor projects to fully fund the construction phase of the Caltrans SR-76 Middle Project. The estimated completion date for the Caltrans SR-76 Middle Project is 2012. The Caltrans SR-76 East Project has identified TransNet as a funding source and the current estimate of completion is 2015. (LOS Engineering, 2009).

PANKEY ROAD

Pankey Road is the only current vehicular access to SR 76. From SR-76 south to the project site, Pankey Road is constructed with approximately 40 feet of pavement and one travel lane in each direction. No posted speed limits were observed.

A detailed traffic study conducted by LOS Engineering for the Meadowood Project, which is north of the project site off of Pankey Road, analyzed existing roadway conditions for various intersections in the project vicinity. This traffic study became an appendix to the Meadowood EIR that was circulated by the County in late 2009. The existing LOS information below for the roadways surrounding the project site is reproduced from that study (LOS Engineering, 2009):

The major intersection for purposes of the Pala gateway project site is the connection of the regional access – SR 76 – to the local access road – Pankey Road. This intersection is currently unsignalized and contains a southbound left turn from SR 76 to Pankey Road. The AM and PM LOS at this intersection is A, which is free flow conditions. The other major intersection to consider is the SR76 off ramp from Interstate 15. This connection is currently signalized and experiences an LOS C during the AM period and D during the PM period. The San Diego County General Plan strives to maintain an LOS C on County Circulation Element roads; however, the General Plan states that states that when an existing LOS D already exists, as is the case for the PM period for the SR76/I15 intersection, "a LOS D may be allowed". Therefore, the two main intersections leading to the project site are currently operating at acceptable levels.

Looking at street segments volumes and LOS, Pankey Road in the vicinity of the project site is considered a light collector that has a daily volume of 936 vehicles and is two lanes. These vehicles exist due primarily to the residential development located south of the San Luis Rey that travel Pankey

north to SR 76. The LOS E threshold capacity for this type of roadway allows up to 16,200 vehicles before a significant load is experienced. There are few-to-no traffic trips on Pankey from Shearer Crossing to the project site. The current LOS for Pankey is A.

There is an unacceptable LOS for SR 76 from the Interstate 15 northbound ramp to Pankey Road; however, this was calculated to change to acceptable LOS when the current widening of SR 76 from 2 to 4 lanes is completed.

3.8 LAND USE AND AGRICULTURE

3.8.1 LAND USE

The project site is located within the Fallbrook Community Plan area of San Diego County. The Fallbrook Community Plan was originally adopted in December 1974. The Plan was updated by the County in July 2009 and has this to say about the existing land uses and community character of the Fallbrook community:

> The town center of Fallbrook has a mix of high density residential uses - such as apartments and townhouses - and single family dwellings that are intertwined with light manufacturing and retail business. The original segment of the downtown area, now designated "Historic Fallbrook," reflects the early architectural character of the community and the rural ambiance.
>
> This historic section of town originally served the area's agricultural base with three packing plants and retail stores. As more and more newcomers arrived who were not involved in agriculture, Fallbrook gradually became a bedroom community, with residents who commuted long distances to jobs in neighboring communities. In recent years, the downtown area has developed into an active arts community with galleries, workshops, art schools, and similar art-related enterprises. The character of the community is wide ranging. It has retained its family farm oriented culture, while adding an influx of young families fleeing urban life, retirees venturing into country life, and farm workers that supply labor. For many, the character of Fallbrook is defined by their change from big city indifference to small town friendliness, interdependence, and traditional family-community values.
>
> (San Diego County, 2009)

It should be noted that, while the project site lies within the community planning area of Fallbrook, the site itself is approximately 5 miles southeast of the town center. The setting around the three parcel project site is one of transition. The site itself has been used for years as orchards and remains absent of urban development. However, a dense residential community exists south of the project site (south of the San Luis Rey River), which shows the transition that this area is under. In addition, the project site lies within the junction of two busy freeways: Interstate 15 and SR 76. Interstate 15 borders the western boundary of the site, while SR 76 borders the north. SR 76 is currently undergoing significant upgrades, expansion and improvements to accommodate existing and future traffic in this region.

SAN DIEGO COUNTY GENERAL PLAN

The existing San Diego County General Plan consists of multiple documents containing regional elements, community/sub regional plans and Land Use and Circulation Element maps. The current General Plan contains 12 different elements ranging from the Land Use and Circulation Elements to Recreation and Scenic Highway Elements. The existing General Plan designates the project site as "Specific Planning Area". The Specific Plan Area (hereafter, "21 SPA") designation exists where a specific plan must be adopted prior to development. According to the General Plan, land within this designation typically has environmental constraints or unique land use concerns which require special land use and/or design controls. The overall density permitted in the 21 SPA is to be designated on the community or sub-regional plan map.

The General Plan goes on to state that the County "…has no land use jurisdiction over Indian Reservations and federally-owned public lands. The applied land use jurisdiction for such land is non-operational unless any such land is transferred to private ownership in the case of federally-owned public lands, or is no longer designated as Indian Reservation Land by an Act of Congress in the case of Indian Reservations." (San Diego County, 1979)

SAN DIEGO COUNTY GENERAL PLAN UPDATE

The County is currently in the process of preparing the General Plan Update, which is a comprehensive update of the adopted General Plan in order to accommodate reasonable population growth. The General Plan Update is in draft form and has not been adopted by the County. The draft Land Use Plan Map - August 2006 shows the project site with a SR-10 Semi-Rural Residential designation. This designation has a density of one unit per 10 or 20 acres (Arens Group, 2007).

FALLBROOK COMMUNITY PLAN

The County General Plan provides the basic structure by which the Fallbrook Community Plan is organized. The Fallbrook CP provides more-defined policies and recommendations applicable to development within the community of Fallbrook. The Fallbrook CP was adopted by the County Board of Supervisors in 1974, and updated July 1, 2009. Currently, the Fallbrook CP designates the project site as "Specific Plan Area".

I-15 CORRIDOR SUB REGIONAL PLAN

The project site falls within the I-15 Corridor Sub regional Plan. In 1988, the Board of Supervisors adopted a General Plan Amendment to the Fallbrook CP which included the I-15 Corridor Sub regional Plan. The I-15 Corridor Plan is intended to promote orderly development, protect environmental and man-made resources and implement the County's objectives for growth management and the structure of government for the Sub region. The I-15 Corridor extends approximately 20 miles from the Escondido city limits to the Riverside County line. It contains the ½ acre to 2 mile "view shed" area on either side

of the freeway, which is what generally can be seen while driving along the Corridor. It encompasses some 12,600 acres and passes through five different plan areas: North County Metropolitan, Bonsall, Valley Center, Fallbrook, and Rainbow.

The Objective of the I-15 Corridor Sub regional Plan is stated as follows:

> The purpose of the following scenic and planning quality guidelines is to: 1) protect and enhance scenic resources within the I-15 Corridor planning area while accommodating coordinated planned development which harmonizes with the natural environment; 2) establish standards to regulate the visual quality and the environmental integrity of the entire Corridor; and 3) encourage scenic preservation and development practices compatible with the goals and policies of the five community and sub regional planning areas encompassed by the I-15 Corridor area, when appropriate.
>
> (San Diego County, 2009)

I-15/SR 76 INTERCHANGE MASTER SPECIFIC PLAN

The project site also falls within the I15/SR 76 Interchange Master Specific Plan. The I-15/SR-76 Interchange MSP is Appendix B of the adopted I-15 Corridor Sub regional Plan. According to the County, the Interstate 15/Highway 76 Master Specific Plan Area (MSPA) contains approximately 1,178 acres of land located within the four quadrants of the I-15/SR 76 interchange area Including the project site). Because of its location at the intersection of an interstate highway and a major state highway, it is anticipated that this area will become a logical node of future development.

The zoning for the MSPA is a Holding Area Use Regulation (S90) until the necessary supporting technical studies are carried out and the Master Specific Plan Area and its implementing zones are adopted by the Board of Supervisors after later public hearings. The County Zoning Ordinance, Section 2900, states that "...this zone [S90] is intended to prevent isolated or premature land uses from occurring on lands for which adequate public services and utilities are unavailable or for which the determination of the appropriate zoning regulations is precluded by contemplated or adopted planning proposals or by a lack of economic, demographic, geographic, or other date. It is intended that the Holding Area Use Regulations will be replaced by other use regulations when the aforementioned conditions no longer exist. The uses permitted are those which are community services, interim uses, or uses which, with appropriate development designators, will not prematurely commit the land to a particular use or intensity of development."

SAN DIEGO COUNTY ZONING ORDINANCE

The San Diego County Zoning Ordinance provides detailed regulatory provisions for development of all unincorporated lands within the County. County zoning is used to implement the goals and objectives of the adopted General Plan in accordance with State law which requires that the General Plan and corresponding zoning be consistent with one another. The County has zoned a majority of the site

(Parcels 125-063-02 and 125-063-09 [total 63.32 acres]) S-90: Holding Area. Parcel 125-100-10 (27.21 acres) is designated A72: General Agriculture.

The S-90 zone is "intended to prevent isolated or premature land uses from occurring on lands for which adequate public services and facilities are unavailable or for which the determination of the appropriate zoning regulations is precluded by contemplated or adopted planning proposals or by a lack of economic, demographic, geographic, or other data." Uses allowed under the S-90 zone include residential, limited civic uses, and agricultural uses. The maximum height is 35 feet or 2 stories. The minimum lot size is 20 acres. (Arens Group, 2007)

The A72: General Agriculture zone has similar uses as the S-90 – residential, limited civic use and agricultural uses. The maximum structure height in this zone is 35 feet or 2 stories. The minimum lot size is 4 acres. (Arens Group, 2007)

3.8.2 AGRICULTURE

WILLIAMSON ACT PROVISIONS

Although the project consists of open land used for orchard farming, there are no Williamson Act Contracts on the project site (Griswold, pers. comm.)

FARMLAND PROTECTION POLICY ACT

The goal of the Farmland Protection Policy Act (FPPA) is to minimize the extent that federal actions and programs result in the conversion of agricultural lands to non-agricultural uses. Pursuant to the FPPA, the Farmland Conversion Rating Form (Form AD 1006) is used to determine the value of the farmland under consideration and the level of protection such land should receive. The NRCS applies a score of up to 260 points, composed of up to 100 points for relative value and up to 160 points for the site assessment. Sites receiving a score of less than 160 need not be given further consideration for protection. The Pala site received 65 points of relative value and 0 points for the total site assessment for a total score of 65 points. The completed Form AD 1006 for the project site is provided in **Appendix C**.

3.9 PUBLIC SERVICES

3.9.1 WATER SUPPLY

The project site is located within the San Luis Rey Municipal Water District (District). The District was formed in 1958 under the Municipal Water District Act of 1911 (California Water Code Section 71000 et al.). The following information is from the District's website: http://sanluisreymwd.com/index.php

The District serves property in that area along the San Luis Rey River from the Pala Indian Reservation on the east to Highway I-15 on the west. The sole source of water to properties within the District is the San Luis Rey River and the groundwater basins it supplies. The District protects the rights of those within the District's boundaries who benefit from the water resources of the San Luis Rey River by monitoring the activities that can affect the continued use of the water, and by taking action to protect the Landowners' rights to the use of that water.

The District is governed by 5 Board members, each representing a Division (separate geographic section of the District) and elected by the registered voters within their Division. The District is required by law to maintain, support and protect the water rights and water storage rights of landowners within the boundaries of the District, and to plan for a reliable water supply to meet future demands.

To pay for the water-related activities, the Board has, over the last several years, levied a water availability charge in an amount not to exceed $30.00 per acre (or portion of an acre) in accordance with the procedures of the Municipal Water District Act (Water Code sections 71630 et seq. and 71631.7). Currently, the District levies a charge of $20.00 per acre (or portion of an acre) to generate operating funds.

The District monitors proceedings conducted by the State Water Resources Control Board (SWRCB) on water rights applications filed along the San Luis Rey River specifically concerning the Bonsall and Pala basins. In 2002, the SWRCB designated the Pala Basin of the San Luis Rey River as a subterranean stream flowing through known and definite channels (i.e., there is no percolating groundwater in the Pala Basin), which is therefore under the jurisdiction of the SWRCB. That means that surface water rules will be administered by the State Water Resources Control Board for all water uses in the Pala Basin.

Additionally, the District monitors activities such as the San Luis Rey River Indian Water Rights Settlement, with Colorado River water to be supplied to the San Luis Rey River Indians through a transfer between the Imperial Irrigation District and San Diego County Water Authority ("SDCWA"). As the transaction has finally been consummated, the details of how the settlement will be produced in the near future.

The District also monitors the SDCWA's Groundwater Resources Development Planning. In March, 2005, the San Diego County Water Authority finalized the Final Lower San Luis Rey River Valley Groundwater Storage and Recovery Feasibility Study. The study concentrated mostly on the Mission Basin near Oceanside, but there is some data regarding the Bonsall Basin, which is one of the basins underlying the District. In particular, the District made sure that SDCWA did not forget that the District and its landowners have existing water rights and groundwater storage rights in the Bonsall Basin.

The Tribe currently operates 2 water wells on the project site for the operation of the existing orchards. The location of those wells are shown on Figure 2-1.

3.9.2 WASTEWATER SERVICE

Although the project site is located within the District's boundary, the District does not currently provide wastewater service to its customers. The District previously embarked upon a program to apply to LAFCO to expand the boundaries of its jurisdiction and activate its latent powers to provide wastewater service; the District has no existing wastewater infrastructure to serve the project site.

3.9.3 SOLID WASTE SERVICE

According to the County General Plan the San Diego region is served by nine sanitary landfill sites, five of which are the property of the County and administered by the County Department of Public Works (Borrego Springs, Ramona, Otay, San Marcos and Sycamore). Two sites are under the jurisdiction of the City of San Diego and three are the property of the United States Marine Corps at Camp Pendleton. The City of San Diego operates its landfills with its own work force. The County and Marine Corps contract with a private company to perform the daily landfill operations. (San Diego County, 2005)

Residents of the unincorporated area of the County can bring household garbage and refuse to any of ten rural transfer stations located at Barrett Junction, Boulevard, Campo, Julian, Ocotillo Wells, Vallecito, Palomar Mountain, Ranchita, Sunshine Summit and Viejas. Alternatively, residents can contract with private haulers to pick up their refuse, as businesses are required to do. With the increased emphasis on reducing the amount of waste disposed of in landfills, over 25 recycling centers have been created. Virtually all solid waste generated in the region is stored and disposed in facilities under the jurisdiction of either the County or the City of San Diego. The two jurisdictions have attempted to adopt uniform disposal fees so that wastes are taken to the nearest or most accessible site. The United States Marine Corps disposes of its own waste, with the exception of demolition materials generated from construction projects on Camp Pendleton, which are usually disposed of in County landfills (waste from other military bases is disposed of at City and County facilities). The County has been designated the solid waste planning and management agency for the region. The San Diego County Integrated Waste Management Task Force, consisting of representatives of the County and each of the region's cities, is responsible for updating and implementing the State-mandated Integrated Waste Management Plan. The County Department of Public Works is serving as staff to the Integrated Waste Management Task Force. In addition, the County is responsible for overall solid waste planning and regulatory control in the unincorporated areas of the County. (San Diego County, 2005)

Solid waste generated by the Tribe at the existing Pala Reservation is shipped to the Sycamore Landfill, which is located entirely within the City of San Diego near the San Diego/Santee border.

3.9.4 ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

San Diego Gas & Electric Company (SDG&E) supplies electricity and natural gas services to existing homes and businesses in the project area. Telephone, cable television and Internet services are available to the project area from Cox Communications. Various satellite companies also provide television services to the area. (Note: there is a cell phone tower lease on the property on the hill above the orchards).

3.9.5 LAW ENFORCEMENT

The San Diego County Sheriff's Department provides generalized patrol services, as well as law enforcement and investigative services, to the unincorporated communities and rural areas within the county, including the project site. The California Highway Patrol is responsible for traffic safety on highways maintained by the state.

The San Diego County Sheriff Department's Fallbrook Substation, Bonsall Office, is located in downtown Fallbrook, approximately 5 miles from the Proposed Project. This station provides law enforcement services to the communities of Fallbrook, Bonsall, and Rainbow over a 137-square-mile area, including the Project Site.

The Law Enforcement section of the Public Facility Element of the County of San Diego General Plan provides facility standards for the provision of responses to calls for service. Response time is the time it takes a unit to get to the scene of a crime from the moment a call for service is received. Response time is the most meaningful indicator of the adequacy of the level of service. The minimally acceptable response time for urban areas is eight minutes or less for a priority call (calls involving life threatening situations or felonies in progress) and 16 minutes for non-priority calls. (RECON, 2009)

3.9.6 FIRE PROTECTION/EMS

The North County Fire Protection District (NCFPD) is located in the northern part of San Diego County and bordered by Vista, Oceanside, Camp Pendleton and Riverside County. The NCFPD was formed in December 1986 as a result of the reorganization of the Fallbrook Fire Protection District and the Rainbow County Service area. The Project Site is adjacent to the service boundaries of the NCFPD and is within the NCFPD's Sphere Of Influence. (RECON, 2009)

The NCFPD provides fire, rescue, advanced life support, and basic ambulance services to a population of more than 45,000 in an area covering 90 square miles, including the communities of Fallbrook, Bonsall, and Rainbow. In addition, the NCFPD provides structural and watershed fire protection and suppression, as well as emergency medical services. The NCFPD also provides emergency medical services for 40 additional square miles outside the primary service area. NCFPD has automatic aid agreements with the Vista and Deer Springs Fire Protection Districts, and mutual aid agreements with

the California Department of Forestry and Camp Pendleton and has signed the San Diego County Mutual Aid Pact. (RECON, 2009)

The NCFPD operates out of six fire stations; five staffed with full-time personnel and reserve personnel and one staffed with volunteer personnel. The station closest to the project site is located in the Village of Pala Mesa at 4375 Pala Mesa Drive. The next closest station is the NCFPD Engine Number 6, located at 2309 Rainbow Valley Boulevard. This station is staffed by volunteers.

Additional engines can be requested from Pala Reservation Fire Department and California Department of Forestry and Fire Protection engines to respond under either Automatic Aid or the State Mutual Aid Agreement.

The Pala Fire Department, located at 11800 Pala Mission Road, was established in 1978 and was expanded in 1980 when a volunteer program was formed. The Department eventually evolved into a full time fire department operating 24 hours a day, seven days a week. There are currently 30 full time suppression personnel (Chief, Assistant Chief, Battalion Chief, six Captains, six Engineers and 15 firefighters. The Department's equipment consists of a 100-foot ladder truck, Type One Structure Engineer, and a Type Three Brush Engine, two Water Tenders, three Chief vehicles and one utility pickup (Pala, 2009). The response area is the Pala Indian Reservation north to San Diego County line; south on Lilac Road to Pala Loma Road/Couser Canyon; east on Highway 76 to Adams Drive, and Pauma Reservation; west on Highway 76 to Rice Canyon Road.

The Pala Fire department currently has several Mutual/Auto Aid Agreements: (1) Yuima Water District, (2) Rincon Reservation Fire, (3) Valley Center Fire Protection District, (4) Deer Springs Fire Protection District, (5) North County Fire Protection District, and (6) San Pasqual Reservation Fire District. The Department currently has contracts with Pauma Tribe for fire and EMS services, and Rincon for duty chief coverage.

The Tribe is considering the construction of a new Fire Station, a two-story building to house administrative functions, sleeping quarters and a six bay garage for a total of 23,000 square feet. There would also be a training classroom that can be utilized as am Emergency Operation Center during an expected event, and a four-story Training Tower with live fire burn rooms. (Pala, 2009)

3.10 NOISE

NOISE EXPOSURE

The ambient sound level of a region is defined by the total noise generated within the specific environment, and is usually comprised of sound emanating from natural and artificial sources. At any location, both the magnitude and frequency of environmental noise may vary considerably over the course of the day and throughout the week. This variation is caused in part by the changing weather conditions and the effects of seasonal vegetative cover.

Two measurements used by Federal agencies to relate the time-varying quality of environmental noise to its known affect on people are the 24-hour equivalent sound level ($L_{eq(24)}$) and the day-night sound level (L_{dn}). The $L_{eq(24)}$ is the level of steady sound with the same total (equivalent) energy as the time-varying sound of interest, averaged over a 24-hour period. The L_{dn} is the $L_{eq(24)}$ with 10 decibels on the A-weighted decibel scale (dBA) added to nighttime sound levels between the hours of 10 p.m. and 7 a.m. to account for people's greater sensitivity to sound during nighttime hours.

In local land use planning, the most commonly used measurement scale to account for a person's increased sensitivity to nighttime noise is the community noise equivalent level (CNEL). The CNEL is a noise scale used to describe the overall noise environment of a given area from a variety of sources. The CNEL applies a weighting factor to evening and nighttime values. The CNEL is a 24-hour A-weighted average sound level [dB(A) Leq] from midnight to midnight obtained after the addition of five decibels to sound levels occurring between 7:00 P.M. and 10:00 P.M. and of 10 decibels to the sound levels occurring between 10:00 P.M. and 7:00 A.M. A-weighting is a frequency correction that often correlates well with the subjective response of humans to noise. Adding five decibels and 10 decibels to the evening and nighttime hours, respectively, accounts for the added sensitivity of humans to noise during these time periods.

In 1974, EPA published "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety." This document provides information for state and local agencies to use in developing their ambient noise standards. EPA identified outdoor and indoor noise levels to protect public health and welfare. An $L_{eq(24)}$ of 70 dBA was identified as the level of environmental noise that would prevent any measurable hearing loss over a lifetime. An L_{dn} of 55 dBA outdoors and an L_{dn} of 45 dBA indoors were identified as noise thresholds that would prevent activity interference or annoyance. These levels are not "peak" levels, but are 24-hour averages over several years. Occasional high levels of noise may occur. An L_{dn} of 55 dBA is equivalent to a continuous noise level of 48.6 dBA. Typical noise levels are as follows:

- Quiet room: 28 – 33 dBA

- Refrigerator: 40 – 43 dBA
- Computer: 47 – 35 dBA
- Forced hot air heating system: 42 – 52 dBA
- Microwave: 55 – 59 dBA
- Clothes dryer: 56 – 58 dBA

With regard to increases in decibels measured on the A-weighted noise level scale, the following relationships occur:

- A change of 1 dBA cannot be perceived by humans, except in carefully controlled laboratory environments;
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference by humans;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause adverse response.

EXISTING NOISE SOURCES

Ambient noise in the vicinity of the Project Site is generated by traffic on SR-76 and I-15. The project site currently generates intermittent noise associated with farming activities. Assuming flat site conditions, the distance to the 75CNEL contour from SR 76 would be 150 feet, while it would be over 1,000 feet for Interstate 15 (RECON, 2009). However, actual noise conditions from these noise sources would vary due to the existing hill on the project site, which would buffer the proposed cultural resource facility from Interstate 15 traffic noise.

SENSITIVE RECEPTORS

There are no sensitive receptors on the project site. The nearest sensitive receptors are the existing residences located south of the project site and San Luis Rey River/riparian zone, which is approximately 500 feet south of the proposed parking lot and 750 feet south of the proposed cultural center.

REGULATORY SETTING

The Department of Housing and Urban Development (HUD) and the Federal Highway Administration (FWA), federal agencies, consider outdoor day-night noise exposure up to 65 dBA, Ldn as acceptable under most circumstances.

Policies contained in the San Diego County General Plan provide standards for ambient noise levels. The following is applicable:

Policy 4b: Because exterior community noise equivalent level (CNEL) above 60 dB and/or interior CNEL above 45dB have an adverse effect on public health and welfare, it is the policy of the County of San Diego that:

1. Whenever it appears that new development may result in any (existing or future) noise sensitive land use being subject to noise levels of CNEL equal to 60 decibels (A) or greater, an acoustical analysis shall be required.

2. Is the acoustical analysis shows that noise levels at any noise sensitive land use will exceed CNEL equal to 60 dB, modifications shall be made to the development which reduce the exterior noise level to less than CNEL of 60 dBA and the interior noise level to less than CNEL of 45 dBA.

3. If modifications are not made to the development in accordance with paragraph 2 above, the development shall not be approved unless a finding is made that there are specifically identified overriding social or economic considerations which warrant approval of the development without such modification: provided, however, if the acoustical study shows that sound levels for any noise sensitive land use will exceed a CNEL equal to 75dBA even with such modifications, the development shall not be approved irrespective of such social or economic considerations.

3.11 HAZARDOUS MATERIALS

A Phase I Environmental Site Assessment for the Pala Gateway project was conducted and is included in **Appendix D**. The summary information contained below is from that assessment. Please refer to **Appendix D** for a complete description of historical uses and summaries of prior Phase I and II assessments completed for this site. Additionally, **Appendix D** contains the detailed methodology used in this site assessment, results of past interviews and historical aerials that show past uses on the project site. **Appendix D** is hereby incorporated into this Draft Environmental Assessment by reference.

EXISTING CONDITIONS

Structures on the Property consist of the following: an open shed housing electronic fuse boxes; an abandoned mechanics shed; two wind machines; and several generators and telecommunications vaults and associated cell towers. Other improvements consist of: a cement-lined reservoir; dirt roads; overhead power lines; groundwater pump and irrigation systems.

SITE RECONNAISSANCE

The ASTM (2005) explains that, "*The objective of the site reconnaissance is to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the property*" (page 16, ASTM, 2005). The site reconnaissance is limited to visual and/or physical

observation of the exterior and interior of the Property and its improvements, the past and current uses of the Property and adjoining properties, and the condition of the Property. The site reconnaissance evaluated the Property and adjoining properties for potential hazardous substances use, storage, disposal, or accidental release, including the following: presence of tank and drum storage; PCB-containing transformers or electrical equipment; evidence of soil or pavement staining or stressed vegetation; ponds, pits, lagoons, or sumps; suspicious odors; fill and depressions; or any other condition indicative of potential contamination. The site reconnaissance did not evaluate the presence of asbestos-containing materials, radon, lead-based paint, mold, or structural defects.

On 28 and 29 September 2009, a Site reconnaissance of the Property. All accessible portions of the Property were observed by a pedestrian survey; adjoining properties were observed by a combination of pedestrian survey and windshield (automobile) survey. Photographic documentation accompanies the following summary of the site reconnaissance.

No stained soils or distressed vegetation was noted. On the southern portion of the Property, a sewage odor was noticeable along the main orchard road were the municipal sanitary sewer pipeline vented through manhole access. The San Luis Rey River corridor occasionally smelled of cow manure.

Roads within the Property are all dirt roads; none are paved with asphalt or concrete. None of the roads displayed any suspicious staining.

Regionally, potable water is supplied by Rainbow Municipal Water District. A water well was visible in the south orchard. Previous interviews with Mr. Pankey indicated that a total of three water wells existed on the Property.

Several historic residences were located on the Property; it is not known whether they were serviced by septic systems/leach fields or by a municipal sanitary sewer system. The Rainbow Municipal Water District has a municipal sanitary sewer pipeline, and corresponding title easement, through the Property, beginning at the Pankey Road cul-de-sac, traversing the main orchard road, and continuing under the I-15 bridge crossing of the San Luis Rey River.

No drum storage was noted on the Property or adjoining properties during the site reconnaissance. The following storage tanks were noted: 1 compressed air tank was located in the mechanics shed; and 2 tanks were located adjacent to the reservoir (assumed to be pressure tanks).

No petroleum product usage or storage was noted on the Property or adjoining properties during the site reconnaissance. The nearest commercial uses sighted were the Mobil fuel station and mart at the northwest corner of I-15 and SR-76. There was no evidence of the former ASTs that were mentioned in the MAZ Environmental (2006) Phase I ESA. The current groundwater well pump appears to be

electrically powered, and not diesel powered. A small open shed, metal-roofed, is adjacent to the pump, and houses electrical switchboxes.

No hazardous substances were noted on the Property except for the following, which are considered insignificant (*de minimis*): a roll-off dumpster at the southern orchard contained demolition debris, and bags of ammonium salts fertilizer; and several empty 50-pound bags labeled "copper sulfate crystal" were found near the reservoir; this compound is used to control algal growth in ponds, and it is also used as a fungicide on certain food crops (e.g. berries).

No poly-chlorinated biphenyl (PCB)-containing equipment (electric or hydraulic) was observed during the site reconnaissance. Pole-mounted transformers were observed, but all appear to be modern and non-leaking. Pole-mounted electrical lines run throughout the Property, primarily to serve the telecommunications facilities on the hilltop. Several generators and switch boxes are also present.

No municipal storm water facilities were noted on the Property or on adjacent properties, except for Lake Rancho Viejo, which has a storm sewer system. One drop-inlet and pipe discharge was noted on the Property on the dirt road that accesses the hilltop. Drainage improvements associated with nearby highways consist primarily of vegetated swales.

No municipal solid waste service was noted for the Property. One privately-contracted "roll-off" dumpster was noted in the south orchard. Significant amounts of solid waste materials have been dropped off at the edge of the bank of the San Luis Rey River. Most of the visible material consists of demolished concrete slabs and boulders from unknown sources. Large equipment tires are also common on the riverbank. This debris appears to have been placed for erosion control.

3.12 VISUAL RESOURCES

The project site is located in the unincorporated Fallbrook community and is situated within the upper San Luis Rey River Valley and floodplain northwest of Lancaster Mountain and southwest of Monserate Mountain. The terrain on both nearby mountains is relatively rugged with steep slopes, intermittent drainages, and ridges. The site is bordered on two sides (north and west) by freeway systems and on the south and east by a river and tributary system. Access to the site is via Pankey Road, which has a bridge over the tributary. There is no other existing public access to the project site. The eastern and southeastern edges of the project border of the San Luis Rey River channel and lie within the river's riparian corridor. The property sits on a gently sloping river terrace accentuated with a steep granitic rock outcropping on the northern portion of the site. The granitic rock outcropping rises quickly to an elevation of approximately 255 feet. The elevation of the channel of the San Luis Rey River drops about 10 feet to 240 feet. Elevations within the project site range from approximately 244 to 470 feet above mean sea level. The project site itself has been modified for years with agricultural activities,

which continue to this day. Various utility placements also exist on the project site including large wind fan structures.

Surrounding uses include agriculture, existing roadway construction activities, and residential development (to the south of San Luis Rey River and riparian corridor). Interstate 15 borders the site to the west, SR 76 parallels the northern border of the site, and residential to the south. Current uses of adjacent properties include an abandoned house with trespassing warning advisories, the SR 76 fruit stand, and the SR 76 corridor, and fallow fields of the Pankey farms (Meadowood subdivision is currently in its planning stages. To the east is a small riparian corridor, the intersection of Pankey Road and Shearer Crossing, and agricultural production (primarily orchards). To the south, after crossing the San Luis Rey River, Shearer Crossing turns into Dublin Road, which leads into the planned community of Lake Rancho Viejo. Lastly, to the west is the Interstate 15 corridor and the community of Pala Mesa.

As mentioned previously, the project site lies within the Interstate 15 Corridor Sub regional Plan. The purpose of the Plan's guidelines is to "1) protect and enhance scenic resources within the I-15 Corridor planning area while accommodating coordinated planned development which harmonizes with the natural environment; 2) establish standards to regulate the visual quality and the environmental integrity of the entire Corridor; and 3) encourage scenic preservation and development practices compatible with the goals and policies of the five community and sub regional planning areas encompassed by the I-15 Corridor area, when appropriate."

SECTION 4.0

ENVIRONMENTAL CONSEQUENCES

SECTION 4.0

ENVIRONMENTAL CONSEQUENCES

In this section, environmental consequences are described for the Proposed Action and the Reduced Intensity Alternative. As shown within this analysis, the construction and operation of the proposed cultural interpretive facilities are not expected to result in significant environmental effects as the recommended mitigation measures identified in Section 6.0 of this EA have been incorporated into the Proposed Action.

4.1 LAND RESOURCES

4.1.1 ALTERNATIVE A - PROPOSED ACTION

TOPOGRAPHY

The project site is not known to be subject to rock fall hazards. The Proposed Action does not involve major cut and fill operations or other major grading activities that could present topographic hazards. The only permanent structure, cultural building, is located on a flat portion of the site, which minimizes the amount of grading that is required during construction. The parking lot would be prepared by removing existing orchard trees and then providing minimal grading to prepare the surface. All other structures are temporary and would require no mechanical grading. Site topography would not be significantly affected by the project.

GEOLOGY AND SOILS

The region has no known sources of naturally-occurring asbestos. There are no geologic resources of recreational or scientific value known to occur at the project site or vicinity. A less than significant effect would occur under the development proposed for Alternative A.

Soils within the project site are not known to be expansive or require special building techniques. Debris flows are also not considered to be likely at the project site. Debris flows typically require a combination of heavy rainfall, steep slopes, and loose soils. The project site has a small contributing drainage basin and the steep-sloped areas are made of granitic bedrock. Erosion of site soils during construction will be addressed through the implementation of storm water and grading controls as required in Section 5.1.2 – Mitigation Measures. A less than significant effect is expected for Alternative A.

SEISMICITY

There are no known active faults that intersect the ground surface in the vicinity of the project site. The closest active fault is the Elsinore Fault Zone located approximately 8 km east of the project site. Consequently, surface fault rupture is not likely within the project site.

There is a potential for regional earthquakes to produce ground shaking at the project site. The project site is located within California Building Code Seismic Zone 4. The California Building Code requires that structures be designed with adequate strength to withstand such ground shaking. Project design and construction will follow these California Building Code regulations as cited in Section 2.0 of this EA, so seismic hazards will be rendered less than significant.

MINERAL RESOURCES

The southern and eastern portions of the project site are designated MRZ-2; these areas are traditionally known as desirable, marketable sources units of sand or aggregate suitable for asphaltic concrete or Portland Cement Concrete. A significant effect would occur if the project site is located within an area of significant mineral deposits, and would result in the permanent loss of availability of a known mineral resource that would be of value to the region. Within the project site, the MRZ-2 zone is situated within the flood zone. The Proposed Action does not involve the placement of permanent structures or any major development in this zone. Since the Proposed Action will not result in a loss of the availability of the MRZ-2 resource, the effect will be less than significant. The region is also known for a number important gem mines. None of these operations are located near the project site, and implementation of the Proposed Action will not result in the loss of any gem production.

4.1.2 ALTERNATIVE B – CULTURAL CENTER

TOPOGRAPHY

The amount of grading would be reduced under Alternative B when compared with Alternative A due to the elimination of the trail development and interpretive village site. A less than significant effect would occur under the development proposed for Alternative B – Cultural Center.

GEOLOGY AND SOILS

The level of earth disturbance under Alternative B would be less than that proposed for Alternative A. The location of earth disturbance for Alternative B would be within the footprint identified for Alternative A. A less than significant effect is expected for Alternative B.

SEISMICITY

The development proposed for Alternative B would be within the same footprint, albeit to a lesser extent, as Alternative A. The cultural resource building that is proposed under Alternative A is the

same as proposed under Alternative B. A less than significant seismicity effect would occur under Alternative B.

MINERAL RESOURCES

Alternative B would have the same mineral resources effect as described for Alternative A.

4.1.3 ALTERNATIVE C – NO ACTION

TOPOGRAPHY

Alternative C would not result in any alterations to the project site. The existing use of the property would continue following selection of the No Action Alternative. Therefore, no significant topography effects would result.

GEOLOGY AND SOILS

Geology and soils would not be affected by Alternative C given that no land use development/change would occur. No significant geology and soil effects would occur under Alternative C.

SEISMICITY

Alternative C does not include the development of any structures; therefore, no significant seismicity effects would occur.

MINERAL RESOURCES

No development is proposed for Alternative C; therefore, this alternative would not result in any effects to mineral resources.

4.2 WATER RESOURCES

4.2.1 ALTERNATIVE A – PROPOSED ACTION

SURFACE WATER AND DRAINAGE

Project construction will not significantly affect any surface water bodies and does not involve major changes to the land form that would affect regional drainage patterns. Construction of the Proposed Action would alter the topography minimally by some grading and earthmoving activities. The onsite cut/excavation and fill volumes are expected to balance such that no import or export of soil would be needed. Construction would occur primarily on previously graded and/or farmed areas. This is considered a less than significant effect. However, because the Proposed Action's construction footprint is larger than one acre in area, such construction is regulated by the Clean Water Act under the National Pollution Discharge Elimination System. The Tribe and its designated general contractor must enroll under the USEPA's General Storm Water Discharge Permit for Construction

Activities (No. CAR10000IF) prior to the initiation of construction. In conjunction with enrollment under this Permit, a Storm Water Pollution Prevention Plan, Erosion Control Plan, and a Hazardous Materials Management/Spill Response Plan must be created and implemented during construction to avoid or minimize the potential for erosion, sedimentation, or accidental release of hazardous materials. Construction Best Management Practices are also required. Implementation of these measures would reduce potential construction-related effects to water quality to a less than significant level. The Proposed Action would be consistent with the County Standard Urban Stormwater Mitigation Plan and the County Stormwater Ordinance

FLOODING

The Proposed Action would not include construction or development of permanent structures within the 100-year flood zone. The only activity to take place within the flood zone is the removal of orchard trees to allow for a non-paved surface for vehicle parking. Best management practices will be used on the un-paved surface parking lot to ensure that the project has a less than significant effect on local waterways.

GROUNDWATER

The project site is currently being operated as a commercial orchard; the entire water supply is furnished by groundwater wells. Implementation of the Proposed Action will retain the majority of the project site in agricultural production. The surface parking lot will replace approximately 3 acres of orchards. Assuming 4 acre feet of water per acre per year, the current orchards (17.5 acres of orchards) consume 70 acre feet of water per year. This translates to approximately 23 million gallons per year (326,000 gallons per acre foot). The elimination of approximately 3 acres of orchards would reduce agricultural related water use by 12 acre feet (4 million gallons) per year. Using a flow factor (gallons per day per unit) of 0.2, the 4,000 square foot cultural center would result in a potable water demand of approximately 800 gallons per day, or 300,000 gallons per year. Therefore, the post project water groundwater demand would be approximately 20 million gallons per year. Compared with pre-project conditions (23 million gallon per year demand), the project would result in a 12% savings to groundwater (approximately 3 million gallons per year). This would be a beneficial effect to groundwater resources. No adverse effects to ground water are expected.

WATER QUALITY

During construction of the Proposed Action, surface water or ground water quality has the potential to be degraded from storm water transport of sediment from disturbed soils or by accidental release of hazardous materials or petroleum products from sources such as heavy equipment servicing or refueling. The Tribe and its designated general contractor must enroll under the USEPA's General Storm Water Discharge Permit for Construction Activities (No. CAR10000IF) prior to the initiation of construction. In conjunction with enrollment under this Permit, a Storm Water Pollution Prevention Plan, Erosion Control Plan, and a Hazardous Materials Management/Spill Response Plan

must be created and implemented during construction to avoid or minimize the potential for erosion, sedimentation, or accidental release of hazardous materials. Implementation of these measures would reduce potential construction-related effects to water quality to a less than significant level.

4.2.2 ALTERNATIVE B – CULTURAL CENTER

SURFACE WATER AND DRAINAGE

The selection of Alternative B would result in the development of the cultural center in the same location as proposed for Alternative A. Alternative B would reduce the level of effect on surface water and drainage due to the fact that the trail and interpretive center would not be developed under this alternative. The proposed development of the cultural center would be regulated by the Clean Water Act and NPDES requirements. As such, no significant effects to surface water or drainage would occur under Alternative B.

FLOODING

The footprint of permanent development under Alternative B would be the same as under Alternative A. As is the case with Alternative A, only the un-paved surface parking lot would be located in the floodplain. No new structures would be exposed to flood threats.

GROUNDWATER

The effects to groundwater under Alternative B are the same as described for Alternative A. A less than significant effect would result.

WATER QUALITY

The effects to water quality under Alternative B are the same as described for Alternative A. A less than significant effect would result.

4.2.3 ALTERNATIVE C – NO ACTION

SURFACE WATER AND DRAINAGE

The selection of Alternative C would not result in any development on the project site. No significant effects to surface water or drainage would occur under Alternative C.

FLOODING

There would be no development under Alternative C; therefore, no flooding effects would result from the selection of this alternative.

GROUNDWATER

Groundwater would continue to be used at the rate as described in Chapter 3. The selection of the No Action Alternative would not result in the accelerated use of groundwater. No significant groundwater effects are expected under Alternative C.

WATER QUALITY

Water quality on the project site would continue to be as described under existing conditions since no site development is proposed under Alternative C. The continued use of groundwater for agriculture purposes would continue under this alternative. Water delivery and use for agricultural purposes would continue. No additional demands from the cultural center would occur.

4.3 AIR QUALITY

4.3.1 ALTERNATIVE A – PROPOSED ACTION

Two types of effects on air quality were analyzed: temporary emissions associated with construction activities and long-term emissions generated from continued operation of the project.

Emissions from construction and operation of the proposed developments have been estimated using URBEMIS 2007 Version 9.2.4 as described below. The URBEMIS is a California-specific regulatory standard software tool that estimates criteria air pollutant emissions (VOC/ROG, NO_X, CO, SO_2, PM_{10} and $PM_{2.5}$) from land use development projects during both short-term construction and long-term operational phases. Due to use of ultra-low sulfur fuels, emissions of SO_2 are *de minimis* for small projects such as these and, thus, are not presented in this section. The URBEMIS input and output files for Proposed Action A are contained in **Appendix F**. As presented in the following sections, estimated criteria emissions for the Proposed Action are all below General Conformity significance thresholds, thus, no further analysis (i.e., dispersion modeling) is warranted, including risk assessment of the diesel particulate matter (DPM) component of construction equipment engine exhaust. No earth is required to be exported from the Project Site to provide adequate grading for Alternative A - Proposed Action. Therefore, no trucks (or their emissions) will be required to export fill.

CONSTRUCTION PHASE EFFECTS

Air quality effects associated with construction of the proposed development under Alternative A - Proposed Action would include diesel fuel combustion emissions from construction equipment comprising VOC/ROG, NO_X, CO, and diesel particulate matter (PM_{10} and $PM_{2.5}$), and fugitive dust (PM_{10} and $PM_{2.5}$) generated by physical land disturbance (earthmoving and grading). Such air quality

effects generally would be temporary and localized. Construction emissions were estimated using URBEMIS and were based on the determination that construction of the proposed developments would disturb a land area of 4.5 acres over a 6 month period commencing June 2010. The 4.5 acres assumed consists of the parking and cultural center site (3.5 acres) and fine grading on the trail (1 acre). **Table 4-1** shows that the construction emissions related to Alternative A - Proposed Action do not exceed the General Conformity significance thresholds for all pollutants, which are used to ensure that the proposed developments conform to the applicable State Implementation Plan (SIP). Therefore, construction activities related to Alternative A - Proposed Action would result in a less than significant effect.

TABLE 4-1
PROPOSED ACTION A CONSTRUCTION EMISSIONS (TONS PER YEAR)

	VOC	NO_X	CO	PM_{10}	$PM_{2.5}$
Estimated Emissions, 2010	0.24	1.00	0.65	0.26	0.11
General Conformity Thresholds	25	25	100	70	100
Above Thresholds?	No	No	No	No	No

Source: URBEMIS results; EDS, 2010

Construction emissions resulting from the implementation of Alternative A - Proposed Action are below the thresholds for construction.

OPERATIONAL EFFECTS

Air quality effects associated with the operation of the proposed development would include emissions from vehicle traffic and area sources (e.g., landscape equipment, consumer products, etc.). Operational emissions were estimated using URBEMIS and were based on the determination that the proposed developments would be constructed by fall 2010. The URBEMIS program uses algorithms to determine, by default, trip lengths and distances from land use data in aggregate, including associated delivery truck traffic, vehicle starts, parking, and idling. The software is programmed by inputting the type of facility that is being assessed. The URBEMIS estimates that were generated for this DEIS are available in **Appendix F**. As shown in **Table 4-2**, the operational emissions associated with Alternative A - Proposed Action are well below the thresholds and would not have a significant effect on the local air quality.

TABLE 4-2
PROPOSED ACTION A OPERATIONAL EMISSIONS (TONS PER YEAR)

	VOC	NO_X	CO	PM_{10}	$PM_{2.5}$
Estimated Emissions, 2010	0.12	0.19	1.50	0.23	0.05
General Conformity Thresholds	25	25	100	70	100
Above Thresholds?	No	No	No	No	No

Source: URBEMIS results; EDS, 2010

4.3.2 ALTERNATIVE B – CULTURAL CENTER

CONSTRUCTION PHASE EFFECTS

The construction phase related emissions for Alternative B would be similar to Alternative A; however, total acres graded would be reduced due to the elimination of the extended trail system. Both construction and operational effects would be less than significant.

4.3.3 ALTERNATIVE C – NO ACTION

CONSTRUCTION PHASE EFFECTS

Under the No Action Alternative, grading activities associated with seasonal agricultural activities would continue (approximately 17.50 acres of orchard use would continue). There would be no development under the No Action Alternative; therefore, no construction phase effects would result.

OPERATIONAL EFFECTS

Emissions associated with Alternative C would be limited to those that already exist from the farming operations. No additional operational emissions would occur under this alternative.

4.4 BIOLOGICAL RESOURCES

4.4.1 ALTERNATIVE A – PROPOSED ACTION

NATURAL COMMUNITIES

No development is proposed in the following special-status natural communities within the project site: cottonwood/willow riparian habitat or coastal scrub habitat. Although the portions of the project site proposed for development would occur within agricultural areas that do not function as high-quality habitat for endangered species, the project site is nonetheless situated within 4 larger areas designated as critical habitat by the USFWS. The project site is adjacent to, but not inside, the current

critical habitat boundaries for the California gnatcatcher. The entire project site is located within designated Least Bell's vireo critical habitat. The riparian zones within the project site are designated critical habitat for the southwestern willow flycatcher. The majority of the project site also falls within "Excluded Essential Habitat" for the arroyo toad, which is a designation that allows for the reinstatement of critical habitat if existing habitat conservation plans fail to preserve habitat for the species. Implementation of the proposed Project could result in temporary disturbances to critical habitat during construction, and permanent loss of critical habitat by structure placement (less than 0.5 acres); these actions could be considered incidental (indirect) take actions by USFWS.

The Gateway property is currently designated as a Pre-Approved Mitigation Area according to the draft MSCP North County Subarea Plan. The current proposed development plan was overlaid on the draft North County Plan habitat rankings. As currently designed, the proposed Cultural Center would be built on land ranked "High" in habitat value for covered species in the North County Plan. The proposed Village would be built on land ranked "High" in habitat value for covered species in the draft North County Plan.

Project construction will not prevent wildlife access to foraging habitat, breeding habitat, water resources, or other areas necessary for wildlife reproduction or survival. Therefore, no significant effects from Project construction would occur to fisheries, wildlife nursery sites, or wildlife corridors

JURISDICTIONAL WATER RESOURCES

Project construction will not significantly effect any surface water bodies. Therefore, no Clean Water Act permits are expected to be necessary. Project construction may advance up to the edge of the riparian zone.

SPECIAL STATUS SPECIES

Least Bell's Vireo (*Vireo bellii pusillus*)

Least Bell's Vireo is designated a federal endangered species, a State endangered species, and a County Group 2 species. Least Bell's vireo is restricted to riparian habitats in southern California. The cottonwood/willow riparian forest vegetation associated with the San Luis Rey River is assumed occupied least Bell's vireo habitat. The County's database reported one historical occurrence within the project site of least Bell's vireo. No least Bell's vireos were observed during field surveys conducted in September 2009. The southern and eastern boundaries of the project site contains suitable habitat for the species where cottonwood-willow riparian forest is found. Because the proposed development does not involve destruction or disturbance to any riparian zone, no direct adverse effects on this species are anticipated.

Coastal California gnatcatcher (*Polioptila californica californica*)

Coastal California gnatcatcher is designated a federal threatened species and a California Species of Special Concern. This subspecies is an obligate, permanent resident of coastal sage scrub in southern

California; occasionally, other habitats such as riparian zones and grasslands are used outside of the breeding season. CNDDB reports historical occurrences of this bird within the vicinity of the project site. No coastal California gnatcatchers were observed during field surveys conducted in September 2009. The project site contains suitable habitat for the species where coastal scrub and cottonwood-willow riparian forest are found. Because the proposed development does not involve destruction or disturbance to any coastal scrub habitat or any riparian zone, no adverse effects on this species are anticipated.

Southwestern willow flycatcher (*Empidonax traillii extimus*)

Southwestern willow flycatcher is designates as a federal endangered and County Group 1 species. This species uses cottonwood-willow riparian forest for foraging and nesting. CNDDB reports historical occurrences of this bird in the vicinity of the project site. No southwestern willow flycatchers were observed during field surveys conducted in September 2009. The southern and eastern boundaries of the project site contains suitable habitat for the species where cottonwood-willow riparian forest is found. Because the proposed development does not involve destruction or disturbance to any riparian zone, no adverse effects on this species are anticipated.

Arroyo toad (*Bufo californicus*)

Arroyo toad is designated as a federal endangered species and a County Group 1 species. The majority of the area falls within "Excluded Essential Habitat" for the arroyo toad. The arroyo toad is restricted to riparian zones and channels, where it breeds in shallow, slow-moving streams and pools. CNDDB records document occurrences of this species the along the San Luis Rey River, including occurrences southwest of the boundary of the project site. No arroyo toads were observed during field surveys conducted in September 2009. The southern and eastern boundaries of the Action project site contains suitable habitat for the species where cottonwood-willow riparian forest is found. Consultation with USFWS on adjacent properties has established that some upland habitat may be used by the arroyo toad. Consequently, toads could occur in orchard areas during the active season of the species (i.e., February through July). Because the proposed development does not involve destruction or disturbance to any riparian zone, no direct effects of this species are anticipated. The proposed development does involve destruction or disturbance to orchard lands within a flood zone, and thus arroyo toad could be impacted if found foraging/aestivating in the southern orchards within the project site; this is a potentially adverse effect to this species prior to mitigation.

Western Yellow-billed Cuckoo (***Coccyzus americanus occidentalis***)

Western yellow-billed cuckoo is designated as a federal candidate species, a state endangered species, and a County Group 1 species. CNDDB records document this bird within 8 miles of the Action Area on the Santa Margarita River. This species typically inhabits mature willow/cottonwood riparian forests along large river systems; the riparian corridor of the San Luis Rey River is suitable habitat. Development is only proposed on areas currently used for intensive agricultural production; no

development is proposed in riparian areas. No adverse effect upon western yellow-billed cuckoo is expected.

Stephen's Kangaroo Rat (*Dipodomys stephensi*)

Stephen's kangaroo rat is designated as a federal candidate species, a state endangered species, and a County Group 1 species. This species typically occupies lands described as disturbed annual grassland or coastal shrub, with relatively sparse cover of both shrubs and herbaceous vegetation. The nearest Stephen's kangaroo rat occurrences are at least five miles from the Action Area, according to the CNDDB (CDFG 2010). The Action Area is largely devoid of grasslands, but coastal scrub on hillsides may function as suitable kangaroo rat habitat. Development is only proposed on areas currently used for intensive agricultural production; no development is proposed in coastal scrub habitat. No adverse effect upon Stephen's kangaroo rat is expected.

Federally-listed Plants

Several plants listed under the federal and/or California Endangered Species Act are reported in the vicinity of the Study Area: dwarf burr ambrosia (*Ambrosia pumila*), Nevin's barberry (*Berberis nevinii*) , Nevin's barberry (*Berberis nevinii*), thread-leaved brodiaea (*Brodiaea filifolia*), and slender-horned spineflower (*Dodecahema leptoceras*). These species are detected during field surveys. These plants require one or more of the following vegetation/habitat types: chaparral, coastal scrub, valley and foothill grassland, or cismontane woodland. Suitable patches of the habitat exists within the Action Area, but as isolated patches in on hillsides or in riparian areas; none of the suitable habitat areas are proposed for development. Development is only proposed on areas currently used for intensive agricultural production; natural vegetation has been historically suppressed via herbicide application, moving, and discing. No adverse effects to federally-listed plants are anticipated.

Indirect Impacts

Construction activities and increased human presence in the vicinity of special-status and their habitat may result in temporary or permanent indirect impacts to special-status species. Indirect impacts include increases in ambient noise levels, increases in light pollution at night, and other edge effects. However, the proposed project does not involve major construction activities, and the construction period will be of short duration. Much of the proposed project will be designed for low impact. For example, the hiking trails will not be paved, and the Village will be constructed by hand, in the manner done by inhabitants of the region 1000 years ago. These edge effects are considered less than significant.

NESTING BIRDS

Special-status bird species were reported by governmental agency databases in the vicinity of the project site. The project site contains suitable nesting habitat for various bird species because of the presence of mature trees, poles, and riparian canopy. However, no bird nests were observed during field surveys. If construction activities are conducted during the nesting season, nesting birds could be directly affected by removal of trees or utility poles, and indirectly affected by noise, vibration, and other construction-related disturbance.

4.4.2 ALTERNATIVE B – CULTURAL CENTER

Alternative B would include the development of the parking lot and cultural center as described for Alternative A. The effects to natural communities, jurisdictional water resources, and nesting birds under this Alternative are the same as described for Alternative A. The effects to these resources are marginally lower for Alternative B due to the elimination of grading activities on the trail that borders the riparian zone to the south.

4.4.2 ALTERNATIVE C – NO ACTION

No development would occur from Alternative C; therefore, the effects to natural communities, jurisdictional water resources, and nesting birds would not occur.

4.5 CULTURAL RESOURCES

4.5.1 ALTERNATIVE A – PROPOSED ACTION

Based on the background research and the results of the pedestrian survey, the project site is considered to have a high sensitivity for the discovery of cultural resources. Prehistoric, ethnohistoric, and historic-era resources have been previously recorded along the edges of the San Luis Rey River floodplain adjacent to the mountain slopes. Prehistoric resources include two bedrock milling stations and the Pankey Site, which is a Late Prehistoric village site that is also the ethnographic Luiseño village of Tomka. The Pankey Site has been recommended eligible for listing on the NRHP and CRHR, and is also considered a significant resource under the County of San Diego's RPO. Neither of these sites are located on the project site. Historic-era resources within a 0.5-mile radius include the location of the mid-1800s adobe ranch house on Rancho Monserate, and the disturbed remains of another adobe structure.

4.5.2 ALTERNATIVE B – CULTURAL CENTER

Development effects to cultural resources under Alternative B would be the same as for Alternative A.

4.5.3 ALTERNATIVE C – NO ACTION

There would be no future development under Alternative A; therefore, no cultural effects would result.

4.6 SOCIOECONOMIC CONDITIONS

4.6.1 ALTERNATIVE A – PROPOSED ACTION

HOUSING EFFECTS

Alternative A – Proposed Action would not result in the need for new housing. Development includes a cultural center, trail and interpretive village. Not new demands for new housing will result from this Alternative.

POPULATION EFFECTS

Alternative A – Proposed Action would not result in an increase of population either on the Reservation or within the County. The Tribe would be using this property for educational and interpretive purposes only.

FISCAL EFFECTS

Construction of the new cultural resources building, trail and interpretive village is expected to generate short-term economic benefits to the region over the approximate one -year construction period. Approximately 12 percent of the construction cost will be directed to furniture, fixtures, and equipment (FFE), which are expected to be imported into the project site (San Diego County) and, therefore, do not generate any additional economic benefits associated with the production of goods and services. The remaining 88 percent of costs would be spent on construction materials and services, as well as labor payments to construction workers. A portion of these expenditures would be captured in the San Diego County economy and generate additional economic benefits in the form of indirect and induced effects. The short-term employment benefits under Alternative A - Proposed Action include construction jobs over the two-year construction period. The construction-related economic effects described here represent new economic benefits to the region.

The fiscal effects of Alternative A - Proposed Action are based on changes in property tax, sales tax, and income tax revenues. Proposed Action A would result in a decrease in the local property tax base due to the transfer of the parcels into trust status. The total amount of property taxes (including voter approved bonds and fixed charge assessments) paid by the Tribe in 2009 for the Property was $90,153.96. The total amount of tax revenues collected by the County in 2007 was approximately $3.5 billion; the Tribe's payments represent approximately 0.0003 of this total. With the inception of the North County MSCP, all or most of the property could be preserved as part of the MSCP

preserve, in which case, the property would be taken off of the tax rules, As a result, future tax reserve from the property is speculative. Given that these revenues would be foregone by San Diego County and local government following the approval of the fee-to-trust action, the reduction in property tax revenues is one component of the annual fiscal effect of Alternative A – Proposed Action. The County collects approximately 4.5 billion dollars in County, city, and special district taxes for the County's 980,000 +/- parcels (San Diego County, 2009b). The current $34,000 represents 0.00075% of the annual County tax collection. The County would also save money by having an educational/interpretive facility privately financed and opened to the public at no cost.

ENVIRONMENTAL JUSTICE FOR MINORITY AND LOW INCOME POPULATIONS

On February 11, 1994, the President issued Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," and an accompanying Presidential Memorandum to focus Federal attention on the environmental and human health conditions in minority communities and low-income communities. The Executive Order, as amended, directs Federal agencies to develop an Environmental Justice Strategy that identifies and addresses disproportionately high human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations. Compliance with this Executive Order has been incorporated into the NEPA compliance requirements of the BIA for the Proposed Action.

The project site is located in Census Tract 190.02, which has a 76% white population and a cumulative 24% minority population. This tract also has a median household income that is well above the family poverty line. Therefore, Alternative A would not result in an adverse effect to low income or minority populations.

4.6.2 ALTERNATIVE B – CULTURAL CENTER

HOUSING EFFECTS

Alternative B – Cultural Center would not result in the need for new housing. Development includes a cultural center on the project site. The rest of the property would remain in orchard/vacant use. No new demands for new housing will result from this Alternative.

POPULATION EFFECTS

Alternative B – Cultural Center would not result in an increase of population either on the Reservation or within the County. The Tribe would be using this property for educational purposes only.

FISCAL EFFECTS

Same as Alternative A.

ENVIRONMENTAL JUSTICE FOR MINORITY AND LOW INCOME POPULATIONS

Same as Alternative A.

4.6.3 ALTERNATIVE C – NO ACTION

HOUSING EFFECTS

No change of land use would result from the selection of Alternative C. Alternative C – No Action would not result in the need for new housing.

POPULATION EFFECTS

No change of land use would result from the selection of Alternative C. Alternative C – No Action would not result in an increase of population either on the Reservation or within the County.

FISCAL EFFECTS

Under Alternative C – No Action, the property would not be brought into trust status for the Pala Tribe. As such, the $34,000 per year in property taxes would not be lost to the County by the action. However, the added benefit of an educational facility open to the general public at no cost to San Diego County would also be lost. In addition, when the North County MSCP Sub area Plan is adopted, some or all of the land could be placed into preserve status, which would take the site partially or entirely off of the tax rules. As a result, the property taxes on the property maybe lost to the county even in the No Project Alternative.

ENVIRONMENTAL JUSTICE FOR MINORITY AND LOW INCOME POPULATIONS

The selection of Alternative C would not result in a land use change. There would be no effects on minority and low income populations except for the fact that this educational facility would not be constructed for the general population.

4.7 TRANSPORTATION AND CIRCULATION

4.7.1 ALTERNATIVE A – PROPOSED ACTION

Regional access to the project site is provided via Interstate 15 and SR 76, while local access is provided from Pankey Road, which terminates at the project site. Visitors using the highway system would turn off SR 76 onto Pankey Road, which currently has an LOS A. The Pankey Road street segment is estimated to be operating at an LOS A level. So, both the intersection and street segment leading to the project site are operating at LOS A.

The trip generation of a similar type of facility in San Diego County was assessed to determine the significance of future trips to and from the Pala Gateway project site. The like facility was the San Diego Archaeological Center located at 16666 San Pasqual Valley Road in the City of Escondido. The San Diego Archaeological Center is approximately 30,000 square feet, which is 7.5 times the size of the Pala facility. Uses within the facility are very similar to those proposed by the cultural center (see **Appendix E**). To determine inbound and outbound traffic, manual 24-hour tube counts were conducted at the driveways of the San Diego Archaeological Center on Thursday January 14, 2010. Additionally, existing driverway counts were conducted at 15-minute intervals for the 24-hour period on Thursday, January 14, 2010.

Based on the traffic counts (Appendix E), the Archaeological Center was estimated to generate 92 daily vehicle trips. Ten vehicle trips per hour occurred during the morning peak hour and 9 vehicles during the evening peak hours. Based upon the SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region, the Archaeological Center would not be required to conduct a traffic study because the estimated trip generation does not exceed 1,000 daily trips or 100 peak hour trips, or 500 daily trips or 50 peak hour trips for projects not in conformance with the land use and/or transportation element of the general or community plan. Given that the proposed Pala Gateway facility is 13% the size of the Archaeological Center (and contains similar uses), a traffic study would not be required for the proposed action. Daily trips with Alternative A would be well below 90 per day, and peak hour trips would be well below 10 per day.

4.7.2 ALTERNATIVE B – CULTURAL CENTER

Alternative B would result in the development of the cultural resource building as identified under Alternative A. It could be argued that some visitors would come just for the trail and interpretive village experience; however, the number of trips would be negligible as described above for Alternative A. A less than significant effect would result.

4.7.1 ALTERNATIVE C – NO ACTION

The approval of Alternative C would not result in a significant effect to transportation facilities.

4.8 LAND USE AND AGRICULTURE

4.8.1 ALTERNATIVE A – PROPOSED ACTION

LAND USE

Surrounding land uses, as pointed out in Section 3, are varied and do not off a consistent theme in this area. North and west of the site are freeway corridors, which border the project site, south is the San Luis Rey River corridor and residential subdivision, and east is vacant/orchard land. The Meadowood residential subdivision is currently being planed north of the project site and SR 76

within the unincorporated part of the County. Alternative A features include a low scale 4,000 foot cultural resource facility and associated trail/interpretive village site. The proposed development would not be out of scale or incompatible with surrounding development.

The County's adopted plans all identify the site and surrounding area as one that would require a Specific Plan in order for master development to move forward. The County's Zoning Ordinance identifies the S-90 zone for a majority of the site, including the site that is proposed for the cultural resource building. This "Holding Area Use Regulation" are intended to prevent isolated or premature land uses from occurring on lands where inadequate public services and facilities exist. However, some development is allowed to move forward on these lands. Permitted uses include some residential, civic use and agricultural uses. The County's Zoning Ordinance identified "Cultural Exhibits and Library Services" as a use that is allowed in the S-90 zone with a use permit. The use permit requirement is applied to the site to ensure that adequate public services and facilities could be provided for the proposed use. This Draft EA provides the information necessary to show that, with the proposed uses, adequate services and facilities exist.

The County land use regulations for the S-90 zone allow structures with a 35-foot height limit (or 2 stories). The tallest structure under Alternative A is the cultural building, which is proposed to be 15 feet tall. The density of development proposed under Alternative A is well within that allowed by the County's Zoning Ordinance. The proposed development is considered consistent with the County's Land Use Policies and Zoning Ordinance.

The County's I15 Corridor Sub regional Plan states that the intent is to promote orderly development, protect environmental and man-made resources and implement the County's objectives for growth management and the structure of government for the Sub region. The Proposed Action includes the adoption of an ordinance by the Tribe to preserve the existing riparian corridor on the project site. In addition, the siting of the facilities took into consideration the location of the existing floodplain as identified in the FEMA maps. Lastly, the scale of development is sensitive to the uniqueness of this area and the intent for the County's I15 Corridor Sub regional Plan. This is evidenced by the location of the cultural facility out of the floodplain but below the peak of the on-site hill – and having it oriented on the east side of the rise obstructed from I15 view. All other non-trail features are low scale non-permanent features used for the interpretive village. The proposed development is consistent with the goals of the County's I15 Corridor Sub regional Plan.

AGRICULTURE

The completed AD-1006 form and supporting materials is attached as **Appendix C,** where Alternative A - Proposed Action is listed as Site A. Additionally, the Project Site does not contain

Williamson Act lands.[1] A less than significant effect would result from Alternative A - Proposed Action.

4.8.2 ALTERNATIVE B – CULTURAL CENTER

LAND USE

The cultural center proposed under Alternative B would be the same design and location as identified under Alternative A. As such, this Alternative is consistent with the County's Land Use Plans and Zoning Ordinance. The lack of trail and interpretive village site under this alternative makes this Alternative more consistent with the I15 Corridor Sub regional Plan when compared with Alternative A.

AGRICULTURE

A Farmland Conversion Impact Rating (AD-1006) form was completed by NRCS. The completed AD-1006 form and supporting materials is attached as **Appendix C,** where Alternative B – Cultural Center is listed as Site A. Additionally, the Project Site does not contain Williamson Act lands.[2] A less than significant effect would result from Alternative B – Cultural Center.

4.8.3 ALTERNATIVE C – NO ACTION

LAND USE

There is no development proposed under Alternative C; therefore, there are no land use effects.

AGRICULTURE

Alternative C – No Action would not result in the transfer of property into federal trust nor would it result in development on the project site. Therefore, Alternative C – No Action would not result in an effect to agricultural lands.

---

1 Lands set aside under the California Land Conservation Act of 1965 are commonly known as Williamson Act lands. The Williamson Act Program consists of contracts between local governments and private lands owners that restricts specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. Local governments receive an annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act of 1971 (State of California Department of Conservation, http://www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx).

2 Lands set aside under the California Land Conservation Act of 1965 are commonly known as Williamson Act lands. The Williamson Act Program consists of contracts between local governments and private lands owners that restricts specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. Local governments receive an annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act of 1971 (State of California Department of Conservation, http://www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx).

4.9 PUBLIC SERVICES

4.9.1 ALTERNATIVE A – PROPOSED ACTION

WATER SUPPLY

Water would be supplied to the Development Site by one of the existing wells on the project site and stored in water tank on the west side of the cultural building. Using the water generation rate described in the Groundwater discussion (Section 4.2-1), the facility is expected to generate a water demand of 800 gallons per day. As described in the Groundwater discussion (Section 4.2-1), the land uses under Alternative A would reduce current water demands of 63,000 gallons per day (inclusive of orchard demands) to 55,000 gallons per day – a 13% reduction. The post project water demands would be less than significant when compared with existing conditions.

WASTEWATER SERVICE

An on-site septic system would be developed to accommodate the limited about of wastewater generated by the cultural resource building. For purposes of this analysis, we assume that the cultural resource building would generate approximately 840 gallons of wastewater generation (water demand +5% leakage factor). The generated wastewater would be directed to an underground septic system located west of the proposed cultural building. As described in Section 2, the size of the needed disposal field would be doubled to account for redundancy in case of emergency. The disposal field will be located out of the 100 year floodplain and more than 5 feet from the high water level. A less than significant effect would result from Alternative A.

SOLID WASTE SERVICE

Construction of the project under Alternative A - Proposed Action is expected to result in solid waste generation during the development phase. No demolition activities of older buildings would occur, and solid waste generation during construction would consist of any excess construction debris from the construction of the cultural building, parking lot, and interpretive village site (which is not a permanent development). Potential solid waste streams from construction are expected to include the following:

- Paper, wood, glass, and plastics from packing materials, waste lumber, insulation, and empty non-hazardous chemical containers;
- Excess concrete from construction practices;
- Excess metal, including steel from welding/cutting operations, packing materials, and empty non-hazardous chemical containers, and aluminum from packing materials and electrical wiring.

Operation of the cultural resource facility is expected to generate approximately 1.6 tons (3,200 pounds) per year based on a generation rate of 0.8 tons/employee/year (CIWMB, 2009). This translates to approximately 9 pounds of waste generated by the facility per day. Note that this would be a worst case operational number due to the fact that it is based on two employees working at the same time for the entire period. The trail and interpretive village is expected to generate very little contribution to the waste stream. The worst case number for the cultural facility is expected to cover any waste generated by the trail and interpretive village.

Solid waste streams from construction of the features under Alternative A - Proposed Action would be transported to the Escondido Transfer Station, south of the Project Site. Materials that would be recycled include paper, wood, glass, plastic, lumber, concrete, and metal. The MRF does not recycle insulation or empty non-hazardous chemical containers. Construction and demolition materials generated during the construction process are generally deferred at a rate of 85 percent. The remaining waste would be hauled to the Sycamore Canyon Landfill, which is located within the City of San Diego near the San Diego/Santee border. The majority of solid waste generated by construction of Alternative A - Proposed Action facilities would be recycled, and the Sycamore Canyon Landfill has the capacity to serve the Project Site; therefore, a less than significant effect to the solid waste

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Underground Service Alert (USA) of Southern California provides a free "Dig Alert" service to all excavators (e.g. contractors, homeowners, and others) in California. The excavator's one call will automatically notify all USA members (utility services providers) that might have underground facilities at the excavator's work site. In response, the USA member(s) will mark or stake the horizontal path of underground facilities, provide information about the facilities, and/or give clearance to dig. This simple safety service protects the excavator from personal injury and prevents underground facilities from being damaged. The Tribe will utilize USA and will coordinate with SDG&E and Cox Communications regarding any excavation and extension of services to the cultural buildings. No adverse utility system effects are expected.

LAW ENFORCEMENT

The County and Tribal Police Department would provide law enforcement services to the project site once the site is taken into trust. The cultural center, trail and interpretive village is not expected to significantly raise the level of law enforcement services. Note that the trail would not be a continuous public trail that travels off-site, it would be fully contained private trail on the project site. Any additional law enforcement needs associated with new activities on the project site would be administered by the Tribal Police Department.

FIRE PROTECTION/EMS

There are two types of fire related issues associated with Alternative A: (1) Short Term – construction related effects, and (2) long term – operational effects. The short term construction related effects include the potential fire threat associated with equipment and vehicles coming into contact with wild land areas. Construction vehicles and equipment such as welders, torches, and grinders may accidentally spark and ignite vegetation and building materials. This increased risk of fire during the construction of the proposed facilities would be similar to that found at other construction sites. Mitigation included in Section 5 would prevent construction related fires.

The construction of the cultural resource facility would be undertaken consistent with current building and fire codes as it relates to fire safety. The trail and interpretive center will have "No Smoking" signs posted at regular intervals and site employees will ensure that all visitors adhere to this standard. Additionally, the trail will be posted with signs to ensure that all visitors stay on the trail. The modest size of the proposed facilities, code compliance, no smoking assurances all ensure that additional fire related calls from the proposed facility would be minimal. The size, training and equipment of the Pala Fire Department will ensure that any fire/ems additional calls would be adequately responded to in a timely manner. Additionally, the various mutual aid agreements in place as noted in Chapter 3 would ensure that adequate fire prevention/ems personnel and equipment exists for this project. Therefore, Alternative A – Proposed Action would have a less than significant effect on fire/ems services.

4.9.2 ALTERNATIVE B – CULTURAL CENTER

WATER SUPPLY

The water supply effects under Alternative B would be the same as Alternative A given that the cultural building – the water generator – would be exactly the same size as defined under Alternative A. No significant effects are expected.

WASTEWATER SERVICE

The wastewater effects under Alternative B would be the same as Alternative A given that the cultural building and associated septic system would be exactly the same size as defined under Alternative A. No significant effects are expected.

SOLID WASTE SERVICE

The solid waste effects under Alternative B would be the same as Alternative A given that the cultural building would be exactly the same size as defined under Alternative A. No significant effects are expected.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

The electricity, natural gas and telecommunications effects under Alternative B would be the same as Alternative A given that the cultural building would be exactly the same size as defined under Alternative A. No significant effects are expected.

LAW ENFORCEMENT

The demand for law enforcement under Alternative B would generally be the same as identified for Alternative A. The lack of a trail and interpretive village site may reduce law enforcement demands somewhat; however, the amount is expected to be negligible.

FIRE PROTECTION/EMS

The short term construction related effects to fire/ems are expected to be reduced somewhat when compared with Alternative A due to the reduced amount of construction related activities. The effect is considered less than significant with fire suppression conditions identified in Section 5 of this EA. The operational effects to fire/ems associated with the cultural resource facility is expected to be the same as that identified under Alternative A. A less than significant operational effect is expected.

4.9.3 ALTERNATIVE C – NO ACTION

WATER SUPPLY

The adoption of Alternative C would not result in the transfer of the property into federal trust nor the development of the cultural resource, trail, or interpretive village facilities. As such, no additional water supply demands would result.

WASTEWATER SERVICE

The adoption of Alternative C would not result in the transfer of the property into federal trust nor the development of the cultural resource, trail, or interpretive village facilities. As such, no additional wastewater generation would result.

SOLID WASTE SERVICE

The adoption of Alternative C would not result in the transfer of the property into federal trust nor the development of the cultural resource, trail, or interpretive village facilities. As such, no additional solid waste generation would result.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

The adoption of Alternative C would not result in the transfer of the property into federal trust nor the development of the cultural resource, trail, or interpretive village facilities. As such, no additional electricity, natural gas, or telecommunication demand would result.

LAW ENFORCEMENT

The adoption of Alternative C would not result in the transfer of the property into federal trust nor the development of the cultural resource, trail, or interpretive village facilities. As such, no additional law enforcement demand would result.

FIRE PROTECTION/EMERGENCY MEDICAL SERVICE

The adoption of Alternative C would not result in the transfer of the property into federal trust nor the development of the cultural resource, trail, or interpretive village facilities. As such, no additional fire service/EMS demand would result.

4.10 NOISE

4.10.1 ALTERNATIVE A – PROPOSED ACTION

Noise effects generally fall into two categories: temporary effects resulting from the use of construction equipment, and long-term effects resulting from operation.

Noise effects from construction activities that would take place at the project site under are a function of the noise generated by construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of the noise-generating activities. **Table 4-3** lists noise levels produced by typical construction machinery, measured at various distances.

CONSTRUCTION NOISE

Construction noise levels are rarely steady in nature, but instead fluctuate depending on the number and type of equipment in use at any given time. There would be times when no large equipment is operating and noise will be at or near ambient levels. In addition, construction-related sound levels experienced by a noise sensitive receptor in the vicinity of the project site would be a function of distance.

TABLE 4-3
NOISE LEVELS OF TYPICAL CONSTRUCTION EQUIPMENT

Equipment	Noise Level (dBA)					
	50 Feet	100 Feet	200 Feet	400 Feet	1,000 Feet	2,500 Feet
Heavy Trucks	84-89	78-83	72-77	66-71	58-63	50-55
Dump Trucks	88	82	76	70	62	54
Concrete Mixer	85	79	73	67	59	51
Jackhammer	88	82	76	62	56	54
Scraper	80-89	74-82	68-77	60-71	54-63	46-55

Equipment	Noise Level (dBA)					
	50 Feet	100 Feet	200 Feet	400 Feet	1,000 Feet	2,500 Feet
Bulldozer	87-102	81-96	75-90	69-84	61-76	53-68
Generator	76	70	64	58	50	42
Loader	73-86	67-80	61-74	55-68	47-60	39-52
Grader	88-91	82-85	76-79	70-73	62-65	54-57
Forklift	95	89	83	77	69	61

Source: EDS, Inc., 2009

Construction activities are expected to occur over a 6-month period of time and would include the various pieces of construction equipment identified above in **Table 4-3**. The nearest noise sensitive receptor to the project site is the Lake Rancho Viejo residential subdivision approximately 500-750 feet south of the proposed cultural resource building location, which is where the construction activities would take place. The Riparian zone is located approximately 125-feet from the cultural center site. The line of sight from the nearest residence to the construction site is broken up by a 30-foot wide riparian corridor, which would attenuate noise even further. In addition, the residential area is currently influenced by continuous noise generated from Interstate 15 and SR 76. As can be seen when compared with the noise levels in **Table 4-3**, the only activity that would potentially exceed the County's noise standard of 75 dBA would be bulldozer activity, and that would only be by a few decibels under perfect conditions. Given the existing terrain, riparian buffer between the source and receptor, existing ambient noise, and temporary nature of construction activities, a less than significant construction related effect is expected.

OPERATIONAL NOISE

Traffic noise from highways and other roads is rarely constant and depends on the volume of traffic, the speed of traffic, and the number of trucks in the traffic flow. Traffic noise generally increases with heavier traffic volume, higher speeds, and greater number of trucks. Vehicle noise is a combination of noise produced by the engine, exhaust, and tires, and can be increased by faulty equipment. Increased noise levels would be commensurate with increased traffic volumes. The traffic increase under Alternative A would be less significantly less than 100 trips per day. The Tribe estimates that average visitor visitation would be 10 visitors per day. Given the small level of traffic increase expected, the existing ambient noise, distance to sensitive receptor and existing barriers, the estimated operational noise effects associated with project related traffic increases are considered less than significant.

4.10.2 ALTERNATIVE B – CULTURAL CENTER

CONSTRUCTION NOISE

The construction noise associated with the construction of the cultural center under Alternative B would be the same as for Alternative A. Other grading activities associated with the trail and/or interpretive village would not occur under this alternative; therefore, the noise generated during construction activities would be less than for Alternative A. A less than significant effect would result from the implementation of Alternative B.

OPERATIONAL NOISE

Operational noise under Alternative B would be the same as for Alternative A. The elimination of the trail and interpretive village site under this alternative is not expected to significantly reduce operational trips. A less than significant noise effect would result from the implementation of Alternative B.

4.10.3 ALTERNATIVE C – NO ACTION

CONSTRUCTION NOISE

Alternative C would not result in the transfer of land into federal trust nor the development of the cultural/trail facilities. Therefore, no construction related noise effects would result from the selection of this alternative.

OPERATIONAL NOISE

Alternative C would not result in the transfer of land into federal trust nor the development of the cultural/trail facilities. However, agricultural operation on the property would continue, including the use of farm vehicles and tractors. Therefore, no new operational related noise effects would result from the selection of this alternative.

4.11 HAZARDOUS MATERIALS

4.11.1 ALTERNATIVE A – PROPOSED ACTION

There is one historic recognized environmental condition and no current recognized environmental conditions in connection with the Property pursuant to the ASTM Practice E 1527-05. Records review, database searches, or interviews failed to identify any environmental conditions in connection with the Property other than *de minimis* use of solid waste on the riverbank for erosion control. The use of the Property for agricultural operations since the 1920s, and some petroleum product staining of soil, is an historic recognized environmental condition. However, no further site investigation is recommended.

No significant data gaps or data failures were identified that affect the ability of the Environmental Professional to identify recognized environmental conditions. There are no unusual circumstances where greater certainty is required regarding recognized environmental conditions. Therefore, no additional assessment is recommended at this time. Based on the findings of this Phase I ESA, no new areas or concerns were noted that were not already addressed in the 2007 Limited Phase II ESA.

However, ground disturbance or excavation during construction of the proposed project and associated property improvements could pose a risk to human health for construction personnel if contaminants or unknown objects are encountered. Hazards include ignition of flammable liquids or vapors, inhalation of toxic vapors in confined spaces such as trenches, skin contact with contaminated soil or water, or the excavation of undocumented obstructions such as underground storage tanks, piping, or solid waste, that might pose a hazard of explosion or ground collapse. Mitigation identified in Section 5 addresses these concerns.

4.11.2 ALTERNATIVE B – CULTURAL CENTER

Alternative B would have the same hazardous materials effects as identified for Alternative A, albeit to a lesser extent due to the fact that the trail and interpretive village site would not be developed. The mitigation in Section 5 would ensure a less than significant effect would result.

4.11.3 ALTERNATIVE C – NO ACTION

The approval of Alternative would not result in a fee-to-trust transfer or land use development. As such, no hazardous material effects would result.

4.12 VISUAL RESOURCES

4.12.1 ALTERNATIVE A – PROPOSED ACTION

The only permanent feature associated with Alternative A is the cultural center which would be located west of Pankey Road and north of the riparian zone on the project site. This structure would be less than 15 feet tall and would be located above the floodplain. The existing Lake Rancho Viejo residential subdivision, which is located approximately 500-750 feet south of the development site, would be screened by the existing 30 foot wide riparian corridor located in the San Luis Rey floodway. The visual effect on these residences from development on the project site would be less than significant.

As mentioned previously, the project site lies within the Interstate 15 Corridor Sub regional Plan. The purpose of the Plan's guidelines is to "1) protect and enhance scenic resources within the I-15 Corridor planning area while accommodating coordinated planned development which harmonizes with the natural environment; 2) establish standards to regulate the visual quality and the

environmental integrity of the entire Corridor; and 3) encourage scenic preservation and development practices compatible with the goals and policies of the five community and sub regional planning areas encompassed by the I-15 Corridor area, when appropriate." The proposed development would constitute the permanent conversion of less than 0.5 acres of land or 0.05% of the project site to urban use. The height of the facility will be consistent with the requirements of the County. Additionally, the Tribe will ensure that applicable UBC standards are used in the development of the facility. The fact that the project proposes development of less than 0.05% of the entire site, ensures that the scenic resources within the I15 corridor would be protected, while allowing development to move forward that harmonizes with the environment. The interpretive village site further ensures the harmonization with the environment due to the village's non-permanent, low scale style, as well as the reintroduction of native species where existing orchards now stand. The proposed development is a prime example of land use that is one that preserves scenic quality of the site. The intent of the proposed interpretive village site is to show how the Mission Indians of yesterday lived in harmony with this land in San Diego County. No significant visual effect would result from approval of Alternative A.

4.12.2 ALTERNATIVE B – CULTURAL CENTER

Development under Alternative B would result in the development of the cultural center as planned for Alternative A; therefore, the effect of development on visual resources is the same as Alternative A. The trail and interpretive center would not be developed under this alternative. A less than significant visual effect would result from the implementation of Alternative B.

4.12.3 ALTERNATIVE C – NO ACTION

Alternative C would not result in a land trust transfer or development. Selection of Alternative C would not result in visual effects.

4.13 CUMULATIVE EFFECTS

Cumulative effects are defined in 40 CRF Sec. 1508.7 as effects:

> *…on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.*

4.13.1 LAND RESOURCES

Potential project effects to land resources (topography, soils, seismicity, and mineral resources) within the County and beyond are related to measures required to ensure proper design for site

conditions. The proposed cultural center would be constructed to comply with the Uniform Building Code, as would other future development outside of the project site. No cumulative land resource effects would occur.

4.13.2 WATER RESOURCES

Cumulative urban development in the region would contribute to change to existing runoff characteristics in local waterways and groundwater. A watershed's runoff characteristics are altered when impervious surfaces replace natural vegetation. Runoff changes may increase stream volumes, increase stream velocities, increase peak discharges, shorten the time to peak flows, and lessen groundwater contributions to stream base-flows during non-precipitation periods. Urban areas also have significant sources of non-point source pollution that can affect regional water quality when examining the entire watershed contribution to receiving waters. The proposed project would contribute to very minor changes (only 0.5 acres of the 90+ acre site would be developed) in runoff characteristics (volume, velocity, and hydrograph) and water quality of tributaries and groundwater. The parking lot, access road and trail system would all remain unpaved thereby reducing the potential to further contribute to cumulative changes to these resources. Due to the rural nature of the project area and the type of development proposed, it is unlikely that the Proposed Action would have significant cumulative effects on water quality when it is combined with future development.

4.13.3 AIR QUALITY

Cumulative effects to the air basin are addressed within the requirements of the Clean Air Act and the General Conformity Rule. Using the significance thresholds in the General Conformity Rule, the air basin would not be significantly affected by the Proposed Action when added to potential effects from other actions. The fact that the project does not violate the de minimus threshold, results in the conclusion that the project will not have a cumulative effect.

4.13.4 BIOLOGICAL RESOURCES

The Project will not contribute to cumulative loss of high quality habitats such as coastal sage scrub or cottonwood/willow riparian habitat. The Project will contribute incrementally to development / urbanization of the region; since the Project has a small structural footprint and the proposed structure would not impede wildlife movement, this incremental contribution is not considered significant. Approximately 20% of the project site is currently in agricultural production. Such land has low to moderate habitat value and provides only lower quality foraging opportunities for wildlife. Project implementation would result in the removal of approximately 3 acres of orchard, which would incrementally reduce the amount of low quality habitat available in the region. Because of the low habitat value of this current land use, this incremental contribution to habitat loss is not considered significant.

4.13.5 CULTURAL RESOURCES

The project site is identified as having high potential for cultural resources. As noted in Chapter 4, Prehistoric, ethno historic, and historic-era resources have been previously recorded along the edges of the San Luis Rey River floodplain adjacent to the mountain slopes. Aside from the 0.5 acre development for the cultural center, no other permanent development would be placed on the project site. Over 99% of the project site would be free of permanent development. The uses designed for the site are intended to preserve what resources exist on the site, as well as preserve the cultural heritage of the Pala Tribe. For the project site, the Tribe's goal is to preserve above and below ground cultural resources and heritage. The proposed project would not contribute to cumulative loss of cultural resources.

4.12.6 SOCIOECONOMIC CONDITIONS/ENVIRONMENTAL JUSTICE

The total amount of property taxes (including voter approved bonds and fix charge assessments) paid by the Tribe in 2009 for the Property was $90,153.96. The total amount of tax revenues collected by the County in 2007 was approximately $3.5 billion; the Tribe's payments represent approximately 0.0003 of this total. The project site is not targeted in County plans for employment generation; therefore, approval of the fee-to-trust request would not contribute to the cumulative conversion of land away from potential employee generating uses. The site is designated semi-rural residential with a target density of 1 residence per 10-20 acres of land; therefore, the 90+/- acre project site could theoretically provide up to 9 residences if the 1 residence per 10 acre standard were used. As shown in Table 3-5 of the EA, housing stock in San Diego County has grown as has the vacancy rate. The project is not expected to significantly add to the cumulative removal of residential inventory in San Diego County.

4.13.7 TRANSPORTATION AND CIRCULATION

Area roadways can continue to expect increased use of capacity as cumulative land development occurs. The County has planned for the development of the project site for residential use. The development of the cultural center will limit the amount of development on the site from what is currently designated/zoned. The project will still contribute to a small amount of traffic on area roadways as shown in the Section 4 traffic discussion; however, this contribution, which is not enough to justify a traffic study, would not contribute to significant cumulative traffic effects on area roadways.

4.13.8 LAND USE AND AGRICULTURE

As mentioned above, the project site is designated for limited residential use. The Tribe would forgo the residential development for a 4,000 square foot cultural center. As noted in the Land Use discussion in Chapter 3, this area of the Fallbrook Community Plan is an area of transition with dense residential uses being approved and/or developed around the project site. The change proposed for

the project site is a reversal of those recent proposals/developments. The proposed use would limit permanent urban land use density change to one 4,000 square foot cultural center. This land use change is an insignificant contribution to the overall cumulative land use changes taking place in the project vicinity. From an agricultural standpoint, only 3 acres of existing orchards are being removed with the proposed action. Over 15 acres of the original orchards would remain and in agricultural production.

4.13.9 PUBLIC SERVICES

Land use in the project vicinity is governed by San Diego County. Allowable land uses are specified in applicable County documents. Cumulative land development within the County will place increased pressures on public services. However, the County has discretionary authority regarding any potential changes to land uses in the project vicinity and has a process in place to ensure that public service capacity keeps pace with increased demands. The approval of the Proposed Action would actually reduce cumulative demands to Countywide Public Services because the Tribe would take over some of these responsibilities (e.g., fire protection, police services, water delivery, wastewater disposal, etc.). For those services outside of Tribal control (e.g., solid waste disposal), the project site is within the applicable service area and capacity exists to serve the increased demand. The cultural center would not increase site development density/intensity beyond what has already been planned. The contribution to cumulative public service demands resulting from the Proposed Action is less than significant.

4.13.10 NOISE

Cumulative area noise due to cumulative development and increased use of area roadways/freeways can be expected to increase noise levels around the project site. Operational noise associated with the Proposed Action includes the addition of fewer than 100 trips per day on area roadways. Some of these trips could be expected to be pass-by capture trips, which would further reduce the number of new trips to the site. The increased noise resulting fro the trips that would be added is not considered a significant contribution to the cumulative noise environment. The elimination of planned land uses resulting from the Proposed Action reduces the cumulative noise contribution that would ultimately come from the project site. Additionally, the growth pressures on vacant land in this transition area would be contained on the project site due to Tribal ownership and their desire to maintain the rural nature of the property.

4.13.11 HAZARDOUS MATERIALS

The development of the project site under the plans of the Proposed Action would not result in an increase cumulative effect to hazardous materials. The proposed use does not include the use of hazardous materials. The elimination of 3 acres of orchards would actually reduce the use of

hazardous materials via the reduction in use of pesticides/herbicides/fertilizers associated with agricultural use.

4.13.12 VISUAL RESOURCES

As mentioned previously, the project site is an area in transition from non-urban use to urban use. Several residential/commercial projects have been developed or planned around the project site over the past 10 years, which serves to increase development pressure on the project site (situated between two freeway systems). All of this development pressure is cumulatively changing the visual makeup of the project area. The Proposed Action would serve to stop these development pressures at the project boundaries by the Tribe exerting its land use authority over the property with the intent of preserving its rural character. The permanent transformation of 0.5 acres for the low-level, one story cultural center does not significantly contribute to cumulative effects to visual resources.

SECTION 5.0

MITIGATION MEASURES

SECTION 5.0

MITIGATION MEASURES

5.1 LAND RESOURCES

5.1.1 TOPOGRAPHY

No mitigation is necessary for Alternative A or B.

5.1.2 SOILS

The Tribal Government will comply with erosion and storm water provisions included in the County's Storm water and Grading Ordinance.

5.1.3 SEISMICITY

No mitigation is necessary for Alternative A or B.

5.1.4 MINERAL RESOURCES

No mitigation is necessary for Alternative A or B.

5.2 WATER RESOURCES

5.2.1 SURFACE WATER, DRAINAGE, FLOODING

In addition to complying with the USEPA's General Storm Water Drainage Permit for Construction activities and implementing BMPs, the development will also comply with the County Standard Urban Storm water Mitigation Plan and County Storm water Ordinance.

5.2.2 GROUNDWATER

No mitigation is necessary for Alternative A or B.

5.2.3 WATER QUALITY

Implement Mitigation Measure 5.2.1. The Tribal Government will adopt and comply with standards no less stringent than safe drinking water standards applicable in the State of California.

5.3 AIR QUALITY

5.3.1 CONSTRUCTION-PHASE MITIGATION MEASURES

The construction activities associated with the project will comply with the following mitigation measures:

- Water work areas during excavation and other ground disturbing activities at least twice daily, or more frequently if necessary to prohibit visible dust emissions.
- Limit vehicle access and speed.
- Cover areas exposed to vehicle travel with non-asbestos material.
- Maintain high moisture conditions or apply a "binder" to seal fibers of disturbed surfaces or stockpiles.
- Cover loads of excavated materials.
- Sweep dirt and debris that may contain asbestos from adjacent street to prevent re-suspension.
- Plant vegetation to reclaim disturbed serpentine rock areas.
- The above listed measures would reduce fugitive dust emissions from construction by approximately 50 percent and would reduce the local, temporary, adverse impact related to PM-10 and visibility.

5.4 BIOLOGICAL RESOURCES

NATURAL COMMUNITIES

Development within areas designated as Critical Habitat may require presence/absence surveys for endangered species and an Incidental Take Permit issued by USFWS. Consultation with USFWS should occur early in the Project design phase to minimize endangered species take liability. Creation of an individual Habitat Conservation Plan or enrolling under permit coverage of the adopted North County Plan and implementing habitat loss compensatory mitigation specified in either plan would reduce impacts to covered species to a less than significant level.

SPECIAL STATUS SPECIES

Development within areas designated as Critical Habitat may require presence/absence surveys for endangered species and an Incidental Take Permit issued by USFWS. Consultation with USFWS should occur early in the Project design phase to minimize endangered species take liability. Creation of an individual Habitat Conservation Plan or enrolling under permit coverage of the North County Plan and implementing habitat loss compensatory mitigation specified in either plan would reduce impacts to covered species to a less than significant level.

NESTING BIRDS

If construction activities will occur during the nesting season (usually March to September), preconstruction surveys for the presence of special-status bird species or any nesting bird species should be conducted by a qualified biologist within 500 feet of proposed construction areas. If active nests are identified in these areas, USFWS should be consulted to develop measures to avoid "take" of active nests prior to the initiation of any construction activities. Avoidance measures may include establishment of a buffer zone using construction fencing or the postponement of vegetation removal until after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site.

5.5 CULTURAL RESOURCES

CONSTRUCTION MONITORING AND NOTIFICATION PROCEDURES

The construction site shall be monitored because of the proximity of the APE to known prehistoric, ethnohistoric, and historic-era resources. The cultural resources monitor should meet the Secretary of the Interior's Standards for archaeologists (NPS 1983). In the event that cultural resources are exposed during project implementation or future maintenance within the APE, the monitor/archaeologist must be empowered to temporarily halt construction activities in the immediate vicinity of the discovery while it is evaluated for significance. Should cultural resources be encountered while the monitor/archaeologist is not present, work in the immediate area must be halted and the monitor/archaeologist should be notified immediately to evaluate the resource(s) encountered. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted and would be discussed in consultation with the BIA.

Prehistoric or ethnohistoric materials within the APE might include flaked stone tools, tool-making debris, stone milling tools, pottery, culturally modified animal bone, fire-affected rock, animal bone shaped for use as tools, marine shell, or soil darkened by cultural activities (midden). Historic materials might include building or structure remains; metal, glass, or ceramic artifacts; or debris associated with ranching and agriculture.

NATIVE AMERICAN MONITOR

Considering the proximity of the APE to prehistoric and ethnohistoric resources along the edges of the San Luis Rey River floodplain, particularly the ethnographic Luiseño village of Tomka within a half-mile to the northeast, provision shall be made for the participation of a Native American monitor during ground-disturbing activities. Guidelines for monitoring should be obtained from the NAHC, and preference in the selection of Native American monitor(s) shall be given to Native Americans with traditional ties to the project area; namely the Pala Band of Mission Indians.

HUMAN REMAINS

If the discovery of human remains should occur on federal lands, including Native American Trust lands, the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (25 USC 3001–3013) will apply. A NAGPRA discovery does not necessarily solely entail human remains; it can include associated or unassociated funerary objects, sacred objects, and cultural patrimony per 25 USC 3001 Section 2(3). According to the provisions of NAGPRA, all work in the immediate vicinity of the discovery must cease, and any necessary steps to insure the integrity of the immediate area must be taken. The archaeologist for the lead federal agency would be immediately notified; that agency will be responsible for compliance with NAGPRA.

NAGPRA requires federal agencies to cease activity around the discovery, protect the items, and provide notice to Native American tribes with an interest in the items and determine final disposition of these items, including, if required, repatriation (25 USC 3002[a] and [d]; 25 USC 3005). If, in consultation with the Tribal Historic Preservation Officer (THPO), the discovery is assumed eligible for listing on the NRHP for purposes of Section 106, then pursuant to 36 CFR 800.13(c), the lead agency official "shall specify the National Register criteria used to assume the property's eligibility so that information can be used in the resolution of adverse effects." Ground disturbing activities in the area of the discovery will resume only after proper authorization is received from the lead federal agency.

5.6 SOCIOECONOMIC CONDITIONS

No mitigation is necessary for Alternative A or B.

5.7 TRANSPORTATION AND CIRCULATION

No mitigation is required for Alternative A or B.

5.8 LAND USE AND AGRICULTURE

No mitigation is necessary for Alternative A or B.

5.9 PUBLIC SERVICES

5.9.1 WATER SUPPLY

No mitigation is necessary for Alternative A or B.

5.9.2 WASTEWATER SERVICE

No mitigation is necessary for Alternative A or B.

5.9.3 SOLID WASTE SERVICE

No mitigation is necessary for Alternative A or B.

5.9.4 ELECTRICITY, NATURAL GAS AND TELECOMMUNICATIONS

No mitigation is necessary for Alternative A or B.

5.9.5 LAW ENFORCEMENT

No mitigation is necessary for Alternative A or B.

5.9.6 FIRE PROTECTION/EMERGENCY MEDICAL SERVICES

No mitigation is necessary for Alternative A or B.

5.10 NOISE

No mitigation is necessary for Alternative A or B.

5.11 HAZARDOUS MATERIALS

No mitigation is necessary for Alternative A or B.

5.12 VISUAL RESOURCES

No mitigation is necessary for Alternative A or B.

SECTION 6.0

LEAD AGENCY AND LIST OF PREPARERS

SECTION 6.0

LEAD AGENCY AND LIST OF PREPARERS

6.1 LEAD AGENCY

U.S. Bureau of Indian Affairs, Pacific Region

John Rydzik, Regional Environmental Division Director

Pat O'Mallon, Environmental Protection Specialist

6.2 PREPARERS OF ENVIRONMENTAL ASSESSMENT

Environmental Data Systems, Inc.

Joe Broadhead, Project Manager

Fred Esteves, Graphics

Natural Investigations

Dr. Geo Graening, PhD, MSE, REA

Geo Engineers, Inc.

Cindy Arrington, M.S., RPA

SECTION 7.0

BIBLIOGRAPHY

SECTION 7.0

BIBLIOGRAPHY

APCD, 2008. Air Pollution Control District: County of San Diego. Fact Sheet: Attainment Status. July, 2008. Air Pollution Control District Web site: http://www.sdapcd.org/info/facts/attain.pdf

Arens Group, 2007. Site Analysis of the Pala Gateway project site provided by the Arens Group. Page 26-31. 2007.

California, 2009a. California Department of Finance: Demographic Research Unit. Web site: http://www.dof.ca.gov/research/demographic/reports/. November, 2009.

California, 2009b. California Department of Finance: Demographic Research Unit. Web site: http://www.dof.ca.gov/research/demographic/reports/estimates/e-8/ http://www.dof.ca.gov/research/demographic/reports/estimates/e-5_2001-08/ November, 2009.

California Division of Mines and Geology, 1996. Update of Mineral Land Classification: Aggregate Materials in the Western San Diego County Production-Consumption Region.

CIWMB, 2007. Waste Disposal rates for Business Types. California Integrated Waste Management Board. Business SIC Grouping Number 36. Accessed November, 2009.

County of San Diego, Department of Environmental Health, 2002. Gregory Canyon Landfill Final EIR. SCH No. 1995061007. Section 4.2, Geology and Soils.

Gaughen, Shasta, 2009a. Shasta C. Gaughen, MA, ABD: Tribal Historic Preservation Officer, Acting Director. E-mail communication with Ted Griswald, Partner Procopio, Cory, Hargreaves and Savitch LLP. October 9, 2009.

Griswold, pers. comm. Ted J. Griswold, Partner Procopio, Cory, Hargreaves & Savitch LLP. Personal communication via e-mail correspondence. November 16, 2009.

LOS Engineering, 2009. Meadowood Traffic Impact Study – Revised May 5, 2009. Prepared for County of San Diego by LOS Engineering, Inc. April 22, 2008, Revised February 20, 2009, Revised May 5, 2009.

MAZ Environmental, Inc. 2006. Phase I Environmental Site Assessment, I-15 Property, Fallbrook, California. Prepared for City Home, Inc.

Natural Investigations, 2009a. Pala Gateway River Village Project and Fee-to-Trust Transfer Biological Resources Assessment. Natural Investigations Company. November 4, 2009

Pala, 2009. Pala Band of Mission Indians: Pala Fire Department. Web site: http://www.palatribe.com/programs/pala-fire-department . November, 2009.

RECON Environmental, Inc. 2009. Meadowood Project Draft Environmental Impact Report. San Diego County, California. August21, 2009.

San Diego Association of Governments, 2007. Profile Warehouse. Web site: htto://profilewarehouse.sandag.org/ November, 2009.

San Diego County, 2004. Air Quality in 2003 – Fact Sheet. San Diego Air Pollution Control District. April 4.

San Diego County, 2005. San Diego County Community Trails Master Plan. San Diego County Department of Parks and Recreation.

San Diego County, 1979. General Plan Part II Regional Land Use Element: San Diego County General Plan. Web site: http://www.sdcounty.ca.gov/dplu/generalplan.html . Page II-28. Adopted January 3, 1979.

San Diego County, 2005. General Plan Part XII Public Facility Element San Diego County General Plan. Adopted March 13, 1991, Amended January 12, 2005.

San Diego County, 2009. County of San Diego General Plan Update: Fallbrook Community Plan, Updated July 1, 2009. Web site: http://sdpublic.sdcounty.ca.gov/portal/page?_pageid=93%2C284149&_dad=portal&_schema=PORTAL&cx=01452973245751868642 1%3Agvsb8rhl2ho&cof=FORID%3A11&q=fallbrook+community+plan#0 .

San Diego County, 2009b. San Diego County Treasurer Tax Collector. Web site: http://www.sdtreastax.com/pt_general.html#general_information . November, 2009.

San Diego RWQCB, 2006 CWA Section 303(d) List of Water Quality Limited Segments Requiring TMDLs (approved by USEPA on June 28, 2007). 2006.

San Diego RWQCB, Water Quality Control Plan for the San Diego Basin (9), 1994.

San Luis Rey Municipal Water District, Groundwater Resource Assessment, San Diego County, California, November 9, 2006.

San Luis Rey Municipal Water District, Master Plan for Water and Wastewater Services, Municipal Review Study Area, August 2005.

TRC, Inc. 2008. Application for Certification: Orange Grove Project. Orange Grove Energy, L.P., Schaumburg, Illinois.

U.S. Census Bureau, 2009a. Housing Unit Estimates. Web site: http://www.census.gov/popest/housing/HU-EST2008-4.html. November, 2009.

U.S. Census Bureau, 2009b. U.S. Census Bureau: American Fact Finder, San Diego County. Web site: http://factfinder.census.gov/servlet/ADPTable?_bm=y&-geo_id=05000US06073&-qr_name=ACS_2008_3YR_G00_DP3YR3&-ds_name=ACS_2008_3YR_G00_&-_lang=en&-_sse=on. November, 2009

U.S. Census Bureau, 2009c. U.S. Census Bureau: Pverty Thresholds for 2007 by size of Family and Number of Related Children under 18 years. Web site: http://www.census.gov/hhes/www/poverty/threshld/thresh07.html . November, 2009.

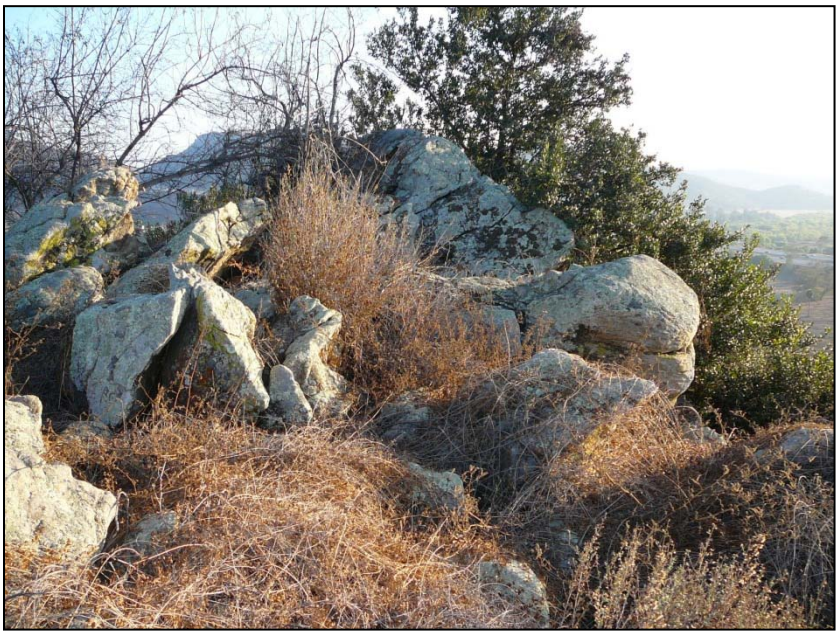
U.S. EPA, 2009. National Ambient Air Quality Standards (NAAQS). US EPA Web Site: http://www.epa.gov/air/criteria.html#8

APPENDICES

APPENDIX A

BIOLOGICAL ASSESSMENT

PALA GATEWAY RIVER VILLAGE PROJECT AND FEE-TO-TRUST TRANSFER BIOLOGICAL ASSESSMENT



Revised 6 April 2010

Prepared for:

Environmental Data Systems, Inc.

and

Pala Band of Mission Indians

Prepared by:

Natural Investigations Company
1017 Carter Street, CA 95630

NATURAL INVESTIGATIONS CO.
WWW.NATURALINVESTIGATIONS.COM

1. EXECUTIVE SUMMARY

Natural Investigations Company has prepared this biological assessment for the proposed Pala Gateway River Village Project for compliance with the Federal Endangered Species Act and the National Environmental Policy Act. The proposed actions are a fee-to-trust transfer and subsequent development of a cultural museum, a "living village" and associated gardens and trails, and an entrance road and parking lot. The Gateway property (Action Area) is located in the southeast corner of the intersection between Interstate 15 and State Route 76 in an unincorporated area of San Diego County, California. The Gateway property is currently used as a commercial agricultural operation and also for various public utility placements/easements.

Habitat types occurring on the property were mapped and evaluated for their potential to support regionally occurring special-status species in September 2009. In addition, the property was assessed for the presence of potentially-jurisdictional water resources and other biologically sensitive features. The Study Area currently contains five terrestrial natural community/habitat types: agricultural; ruderal/developed; riparian, coastal scrub, and oak woodland. The Action Area contains two sensitive natural communities: cottonwood/willow riparian corridor and coastal scrub. Three water resources were detected: the reservoir on top of the hill, the San Luis Rey River, and an unnamed tributary drainage

Governmental databases record historical occurrences of special-status species within, or adjacent to, the Study Area. No special-status species were detected in general field surveys performed in September 2009. Forty-two special-status species were determined to have a moderate or high likelihood of occurrence within the Action Area in places not proposed for development: the riparian corridor and coastal scrub on hillsides. The Study Area is located within, or adjacent to, critical habitat boundaries for Least Bell's Vireo, California gnatcatcher, and southwestern willow flycatcher. Because the proposed development does not involve destruction or disturbance to any coastal scrub habitat or any riparian zone, no adverse effect on California gnatcatcher critical habitat, southwestern willow flycatcher critical habitat, and least Bell's vireo critical habitat is anticipated.

The entire Study Area is located within the draft MSCP Northern County Subarea Plan and is designated as a Pre-Approved Mitigation Area, and has been given preliminary habitat rankings, including some areas ranked "very high" in covered species habitat value. If the Gateway property is included in the covered area of the [adopted] North County Plan, a potential conflict may occur with project implementation. Enrolling in permit coverage under the adopted North County Plan and implementing habitat loss compensatory mitigation specified in the adopted North County Plan would reduce impacts to covered species to a less than significant level.

Project construction and operation will not directly impact any surface water bodies. Therefore, no Clean Water Act permits (or state permits) are expected to be necessary.

Although the portions of the Action Area proposed for development occur only within agricultural areas that do not function as high-quality habitat for any endangered species, implementation of the proposed project could adversely affect endangered species if they are present at the time of groundbreaking. Therefore, pre-construction surveys for endangered species, and other special-status species, should be performed before construction activities begin. If any special status species are detected, USFWS or CDFG should be contacted and project impacts reassessed.

The following FESA Section 7 consultation effect determinations are recommended: the proposed action will have no effect on California gnatcatcher, southwestern willow flycatcher, least Bell's vireo or their critical habitat; the proposed action will have no effect on western yellow-billed cuckoo, Stephen's kangaroo rat, or listed plant species; and the proposed action is not likely to adversely affect arroyo toad.

2. INTRODUCTION

2.1. PURPOSE AND SCOPE OF ASSESSMENT

Natural Investigations Co. has prepared this assessment for Environmental Data Systems, and its Client, Pala Band of Mission Indians, in support of the environmental compliance process. This assessment inventories the existing biological resources within the Study Area, describes the regulatory environment affecting such resources, analyzes any potential project-related impacts upon these resources, and identifies mitigation measures to reduce these impacts. This assessment is intended to provide reviewing agencies, especially the United States Fish and Wildlife Service (USFWS), and the California Department of Fish and Game (CDFG), with information needed for compliance with federal and state Endangered Species Acts. The attached biological assessment was prepared in accordance with legal requirements set forth under Section 7 of the Endangered Species Act (16 U.S.C. 1536 (c)), and follows the standards established in BIA's NEPA guidance, in conjunction with the preparation of an NEPA environmental assessment.

The specific scope of services performed for this Biological Assessment consisted of the following tasks:

- Compile all readily-available historical biological resource information about the Study Area
- Spatially query all readily-available federal, state and local databases for any historic occurrences of special-status species or habitats within the Study Area and vicinity
- Perform a reconnaissance-level field survey of the Study Area, including photographic documentation
- Inventory all flora and fauna observed during the field survey and preparation of a checklist
- Characterize and map the natural communities and wildlife habitat types present within the Study Area, including any potentially-jurisdictional water resources
- Evaluate the likelihood for the occurrence of any special-status species
- Assess the potential for the project to adversely impact any sensitive biological resources
- Recommend mitigation measures to avoid, compensate for, or minimize project-related impacts
- Prepare and submit a report summarizing all of the above findings in a format suitable for agency review.

The scope of services does not include other services that are not described in this Section, such as protocol-level surveys for special-status species, a formal wetland delineation, or preparation of permit applications. This report conforms to the scientific writing style established by Council of Science Editors (2006).

2.2. FEDERAL ACTION, ACTION AREA LOCATION, AND PROJECT DESCRIPTION

The federal action consists of 2 distinct, consecutive actions: the change in legal status of the parcels from land held privately in fee title to land held in federal trust for the Pala Band; and subsequent development (hereafter, “Project”). The development design of the “Pala Gateway River Village Project” is still in early planning stages, but the Pala Band of Mission Indians’ concept is to build a small cultural museum, a “living village” (re-enactment of pre-European contact Indian river village community), and associated gardens and trails; some existing agricultural operations will continue as an exhibition farm (Exhibit 2). An entrance road and parking lot are also proposed.

The Action Area (and Study Area for NEPA purposes) is the Gateway property, located in the southeast corner of the intersection between Interstate 15 and State Route 76 in the unincorporated “Fallbrook” area of San Diego County (hereafter, “County”), California (see Exhibit 1):

- Three joined parcels, totaling approximately 90.5 acres, without a physical address yet assigned by the County. The approximate address range is the upper 4000s block of Pala/Temecula Road on the

northern boundary and the upper 3000s number block of Pankey Road on the eastern boundary. The Assessor's Parcel Number (APN) and acreage of each parcel is: 125-063-02, 0.85 acres (a dirt road); 125-063-09, 62.47 acres (the upper portion of the Property); APN 125-100-10, 27.21 acres (the lower portion of the Property).

2.3. REGULATORY SETTING

The following section summarizes applicable regulations of biological resources on real property in California.

2.3.1. Special-status Species Regulations

The United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service implement the Federal Endangered Species Act of 1973 (FESA) (16 USC §1531 *et seq*.). Threatened and endangered species on the federal list (50 CFR §17.11, 17.12) are protected from "take" (direct or indirect harm), unless a FESA Section 10 Permit is granted or a FESA Section 7 Biological Opinion with incidental take provisions is rendered. Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed species may be present in the project area and determine whether the proposed project will have a potentially significant impact upon such species. Under FESA, habitat loss is considered to be an impact to the species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC §1536[3], [4]). Therefore, project-related impacts to these species or their habitats would be considered significant and would require mitigation. Species that are candidates for listing are not protected under FESA; however, USFWS advises that a candidate species could be elevated to listed status at any time, and therefore, applicants should regard these species with special consideration.

The California Endangered Species Act of 1970 (CESA) (California Fish and Game Code §2050 *et seq*., and CCR Title 14, §670.2, 670.51) prohibits "take" (defined as hunt, pursue, catch, capture, or kill) of species listed under CESA. A CESA permit must be obtained if a project will result in take of listed species, either during construction or over the life of the project. Section 2081 establishes an incidental take permit program for state-listed species. Under CESA, California Department of Fish and Game (CDFG) has the responsibility for maintaining a list of threatened and endangered species designated under state law (CFG Code 2070). CDFG also maintains lists of species of special concern, which serve as "watch lists." Pursuant to requirements of CESA, an agency reviewing proposed projects within its jurisdiction must determine whether any state-listed species may be present in the Study Area and determine whether the proposed project will have a potentially significant impact upon such species. Project-related impacts to species on the CESA list would be considered significant and would require mitigation.

California Fish and Game Code Sections 4700, 5050, and 5515 designates certain mammal, amphibian, and reptile species "fully protected", making it unlawful to take, possess, or destroy these species except under issuance of a specific permit. The California Native Plant Protection Act of 1977 (CFG Code §1900 *et seq*.) requires CDFG to establish criteria for determining if a species or variety of native plant is endangered or rare. Section 19131 of the code requires that landowners notify CDFG at least 10 days prior to initiating activities that will destroy a listed plant to allow the salvage of plant material.

Many bird species, especially those that are breeding, migratory, or of limited distribution, are protected under federal and state regulations. Under the Migratory Bird Treaty Act of 1918 (16 USC §703-711), migratory bird species and their nests and eggs that are on the federal list (50 CFR §10.13) are protected from injury or death, and project-related disturbances must be reduced or eliminated during the nesting cycle. California Fish and Game Code (§3503, 3503.5, and 3800) prohibits the possession, incidental take, or needless destruction of any bird nests or eggs. Fish and Game Code §3511 designates certain bird

species “fully protected”, making it unlawful to take, possess, or destroy these species except under issuance of a specific permit. The Bald and Golden Eagle Protection Act (16 USC §668) specifically protects bald and golden eagles from harm or trade in parts of these species.

California Environmental Quality Act (CEQA) (Public Resources Code §15380) defines “rare” in a broader sense than the definitions of threatened, endangered, or fully protected. Under the CEQA definition, CDFG can request additional consideration of species not otherwise protected. CEQA requires that the impacts of a project upon environmental resources must be analyzed and assessed using criteria determined by the lead agency. Sensitive species that would qualify for listing but are not currently listed may be afforded protection under CEQA. The CEQA Guidelines (§15065) require that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines (§15380) provide for assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Plant species on the California Native Plant Society (CNPS) Lists 1A, 1B, or 2 are typically considered rare under CEQA. California “Species of Special Concern” is a category conferred by CDFG on those species that are indicators of regional habitat changes or are considered potential future protected species. While they do not have statutory protection, Species of Special Concern are typically considered rare under CEQA and thereby warrant specific protection measures.

2.3.2. Jurisdictional Water Resources

Real property that contains water resources are subject to various federal and state regulations and activities occurring in these water resources may require permits, licenses, variances, or similar authorization from federal, state and local agencies, as described next.

The Federal Water Pollution Control Act Amendments of 1972 (as amended), commonly known as the Clean Water Act (CWA), established the basic structure for regulating discharges of pollutants into “waters of the United States”. Waters of the US includes essentially all surface waters, all interstate waters and their tributaries, all impoundments of these waters, and all wetlands adjacent to these waters. CWA Section 404 requires approval prior to dredging or discharging fill material into any waters of the US, especially wetlands. The permitting program is designed to minimize impacts to waters of the US, and when impacts cannot be avoided, requires compensatory mitigation. The US Army Corps of Engineers (USACE) is responsible for administering Section 404 regulations. Substantial impacts to jurisdictional wetlands may require an Individual Permit. Small-scale projects may require only a Nationwide Permit, which typically has an expedited process compared to the Individual Permit process. Mitigation of wetland impacts is required as a condition of the CWA Section 404 Permit and may include on-site preservation, restoration, or enhancement and/or off-site restoration or enhancement. The characteristics of the restored or enhanced wetlands must be equal to or better than those of the affected wetlands to achieve no net loss of wetlands.

Under CWA Section 401, every applicant for a federal permit or license for any activity which may result in a discharge to a water body must obtain State Water Quality Certification that the proposed activity will comply with State water quality standards. The California State Water Resources Control Board is responsible for administering CWA Section 401 regulations. Any construction project that disturbs at least one acre of land requires enrollment in the State’s general permitting program under the National Pollutant Discharge Elimination System and implementation of a storm water pollution prevention plan.
Section 10 of the Rivers and Harbors Act of 1899 requires approval from USACE prior to the commencement of any work in or over navigable Waters of the US, or which affects the course, location, condition or capacity of such waters. Navigable waters of the United States are defined as waters that have been used in the past, are now used, or are susceptible to use as a means to transport interstate or foreign commerce up to the head of navigation. Rivers and Harbors Act Section 10 permits are required for construction activities in these waters.

California Fish and Game Code (§1601 - 1607) protects fishery resources by regulating "*any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake*." CDFG requires notification prior to commencement, and issuance of a Lake or Streambed Alteration Agreement, if a proposed project will result in the alteration or degradation of ''waters of the State". The limit of CDFG jurisdiction is subject to the judgment of the Department; currently, this jurisdiction is interpreted to be the "stream zone", defined as "*that portion of the stream channel that restricts lateral movement of water*" and delineated at "*the top of the bank or the outer edge of any riparian vegetation, whichever is more landward*". CDFG reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFG and the applicant is the Streambed Alteration Agreement. Projects that require a Streambed Alteration Agreement may also require a CWA 404 Section Permit and/or CWA Section 401 Water Quality Certification.

2.3.3. Local Laws, Ordinances, Regulations, and Standards

The Action Area is located within an unincorporated portion of San Diego County. Development in the Action Area is guided by the Fallbrook Community Plan, which is the portion of the San Diego County General Plan that contains the County's goals, policies and maps for land use, conservation, recreation, and scenic highways for this region.

The County of San Diego Codes and Regulations protects the following natural resources (administered by the Dept. of Planning and Landuse):

- Clearing of Vegetation / Grading and Clearing Ordinance (No. 9547). No person may do any vegetation clearing or grading without a permit. No permit shall be issued, unless Habitat Loss Permit code has been complied with. Clearing up to 5 acres on a single-family residential lot, routine landscaping, maintenance, removal of dead trees, clearing for fire protection purposes within 100' of a dwelling, or incidental to repair or construction of a single-family dwelling outside the "MSCP Subarea" is exempt. Within the MSCP, the Biological Mitigation Ordinance must be complied with. When grading or clearing has been done without a permit, the County may order the site be restored to its previous condition, including revegetation of the site with identical species of plants (Sec. 87.501 Clearing Permits - County of San Diego 2003 Revised Grading Ordinance; The Grading and Clearing Ordinance requires a permit for vegetation clearing (and a Habitat Loss Permit) for projects including 5 acres on a single-family residential lot. Violations require restoration to previous condition.
- Coastal Sage Scrub Habitat. Process For Issuance of Coastal Sage Scrub Habitat Loss Permits (Ord. No. 8365).
- Sensitive Habitats / Resource Protection Ordinance (Nos. 7968, 7739, 7685 and 7631) protection of steep-slope lands, wetlands, floodplains, sensitive habitats (inc. mature riparian woodland); requires permit. The Resource Protection Ordinance (RPO) limits impacts to several sensitive natural resources found throughout the County. These sensitive resources include coastal sage scrub. A Resource Protection Study is required for discretionary projects that may affect these sensitive natural resources. Impacts to sensitive habitat lands will be minimized and mitigated in accordance with the County guidelines and will provide equal or greater value to the affected species.

The County is currently in the draft review phase of creating the North County Subarea Plan, the second part of the county-wide Multiple Species Conservation Plan (http://www.sdcounty.ca.gov/dplu/mscp/nc.html). The MSCP is a regional habitat conservation plan designed to protect the county's listed species and habitats, while providing a programmatic approach to permitting and mitigation processes that encourages development in areas of lesser habitat value. The North County Plan has not designated exact preserve boundaries, but instead designates large Pre-approved Mitigation Areas (PAMA) within which conservation efforts are to be concentrated and preserves created. The North County Plan encourages development outside of areas designated PAMA.

2.4. ENVIRONMENTAL SETTING

The Action Area is located within the Peninsular Ranges geographic subregion, which is contained within the Southwestern geographic subdivision of the larger California Floristic Province (Hickman 1993). The region is in climate Zone 21 – "Ocean-influenced southern California", characterized by infrequent frost, with mild to hot, dry summers and mild, wet winters moderated by marine air influx (Hickman 1993; Brenzel 2001).

The Property is situated at the confluence of the San Luis Rey River and an unnamed tributary; the Property sits on a gently sloping river terrace accentuated with a steep mount (granitic rock outcrop) in the center. The topography of the Property is extremely variable. The mount rises quickly to an elevation of approximately 490 feet above mean sea level; the terrace slopes gently from the northeast at an elevation of approximately 255 feet to the southeast at an elevation of about 250 feet. The elevation of the channel of the San Luis Rey River drops about another 10 feet to 240 feet.

The Property is currently used for agricultural production, for telecommunications relay, and other utility easements. The majority of the arable land is currently fallow (with orchard trees removed or mulched in place). The Property has been used for agricultural purposes since at least 1928. Current uses of adjoining properties are as follows: to the north, an abandoned house with warning/trespassing advisory signage by Caltrans, the Highway 76 Fruit Stand, and the SR 76 corridor, and fallow fields of the Pankey Farm (Meadowood subdivision is in planning stage); to the east, a small riparian corridor, the intersection of Pankey Road and Shearer Crossing, and agricultural operations (primarily orchards); to the south, after crossing San Luis Rey River, Shearer Crossing Road turns into Dulin Road, which leads into the planned community of Lake Rancho Viejo; and to the west, the Interstate 15 corridor, and the community of Pala Mesa.

3. GENERAL FIELD SURVEYS

3.1. PRELIMINARY DATA GATHERING AND RESEARCH

Prior to conducting the field survey the following information sources were reviewed:

- Any readily-available previous biological resource studies pertaining to the Study Area or vicinity
- United States Geologic Service (USGS) 7.5 degree-minute topographic quadrangles of the Study Area and vicinity
- Color aerial photography of the Study Area
- Readily-available governmental and non-governmental biological databases.

The following biological resource assessments were found that studied other properties in the vicinity:

- TRC, Inc. 2008. Application for Certification: Orange Grove Project. Orange Grove Energy, L.P., Schaumburg, Illinois. Chapter 6.6—Biological Resources, and Appendices 6.6A to H.
- Natural Resource Consultants. 2009. Biological Technical Report Meadowood, San Diego County, California. Appendix F-1 in: RECON Environmental, Inc. 2009. Meadowood Project Draft Environmental Impact Report.

3.2. FIELD SURVEY METHODS AND CONDITIONS

The purpose of these general field surveys was to gather biological information pertaining to the location and extent of natural communities, the presence of suitable habitat for any special-status species, a checklist of flora and fauna based upon visual observations, and any other important biological resources such as wetlands. Dr. G. O. Graening (see qualifications in Section 10) conducted the general field surveys on 28 and 29 September, 2009, including dawn and dusk surveys when wildlife is typically most active. Weather conditions were mild, with highs in the upper 70s (^{o}F) and lows in the 60s, partially sunny, with fog in the morning. A complete coverage, variable-intensity pedestrian survey was performed of the

Action Area, modified to account for differences in terrain, vegetation density, and visibility. Landowner permission to visit neighboring parcels was not obtained, so surveys of properties adjacent to the Action Area were limited to distant viewing from public places such as road rights-of-way.

Survey efforts emphasized the search for any special-status species or habitats that had documented occurrences, in databases queried, within the Action Area or vicinity. Field glasses were used to assist in the ocular surveys. Wildlife sign—tracks, feathers and shedding, burrows, pellets, etc.—were interpreted to detect species not actually seen. All visible fauna and flora observed were recorded in a field notebook, and identified to the lowest possible taxon; a hand lens was used where necessary. When a specimen could not be identified *in situ*, a photograph or voucher specimen (depending upon scientific permit requirements) was taken and identified later in the laboratory using a dissecting scope where necessary. Dr. Graening holds the following scientific collection permits: CDFG Scientific Collecting Permit No. SC-006802 and CDFG Plant Voucher Specimen Permit 09004. Taxonomic determinations and nomenclature followed these references:

- plants—Pavlik (1991), Hickman (1993), Brenzel (2001), Stuart and Sawyer (2001), Lanner (2002) Calflora (2009), University of California at Berkeley (2009a,b)
- reptiles and amphibians—Stebbins (2003), Nafis (2009)
- birds—Sibley (2003)
- mammals—Jameson Jr. and Peeters (2004)
- invertebrates—Powell and Hogue (1979), Thorp and Covich (2001), NatureServe (2009)

Scientific names are introduced first and common names are used thereafter for ease of reading.

Plant specimens difficult to identify were sent fresh to the Jepson Herbarium (University of California at Berkeley), where senior botanist Margriet Wetherwax made final determinations (see Section 10 for qualifications). Any collected plant specimens worthy of curation were deposited in the Jepson Herbarium by M. Wetherwax. Bird song was also recorded using a digital voice recorder and sent to an ornithologist for additional analysis of the potential presence of special-status bird species. Ornithologist Mike Bumgardner (Bumgardner Biological Consulting Co.) performed the auditory analysis.

The locations of any special-status species sighted were marked on aerial photographs and/or georeferenced with a geographic positioning system (GPS) receiver. Habitat types occurring in the Action Area were delineated on color aerial photographs, and information on habitat conditions and the suitability of the habitats to support special-status species was also recorded. The Action Area was also informally assessed for the presence of potentially-jurisdictional water features, including riparian zones, isolated wetlands and vernal pools, and other biologically-sensitive aquatic habitats.

Locations of species' occurrences and habitat boundaries within the Action Area were recorded on color aerial photographs, and then digitized to produce the final habitat maps. The boundaries of potentially jurisdictional water resources within the Action Area were identified and measured in the field, and similarly digitized to calculate acreage and to produce informal delineation maps. Geographic analyses were performed using geographical information system software (ArcGIS 9.3, ESRI, Inc.).

Informal wetland delineation methods consisted of an abbreviated, visual assessment of the three requisite wetland parameters (hydrophytic vegetation, hydric soils, hydrologic regime) defined in the US Army Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987). Wildlife habitats were classified according to the CDFG's California Wildlife Habitat Relationships System (CDFG 2007c). Species' habitat requirements and life histories were identified using the following sources: Hickman (1993); CNPS (2009), Calflora (2009); CDFG (2009a,b,c); and University of California at Berkeley (2009a,b).

3.2.4. LIMITATIONS OF FIELD SURVEYS

Natural Investigation Company's field surveys were designed to provide a thorough record of the extent and location of existing natural communities and a visual inventory of the plant and animal species that occur within the Action Area. Special-status species may occur within the Action Area, but were not detected during the course of these field surveys. Since any field survey may fail to detect all important biological resources, Natural Investigations Company identified the presence of suitable and apparently unoccupied habitat. The recognition of suitable habitat does not indicate presence or absence of a special-status species.

4. NATURAL COMMUNITIES AND WILDLIFE HABITAT ANALYSES

Classification and description of terrestrial plant communities follows the methodology accepted by CDFG (2003), which is based upon Sawyer and Keeler-Wolf (1995)'s *Manual of California Vegetation*. Wildlife habitat was not classified separately, unless a community association could not encompass a specific wildlife habitat (e.g., cave). In these cases, Holland (1986)'s vegetation classification system or the California Wildlife Habitat Relationships System (Mayer and Laudenslayer 1988) was used. Note that aquatic habitats are discussed separately (see Section 4.2). Wetlands and other aquatic habitats were classified using USFWS National Wetlands Inventory Classification System for Wetland and Deepwater Habitats, or "Cowardin class" (Cowardin et al. 1979; USFWS 2007).

4.1. INVENTORY OF NATURAL COMMUNITIES AND WILDLIFE HABITATS WITHIN THE ACTION AREA

The Action Area currently contains five terrestrial natural community/habitat types, listed in descending areal preponderance: agricultural; ruderal/developed; riparian, coastal scrub, and oak woodland; the following table gives acreages (+/- 0.5 acre), estimated using GIS. These natural community/habitat types are described in the following text and are delineated in Exhibit 3; Exhibit 4 shows photographs of the Action Area.

Natural Community/Habitat Type	Acreage
Agricultural	55.5
Ruderal / Developed	12.5
Riparian	12.0
Coastal Scrub	8.7
Oak Woodland	1.7
Total	**90.5**

4.1.5. Agricultural

Approximately 55.5 acres (61%) of the Action Area can be classified as agricultural lands. Approximately 39 acres of orchard have recently been cleared of fruit trees, with only disced earth and mulch remaining; these areas can be classified as Disturbed Habitat (11300). Approximately 16 acres are still in production, with citrus and avocado as the primary crops. An extensive drip/spray irrigation system is present and active. These areas can be classified as Orchard (18100). Vegetation in the orchard understory consists of non-native grasses and weedy herbaceous species similar to those found in non-native annual grassland communities (42200). Where the orchard grounds have not been maintained, a few coastal shrub community species have re-established. The conversion of native habitats to orchards and annual grasslands greatly reduces wildlife biodiversity and habitat value. However, a variety of wildlife species do occur in these habitats, and many bird species forage in this habitat type.

4.1.6. Ruderal / Developed

Approximately 12.5 acres (14%) of the Action Area (11100, 12000) can be classified as ruderal or developed areas, and consist of disturbed or converted natural habitat that is now either in a weedy and barren (ruderal) state, recently graded, or urbanized with pavement, landscaping, and structure and utility placement. Vegetation within this habitat type consists primarily of nonnative weedy or invasive ruderal species or ornamental plants lacking a consistent community structure. Ornamental species sighted in the Action Area include iceplant (*Mesembryanthemum*), oleander (*Nerium oleander*) and palms (*Washingtonia* and *Phoenix*). Weedy species sighted include wild oat (*Avena fatua*), black mustard (*Brassica nigra*), yellow star thistle (*Centaurea solstitialis*), jimsonweed (*Datura stramonium*), long-beak filaree (*Erodium botrys*), fennel (*Foeniculum vulgare*), castor bean (*Ricinus communis*), and common cocklebur (*Xanthium strumarium*). The disturbed and altered condition of these lands greatly reduces their habitat value and ability to sustain rare plants or diverse wildlife assemblages. However, common, disturbance-tolerant species do occur in these lands.

4.1.7. Riparian

Approximately 12 acres (13%) of the Action Area's eastern and southern boundaries consists of riparian habitat; the southern property boundary along the San Luis Rey River corridor is indeterminate. The natural community types are a combination of Southern riparian forest (61300) and specifically, Southern cottonwood willow riparian forest (61330). The codominant canopy trees are cottonwood (*Populus fremontii*) and willows (*Salix gooddingii*, *S. lasiolepis*, and *S. lucida*); other characteristic riparian trees include sycamore (*Platanus racemosa*) and non-native trees such as Eucalyptus (*Eucalyptus*). Understory vegetation includes elderberry, blackberry, and poison oak mule fat; invasives such as giant reed (*Arrundo donax*) and tamarisk (*Tamarix* sp.) are also prevalent. The Cowardin classes are riverine wetland and palustrine forested wetland (Sawyer and Keeler-Wolf 1995). This type of habitat is important to many wildlife species.

4.1.8. Coastal scrub

Approximately 8.7 acres (10%) of the Action Area can be classified as Diegan coastal sage scrub (32500). The largest patch of this community type occurs as a habitat island on the steep southern and eastern sides of the hill in the center of the Action Area (Exhibit 3); another patch occurs in the northeastern corner of the Action Area between the orchard and the riparian corridor of the unnamed drainage. Diegan coastal sage scrub consists of California sagebrush (*Artemisia californica*), laurel sumac (*Malosma laurina*), sages (*Salvia* spp.), mule-fat (*Baccharis salicifolia*), California buckwheat (*Eriogonum fasciculatum*), and some cacti (*Opuntia* spp.). This type of habitat is important to many wildlife species. Granitic outcrops at the highest points of the hilltop provide breaks in the scrub cover for reptiles to bask and birds to perch; woodrats have established nests in cracks in the boulders, as evidenced by their middens and scat.

4.1.9. Oak Woodland

Approximately 1.7 acres (2%) of the Action Area Coast can be classified as coast live oak woodland (71161). The dominant canopy tree is coast live oak (*Quercus agrifolia*); understory vegetation includes laurel sumac, blue elderberry, blackberry, and poison oak (*Toxicodendron diversilobum*). The remaining patches of oak woodland within the Action Area are highly fragmented and isolated; these patches are not sufficiently large to function as high-quality oak woodland habitat, which sustains a rich assemblage of wildlife species.

4.2. INVENTORY OF WATER RESOURCES AND AQUATIC COMMUNITIES

An informal delineation of any and all water resources within the Action Area was also conducted during the field survey. Three water resources were detected: the reservoir on top of the hill, the San Luis Rey River, and an unnamed tributary drainage (Exhibit 5).

The reservoir is cement lined and copper sulfate is used to discourage algal or plant growth. The perimeter is fenced. This feature does not provide habitat for wildlife and is not considered to be jurisdictional under the Clean Water Act.

The San Luis Rey River is an intermittent drainage, with wide washes and braided channels. Within the Action Area, a 3,200-foot segment of this river meanders in and out of the southern boundary of the Action Area. During the September 2009 site visits, no standing water was present. Reports by others indicate that much of this river's flow is hyporheic. Hyporheic flow, or perched groundwater, sustains regenerating riparian gallery forest and riverine wetlands within the channel. The high water mark is readily evident, and the riverbed is depressed approximately 10 feet below the river terrace above (where the lower orchards are situated). The San Luis Rey River channel width is indeterminate and highly variable. The riparian zone width varies as follows: approximately 430 feet wide at the I-15 bridge; 620 feet wide in the middle of the southern boundary of the Action Area; and 360 feet wide at the confluence with the unnamed tributary.

The unnamed tributary is an ephemeral drainage with a variable channel width and riparian zone. The eastern boundary of the Action Area is defined as the middle of this channel; this eastern boundary is an approximately 1,400-foot long segment. The high water mark is readily evident. The channel width and riparian zone width varies as follows: the channel is approximately 60 feet wide and the riparian zone 210 feet wide at the confluence with San Luis Rey River; the channel is approximately 50 feet wide and the riparian zone 160 feet wide at the Pankey Road Bridge; and the channel is about 40 feet wide and riparian zone 110 feet wide at the Highway 76 bridge.

Just downstream and beyond the southwestern corner of the Action Area, the tributary Keys Creek joins the San Luis Rey River.

The USFWS National Wetland Inventory maps several wetland features within, and adjacent to, the Action Area. According to geographic information system layers provided by the USFWS website, two freshwater ponds are indicated on these USFWS maps, but the locations seem to be shifted to the northwest. The northern pond is obviously the cement-lined pond on top of the hill; the southern pond is depicted as occurring in the existing southern citrus orchard. No pond occurs in this part of the Action Area, and no evidence of a historic pond was detected from research. Freshwater forested/shrub wetlands and riverine wetlands are also mapped in the river channels of the San Luis Rey River and its unnamed tributary. The formal wetland delineation also detected numerous freshwater forested/shrub wetlands and riverine wetlands, all of which were found inside the high water marks of the of the San Luis Rey River and its unnamed tributary. No vernal pools or other isolated wetlands were identified within the Action Area. The conditions within the Action Area—the sloping topography and the homogenized contours from intensive agriculture—make it highly unlikely that any wetlands other than riverine wetlands exist within the Action Area.

4.3. PROTECTED NATURAL COMMUNITIES OR WILDLIFE HABITATS

4.3.1. Historic or Regionally-occurring Special-status Communities / Habitats

One special-status community/habitat was reported by CNDDB (CDFG 2009) within the Action Area: Southern Cottonwood Willow Riparian Forest. The following special-status communities/habitats were reported by the CNDDB within a 10-mile radius of the Action Area: Southern Cottonwood Willow Riparian Forest, Southern Riparian Forest, Southern Willow Scrub, and Southern Riparian Scrub.

4.3.2. Special-status Communities / Habitats Detected During Field Surveys

One special-status community/habitat was detected within the Action Area during field surveys by Natural Investigations Co. in September 2009: Southern Cottonwood Willow Riparian Forest. See Exhibit 3 for location of riparian areas.

4.3.3. Potentially Jurisdictional Water Resources

Three water resources were detected within the Action Area: the reservoir on top of the hill, the San Luis Rey River, and an unnamed tributary drainage (Exhibit 5). The reservoir is cement lined and copper sulfate is used to discourage algal or plant growth. The perimeter is fenced. This isolated feature does not provide habitat for wildlife and should not be considered to be jurisdictional under the Clean Water Act or California state laws. The San Luis Rey River and the unnamed tributary drainage are expected to be jurisdictional under Clean Water Act and California state laws. No development is planned within these channels or within their surrounding riparian areas.

4.3.4. Wildlife Corridors, Nursery Sites, or Nesting Birds

Wildlife movement corridors link remaining areas of functional wildlife habitat that are separated primarily by human disturbance, but natural factors such as rugged terrain and abrupt changes in vegetation cover are also possible. Wilderness and open lands have been fragmented by urbanization, which can disrupt migratory species and separate interbreeding populations. Corridors allow migratory movements and act as links between these separated populations. Within the region several wildlife corridors exist: the San Luis Rey River channel and associated riparian zone is a very high quality corridor; the north-south trending mountain ranges, including Monserate Mountain and Lancaster Mountain are wildlife corridors, but busy roadways (primarily SR97) pose formidable barriers. Bridge crossings on SR97, such as the bridges at Pankey Road and Rice Canyon Creek, allow north-south wildlife movement under SR97. East-west wildlife movements are blocked by the I-15 corridor, except under the bridge crossing of the San Luis Rey River.

No fishery resources exist in the area because streams carry water only seasonally. No nests or nesting birds were noted during the field survey. Several gray squirrel nests were noted in oak trees on the western border of the Action Area. The riparian zone of the San Luis Rey River is considered high quality bird nesting habitat.

4.3.5. Protected Tree Resources

The riparian zone of the San Luis Rey River corridor contains regenerating gallery forests; aerial photography dated 1946 of the Action Area shows this riparian forest extending out to the boundaries of the 100-year floodplain. Aerial photography dated 1953 shows this riparian forest (and adjacent coastal scrub) completely eradicated; wildfire or overgrazing, or a combination of both, is the inferred cause. Isolated mature specimens of cottonwood still occur within the Action Area's agricultural areas, but do not constitute woodland habitat. Isolated patches of coast live oak woodland are found at the edge of the 100-year floodplain within the Action Area and vicinity. No development is planned within coast live oak woodland. No local governmental tree ordinances were identified that would have jurisdiction over the Action Area.

4.3.6. Governmental Habitat Conservation Plan Coverage

The entire Action Area is located within the draft MSCP Northern County Subarea Plan and is designated as a Pre-Approved Mitigation Area, and has been given preliminary habitat value rankings, shown in Exhibit 6, and consisting of approximately 11 acres as "agriculture", 1 acre as "low", 7 acres as "medium" 35 acres as "high", and 36 acres as "very high". The available digital map of these habitat rankings as provided by SanBIOS was at a very rough scale, so these large pixels were interpolated into polygons using the habitat map created in this study.

"Critical Habitat" is a term within the ESA defined as specific geographic areas that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The Action Area is adjacent to, but not inside, the current Critical Habitat boundaries for the California gnatcatcher (USFWS 2009) (Exhibit 7). The entire Action Area is located within designated Least Bell's vireo Critical Habitat (USFWS 2009) (Exhibit 7). The riparian zones within

the Action Area are designated Critical Habitat for the southwestern willow flycatcher (USFWS 2009) (Exhibit 7). The majority of the Action Area also falls within "Excluded Essential Habitat" for the arroyo toad (USFWS 2009), a designation that allows for reinstatement of critical habitat if existing habitat conservation plans fail to preserve habitat for the species.

5. SPECIAL-STATUS SPECIES ANALYSES

For the purposes of this assessment, "special status" is defined to be those species that are of management concern to state or federal natural resource agencies, and include those species that are:

- Listed as endangered, threatened, proposed, or candidate for listing under the Federal Endangered Species Act
- Listed as endangered, threatened, rare, or proposed for listing under the California Endangered Species Act
- Designated as endangered or rare pursuant to California Fish and Game Code §1901
- Designated as fully protected pursuant to California Fish and Game Code §3511, §4700, or §5050
- Designated as a species of special concern by CDFG
- Plants listed as rare under the California Native Plant Protection Act
- Plants designated rare or endangered by CNPS (Lists 1A, 1B, or 2)

5.1. HISTORICAL OCCURRENCES OF SPECIAL-STATUS SPECIES

A list of special-status plant and animal species that historically occurred within the Action Area and vicinity was compiled based upon the following:

- Any previous and readily-available biological resource studies pertaining to the Action Area;
- Informal consultation with USFWS by generating an electronic Species List (available on the applicable Field Office website); and
- A spatial query of the CNDDB.

The CNDDB was spatially queried and any reported occurrences of special-status species were plotted in relation to the Action Area boundary using GIS software (Exhibit 8 and Exhibit 9). The CNDDB reported two special-status species with historical occurrences within the Action Area: orange-throated whiptail and southern California rufous-crowned sparrow (Exhibit 9). Within a 10-mile buffer of the Action Area boundary, the CNDDB reported 67 special-status species occurrences (Exhibit 8).

Presented below are the records from the CNDDB (Rarefind 3) that are closest to the Action Area:

- arroyo toad (*Anaxyrus californicus*)

Record Last Updated: 2002-12-05
Location: SAN LUIS REY RIVER, JUST EAST OF HWY 395, 0.5 MILE SOUTH OF HWY 76.
Location Detail: 2002 TOAD WAS OBSERVED ALONG THESAN LUIS REY RIVER BANK. 1928 INFO INDICATED HABITAT EXCELLENT FROM PALA TO BONSALL.
General: 23 ADULT SPECIMENS COLLECTED SOMEWHERE BETWEEN BONSALL AND EAST OF PALA 8/4/1928 (INFO ADDED TO OCC'S 41 & 42). 1
JUVENILE TOAD OBSERVED ON 24 JUNE 1996.

Record Last Updated: 2004-02-09
Location: KEYS CREEK, SOUTH OF DUNLIN ROAD, EAST OF I-15, AND WEST OF LANCASTER MOUNTAIN, EAST OF BONSALL
Location Detail: HABITAT SURROUNDING THE CREEK CONSISTS OF NON-NATIVE GRASSLAND, SOUTHERN WILLOW SCRUB, COAST LIVE OAK WOODLAND,
DIEGAN COASTAL SAGE SCRUB, AND SOUTHERN MIXED CHAPARRAL.
General: 6 SURVEYS CONDUCTED (18 APR, 26 APR, 9 MAY, 23 MAY, 1 JUN, AND 16 JUN 2001); INDIVIDUAL ADULT MALES HEARD CALLING ON 18 APR, 26
APR, AND 9 MAY 2001

- orange-throated whiptail (*Aspidoscelis hyperythra*)

Record Last Updated: 2003-06-19
Location: SOUTH OF HWY 76, EAST OF I-15, WEST OF PANKEY ROAD, AND NORTH OF SAN LUIS REY RIVER.
Location Detail: SITE IS LOCATED IN A PATCH OF COASTAL SAGE SCRUB AT THE EDGE OF A CITRUS GROVE. 1 INDIVIDUAL LOCATED IN A STRIP OF OAK
WOODLAND AT EDGE OF COASTAL SAGE SCRUB (1990).
General: 2 ADULTS, 2 JUV OBS 27 SEP 1990. 1 ADULT OBSERVED ON 2 JULY 1996. SITE IS TO BE USED FOR A CELLULAR PHONE RELAY ANTENNA.
AREA IS POSSIBLE STEPPNG STONE ACROSS FLOODPLAIN & IS CONTIGUOUS W/ HORSE RANCH CREEK CORRIDOR RUNNING N FROM RIVER

- coastal California gnatcatcher (*Polioptila californica californica*)

Record Last Updated: 2003-08-05
Location: ALONG EAST SIDE OF I-15, SOUTH OF THE SAN LUIS REY RIVER AND NW OF KEYS CANYON, SOUTH OF PALA MESA
Location Detail: 2000: OBS ALONG EAST SIDE I-15. 15 JUL 2001: ALONG FENCELINE BELOW I-15, FAMILY GROUP OBS ON SOUTH PORTION OF SITE. 29 JUL
2001: 14 OBS WEST OF FENCELINE; 3 OBS ON SOUTH PORTION OF SITE
Ecological: HABITAT CONSISTS OF DIEGAN COASTAL SAGE SCRUB (REVEGETATED SLOPE ALONG I-15) DOMINATED BY ARTEMISIA CALIFORNICA,
ERIOGONUM FASCICULATUM, MALOSMA LAURINA AND SALVIA APIANA. MOLOTHRUS ATER OBS DURING MOST SURVEYS.
General: 5 PAIRS OBSERVED ON 5 TERRITORIES 2 NOV 1999 - 29 FEB 2000. 8 OBSERVED (6 BELONGING TO ONE FAMILY GROUP) ON 15 JUL AND 17
(MAINLY JUVENILES) OBSERVED ON 29 JUL 2001. SMALL GROUP OF AGELAIUS TRICOLOR, 2 STERNA ANTILLARUM OBSERVED JUN 2001.

- least Bell's vireo (*Vireo bellii pusillus*)

Record Last Updated: 1992-03-31
Location: APPROX 0.75 MI NORTH OF SAN LUIS REY RIVER, AND 0.75 MI NE OF HWY 76/HWY 395 INTERSECTION.
Location Detail: IN VICINITY OF SAN LUIS REY RIVER; HABITAT NOT DESCRIBED, BUT SURROUNDING AREA IS AGRICULTURAL. SITE ADJACENT TO UNNAMED
STREAM WHICH FLOWS SOUTH TO SAN LUIS REY RIVER.
General: 1 NESTING PR OBS IN 1991.

The County's SanBIOS database (2009) was also spatially queried and any reported occurrences of special-status species plotted (Exhibit 9). The County's database reported one special-status species with a historical occurrence within the Action Area: least Bell's vireo, with an observation date of 6/29/2000. No other information on this sighting was provided in SanBIOS. Several special-status species occurrences were reported by SanBIOS database on adjacent properties (Exhibit 9): western toad (*Bufo boreas*); red diamond rattlesnake (*Crotalus ruber*); snowy egret (*Egretta thula*); white faced ibis (*Plegadis chihi*); and San Diego pocketmouse (*Chaetodipus fallax*).

A federal species list was also generated from the USFWS website using the USGS 7.5-minute quadrangle in which the Action Area is located, plus the surrounding quadrangles. The resulting species list from all databases is presented in Exhibit 10.

5.2. INVENTORY OF FLORA AND FAUNA FROM FIELD SURVEY

All plants and animals sighted during the reconnaissance-level field survey of the Action Area are listed in Exhibit 11. Note that the dates of field surveys may not coincide with every blooming period of regionally-occurring special-status plant species. During the field surveys on 28 and 29 September, 2009, no special-status species were observed within the Action Area or immediate vicinity.

5.3. LIKELIHOOD OF OCCURRENCE OF SPECIAL-STATUS SPECIES NOT DETECTED DURING FIELD SURVEYS

The special-status species identified in Section 5.1 and Section 5.2 were further assessed for their likelihood to occur within the Action Area based upon previously documented occurrences, field surveys, their habitat requirements, and the quality and extent of any suitable habitat within the Action Area. Each species was ranked for its likelihood to occur within the Action Area:

- a "high" rank was given for species where current field surveys have positively identified the species within the Action Area, where there have been previously documented occurrences within the Action Area, and/or where essential habitat elements exist within the Action Area
- a "moderate" rank was given for species that were not detected during current field surveys, but where there have been previously documented occurrences within the Action Area or vicinity, and where preferred habitat elements exist within the Action Area
- a "low" rank was given for species with no known observations within the Action Area or vicinity, and where habitat elements exist within the Action Area or vicinity, but the quality of that habitat is degraded or of poor quality, and/or where Action Area conditions and land uses deter its use of the Action Area
- a “unlikely” rank was given for species with no known observations within the Action Area or vicinity, and where no suitable habitat exists within the Action Area.

The results of these analyses are summarized in Exhibit 10. Forty-two special-status species were determined to have a moderate or high likelihood of occurrence within the Action Area:

Abronia villosa var. aurita (chaparral sand-verbena), *Accipiter cooperii* (Cooper's hawk*), Aimophila ruficeps canescens* (southern California rufous-crowned sparrow*), Ambrosia pumila* (dwarf burr ambrosia*), Amphispiza belli belli* (Bell's sage sparrow), *Anaxyrus californicus* (arroyo toad), *Aspidoscelis hyperythra* (orange-throated whiptail*), Aspidoscelis tigris stejnegeri* (coastal western whiptail), *Astragalus pachypus var. jaegeri* (Jaeger's milk-vetch), *Berberis nevinii* (Nevin's barberry), *Brodiaea filifolia* (thread-leaved brodiaea), *Caulanthus simulans* (Payson's jewel-flower), *Ceanothus cyaneus* (Lakeside ceanothus), *Chaetodipus californicus femoralis* (Dulzura pocket mouse), *Chaetodipus fallax fallax* (northwestern San Diego pocket mouse), *Charina trivirgata* (rosy boa), *Coccyzus americanus occidentalis* (western yellow-billed cuckoo), *Comarostaphylis diversifolia ssp. diversifolia* (summer holly), *Crotalus ruber ruber* (northern red-diamond rattlesnake*), Dendroica petechia brewsteri* (yellow warbler), *Diadophis punctatus similis* (San Diego ringneck snake), *Dipodomys stephensi* (Stephens' kangaroo rat), *Dodecahema leptoceras* (slender-horned spineflower), *Elanus leucurus* (white-tailed kite), *Empidonax traillii extimus* (southwestern willow flycatcher), *Eumeces skiltonianus interparietalis* (Coronado skink*), Horkelia cuneata ssp. puberula* (mesa horkelia), *Horkelia truncata* (Ramona horkelia), *Icteria virens* (yellow-breasted chat), *Lasiurus xanthinus* (western yellow bat), *Lepidium virginicum var. robinsonii* (Robinson's pepper-grass*), Lilium parryi* (lemon lily), *Monardella hypoleuca lanata* (felt-leaved monardella*), Neotoma lepida intermedia* (San Diego desert woodrat), *Packera ganderi* (Gander's ragwort), *Perognathus longimembris brevinasus* (Los Angeles pocket mouse), *Phrynosoma coronatum* (*blainvillii population)* (San Diego horned lizard), *Polioptila californica californica* (coastal California gnatcatcher), *Satureja chandleri* (San Miguel savory), *Taxidea taxus* (American badger), *Vireo bellii pusillus* (least Bell's vireo).

Note, however, that these species are likely to occur only in the undisturbed and undeveloped portions of the Action Area (i.e., riparian corridors and coastal scrub on hillsides) and are not likely to occur within the active orchards, cleared orchards, or dirt roadways.

6. IMPACT ANALYSES AND MITIGATION MEASURES

This section establishes the impact criteria, then analyzes potential Project-related impacts upon the known biological resources within the Action Area, and then suggests mitigation measures to reduce these impacts to a less-than-significant level.

6.1. IMPACT SIGNIFICANCE CRITERIA AND ANALYSIS METHODOLOGY

The significance of impacts to biological resources depends upon the proximity and condition of natural communities and wildlife habitats, the presence or absence of special-status species, and the effectiveness of measures implemented to protect these resources from Project-related impacts. As defined by the CEQA Guidelines, Appendix G, IV (The Natural Resources Agency 2009), the Project would be considered to have a significant adverse impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a special-status species in local or regional plans, policies, or regulations, or by USFWS or CDFG
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by USFWS or CDFG
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
- Conflict with any county or municipal policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved governmental habitat conservation plan.

The County of San Diego Guidelines for Determining Significance for Biological Resources (County of San Diego 2008) specifies the following impact criteria:

- The project would impact one or more individuals of a species listed as federally or state endangered or threatened.
- The project would impact the regional long-term survival of a County Group A or B plant species, or a County Group I animal species, or a species listed as a state Species of Special Concern.
- The project would impact the regional long-term survival of a County Group C or D plant species or a County Group II animal species.
- The project would impact arroyo toad aestivation or breeding habitat.
- The project would impact golden eagle habitat.
- The project would result in a loss of functional foraging habitat for raptors.
- The project would increase the noise and/or nighttime lighting to a level above ambient proven to adversely affect sensitive species.
- The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or an area that supports multiple wildlife species.
- The project would increase human access or predation or competition from domestic animals, pests or exotic species to levels that would adversely affect sensitive species.
- The project would impact nesting success of sensitive animals (as listed in the Guidelines for Determining Significance) through grading, clearing, fire fuel modification, and/or noise generating activities such as construction.

The Project's architectural design was overlaid upon the mapped habitats to assist in the analysis of Project-related impacts (Exhibit 12). The following discussion evaluates the potential for Project-related activities to adversely affect biological resources according to the criteria previously mentioned.

6.2. Potential Impacts to Natural Communities or Special-status Habitats

No development is proposed in the following special-status natural communities within the Action Area: cottonwood/willow riparian habitat or coastal scrub habitat.

6.2.1. Potential Impacts to Federally-designated Critical Habitat

Although the portions of the Action Area proposed for development occur only within agricultural areas that do not function as high-quality habitat for any endangered species, the Action Area is nonetheless situated within or near regions designated as critical habitat: California gnatcatcher critical habitat, southwestern willow flycatcher critical habitat, and least Bell's vireo critical habitat.

California Gnatcatcher Critical Habitat. The Action Area is adjacent to, but not inside, the current critical habitat boundaries for the California gnatcatcher. Because the proposed development does not involve destruction or disturbance to any coastal scrub habitat or any riparian zone, no adverse effect on California gnatcatcher critical habitat is anticipated.

Southwestern Willow Flycatcher Critical Habitat. The riparian zones within the Action Area are designated critical habitat for the southwestern willow flycatcher. Because the proposed development does not involve destruction or disturbance to any riparian zone, no adverse effect on Southwestern willow flycatcher critical habitat is anticipated.

Least Bell's Vireo Critical Habitat. The entire Action Area is located within designated Least Bell's vireo critical habitat. Because the proposed development does not involve destruction or disturbance to any riparian zone, no adverse effect on Southwestern willow flycatcher critical habitat is anticipated.

6.2.2. Potential Impacts to Habitat Conservation Plan Areas

Tribal lands are often excluded from habitat conservation plans. If the adopted North County Plan excludes the Gateway property and other lands owned by tribes, then there would be no impact to a habitat conservation plan from project implementation.

If the Gateway property is included in the covered area of the [adopted] North County Plan, a potential conflict may occur with project implementation. The Gateway property is currently designated as a Pre-Approved Mitigation Area according to the draft MSCP North County Subarea Plan. The current proposed development plan was overlaid on the draft North County Plan habitat rankings (Exhibit 12). As currently designed, the proposed parking lot would be built on land ranked "extremely high" in habitat value for covered species in the draft North County Plan. The proposed Village, game field, gardens would be built on land ranked "agriculture" or "high" in habitat value for covered species in the draft North County Plan. The proposed cultural museum would be built on land ranked "medium" in habitat value for covered specie in the draft North County Plan. This conflict between proposed development and proposed preservation is a potentially significant impact prior to mitigation.

6.2.3. Other Potential Impacts

Project construction will not prevent wildlife access to foraging habitat, breeding habitat, water resources, or other areas necessary for wildlife reproduction or survival. Therefore, no impacts from Project construction will occur to fisheries, wildlife nursery sites, or wildlife corridors.

6.2.4. Recommended Mitigation Measures

If USFWS concurs that there will be no adverse effect on any endangered species' critical habitat, no mitigation is necessary. If USFWS concludes that there may be a potential adverse effect on endangered species, development within areas designated as critical habitat may require presence/absence surveys for endangered species and/or compensatory mitigation. If endangered species are not detected during protocol surveys, no further action may be necessary. If endangered species are detected, an Incidental

Take Permit may need to be issued by USFWS. Creation of an individual Habitat Conservation Plan or enrolling under permit coverage of the [adopted] North County Plan and implementing habitat loss compensatory mitigation specified in either plan would reduce impacts to covered species' habitat to a less than significant level.

Lands, such as the Gateway property, that are designated Pre-Approved Mitigation Areas, are not prohibited from development. In the draft North County Plan, the County intends to discourage development in these areas and provide incentives to lands outside of Pre-Approved Mitigation Areas. Development within Pre-Approved Mitigation Areas would probably be held to a higher standard of mitigation for habitat loss. Consultation with the County and USFWS is suggested. Enrolling in permit coverage under the adopted North County Plan and implementing habitat loss compensatory mitigation specified in the adopted North County Plan would reduce impacts to covered species to a less than significant level.

6.3. Potential Impacts to Jurisdictional Water Resources

Project construction and operation will not directly impact any surface water bodies. Therefore, no Clean Water Act permits (or state permits) are expected to be necessary.

During construction of the Proposed Action, surface water quality has the potential to be degraded from storm water transport of sediment from disturbed soils or by accidental release of hazardous materials or petroleum products from sources such as heavy equipment servicing or refueling. This is a potentially significant impact. However, the Tribe and its designated general contractor must enroll under the USEPA's Construction General Permit prior to the initiation of construction. In conjunction with enrollment under this Permit, a Storm Water Pollution Prevention Plan, Erosion Control Plan, and a Hazardous Materials Management/Spill Response Plan must be created and implemented during construction to avoid or minimize the potential for erosion, sedimentation, or accidental release of hazardous materials. Implementation of these measures mandated by law would reduce potential construction-related impacts to water quality to a less than significant level. No mitigation is necessary.

The proposed parking lot is currently situated within the 100-year flood zone; this is a potentially significant impact prior to mitigation.

6.3.1. Recommended Mitigation Measures

The proposed parking lot is located within the 100-year floodplain. Federal, state, and/or County permits may be necessary to build within a floodplain. Executive Order 11988: Flood Plain Management may need to be addressed.

6.4. Potential Impacts to Special-status Species

6.4.1. Least Bell's Vireo (*Vireo bellii pusillus*)

Least Bell's Vireo is designated a federal endangered species, a State endangered species, and a County Group 2 species. Least Bell's vireo is restricted to riparian habitats in southern California. The cottonwood/willow riparian forest vegetation associated with the San Luis Rey River is assumed occupied least Bell's vireo habitat. The County's SanBIOS database reported one historical occurrence of least Bell's vireo within the Action Area, but details of this report are not known. No least Bell's vireos were observed during field surveys conducted in September 2009. The southern and eastern boundaries of the Action Area contains suitable habitat for the species where cottonwood-willow riparian forest is found. Because the proposed development does not involve destruction or disturbance to any riparian zone, no adverse effects to this species by project implementation are anticipated.

6.4.2. Coastal California Gnatcatcher (*Polioptila californica californica*)

Coastal California gnatcatcher is designated a federal threatened species and a California Species of Special Concern. This subspecies is an obligate, permanent resident of coastal sage scrub in southern California; occasionally, other habitats such as riparian zones and grasslands are used outside of the breeding season. CNDDB reports historical occurrences of this bird in the vicinity of the Action Area. No coastal California gnatcatchers were observed during field surveys conducted in September 2009. The Action Area contains suitable habitat for the species where coastal scrub and cottonwood-willow riparian forest are found. Because the proposed development does not involve destruction or disturbance to any coastal scrub habitat or any riparian zone, no adverse effects to this species by project implementation are anticipated.

6.4.3. Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

Southwestern willow flycatcher is designates as a federal endangered and County Group 1 species. This species uses cottonwood-willow riparian forest for foraging and nesting. CNDDB reports historical occurrences of this bird in the vicinity of the Action Area. No southwestern willow flycatchers were observed during field surveys conducted in September 2009. The southern and eastern boundaries of the Action Area contains suitable habitat for the species where cottonwood-willow riparian forest is found. Because the proposed development does not involve destruction or disturbance to any riparian zone, no adverse effects to this species by project implementation are anticipated.

6.4.4. Arroyo Toad (*Bufo californicus*)

Arroyo toad is designated as a federal endangered species and a County Group 1 species. The majority of the Action Area falls within "Excluded Essential Habitat" for the arroyo toad. The arroyo toad is restricted to riparian zones and channels, where it breeds in shallow, slow-moving streams and pools. CNDDB records document occurrences of this species along the San Luis Rey River, including occurrences southwest of the boundary of the Action Area. No arroyo toads were observed or heard during field surveys conducted in September 2009. The southern and eastern boundaries of the Action Area contains suitable habitat for the species where cottonwood-willow riparian forest is found. Note that consultation with USFWS by other developers on adjacent properties have established that some upland habitat may be used by the arroyo toad:

> "*Potential breeding habitat is located within the active channel of the San Luis Rey River. High quality foraging/aestivation habitat is found off-site in the lower flood prone areas of the San Luis Rey River dominated by riparian vegetation. Low quality foraging/aestivation habitat is located in the upper flood prone areas of the San Luis Rey River dominated by citrus/avocado groves*." (Cadre Environmental 2007 in Meadowood EIR)

Consequently, toads could occur in orchard areas during the active season of the species (i.e., February through July). Because the proposed development does not involve destruction or disturbance to any riparian zone, no direct adverse effects on this species are anticipated. The proposed development does involve destruction or disturbance to orchard lands within a flood zone, and thus arroyo toad could be impacted if found foraging/aestivating in the southern orchards within the Action Area; this is a potentially adverse impact to this species prior to mitigation.

6.4.5. Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*)

Western yellow-billed cuckoo is designated as a federal candidate species, a state endangered species, and a County Group 1 species. CNDDB records document this bird within 8 miles of the Action Area on the Santa Margarita River. This species typically inhabits mature willow/cottonwood riparian forests along large river systems; the riparian corridor of the San Luis Rey River is suitable habitat. Development is only proposed on areas currently used for intensive agricultural production; no development is proposed in riparian areas. No adverse effect upon western yellow-billed cuckoo is expected.

6.4.6. Stephens' Kangaroo Rat (*Dipodomys stephensi*)

Stephens' kangaroo rat is designated as a federal endangered species, a state threatened species, and a County Group 1 species. This species typically occupies lands described as disturbed annual grassland or coastal scrub, with relatively sparse cover of both shrubs and herbaceous vegetation. The nearest Stephens' kangaroo rat occurrences are at least five miles from the Action Area, according to the CNDDB (CDFG 2010). The Action Area is largely devoid of grasslands, but coastal scrub on hillsides may function as suitable kangaroo rat habitat. Development is only proposed on areas currently used for intensive agricultural production; no development is proposed in coastal scrub habitat. No adverse effect upon Stephens' kangaroo rat is expected.

6.4.7. Federally-listed Plants

Several plants listed under the federal and/or California Endangered Species Act are reported in the vicinity of the Study Area: dwarf burr ambrosia (*Ambrosia pumila*), Nevin's barberry (*Berberis nevinii*), Nevin's barberry (*Berberis nevinii*), thread-leaved brodiaea (*Brodiaea filifolia*), and slender-horned spineflower (*Dodecahema leptoceras*). These species not detected during field surveys. These plants require one or more of the following vegetation/habitat types: chaparral, coastal scrub, valley and foothill grassland, or cismontane woodland. Suitable patches of habitat exists within the Action Area, but as isolated patches in on hillsides or in riparian areas; none of the suitable habitat areas are proposed for development. Development is only proposed on areas currently used for intensive agricultural production; natural vegetation has been historically suppressed via herbicide application, mowing, and discing. No adverse effects to federally-listed plants are anticipated.

6.4.8. Indirect Impacts

Construction activities and increased human presence in the vicinity of special-status and their habitat may result in temporary or permanent indirect impacts to special-status species. Indirect impacts include increases in ambient noise levels, increases in light pollution at night, and other edge effects. However, the proposed project does not involve major construction activities, and the construction period will be of short duration. Much of the proposed project will be designed for low impact. For example, the hiking trails will not be paved, and the Village will be constructed by hand, in the manner done by inhabitants of the region 1000 years ago. These edge effects are considered less than significant.

6.4.9. Recommended Mitigation Measures

Although the portions of the Action Area proposed for development occur only within agricultural areas that do not function as high-quality habitat for any endangered species, implementation of the proposed project could adversely affect endangered species if they are present at the time of groundbreaking. Therefore, pre-construction surveys for endangered species, and other special-status species, should be performed before construction activities begin. If any special status species are detected, USFWS or CDFG should be contacted and project impacts reassessed. Project construction should not begin until any identified impacts are mitigated.

6.5. Potential Impacts to Nesting Birds

Special-status bird species were reported in governmental agency databases in the vicinity of the Action Area. The Action Area contains nesting habitat for various bird species because of the presence of mature trees, poles, and riparian canopy. However, no bird nests were observed during field surveys. If construction activities are conducted during the nesting season, nesting birds could be directly impacted by removal of trees or utility poles, and indirectly impacted by noise, vibration, and other construction-related disturbance. Therefore, Project construction is considered a potentially significant adverse impact before mitigation.

6.5.1. Recommended Mitigation Measures

If construction activities will occur during the nesting season (usually March to September), pre-construction surveys for the presence of special-status bird species or any nesting bird species should be conducted by a qualified biologist within 500 feet of proposed construction areas. If active nests are identified in these areas, CDFG should be consulted to develop measures to avoid "take" of active nests prior to the initiation of any construction activities. Avoidance measures may include establishment of a buffer zone using construction fencing or the postponement of vegetation removal until after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site.

6.6. Potential Cumulative Impacts

CEQA Guidelines define a cumulative impact as, "...*of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts*." CEQA Statutes further explain:

> "*The project has possible environmental effects that are individually limited but cumulatively considerable. 'Cumulatively considerable' means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects*."

A cumulative impact to biological resources would occur if the proposed project's contribution of incremental impacts would elevate any of the significance criteria established in Section 6.1 to a significant level.

The Project will not contribute to cumulative impacts to water resources, wetlands, or riparian zones. The Project will not contribute to cumulative loss of high quality habitats such as coastal sage scrub or cottonwood/willow riparian habitat. The Project will contribute incrementally to development / urbanization of the region; since the Project has a small structural footprint and the proposed structures will not impede wildlife movement, this incremental contribution is not considered significant. The vast majority of the Action Area is currently in agricultural production. Such land has low to moderate habitat value and provides only lower quality foraging opportunities for wildlife. Project implementation would result in the removal of several acres of orchard, which would incrementally reduce the amount of low quality habitat available in the region. Because of the low habitat value of this current landuse, this incremental contribution to habitat loss is not considered significant.

6.6.2. Recommended Mitigation Measures

No impacts were identified, and therefore no mitigation measures are proposed.

7. DETERMINATION AND RECOMMENDATIONS

The following FESA Section 7 consultation effect determinations are recommended:

- the proposed action will have no effect on California gnatcatcher or its critical habitat
- the proposed action will have no effect on southwestern willow flycatcher or its critical habitat
- the proposed action will have no effect on least Bell's vireo or its critical habitat
- the proposed action will have no effect on western yellow-billed cuckoo
- the proposed action will have no effect on Stephen's kangaroo rat
- the proposed action will have no effect on listed plant species
- the proposed action is not likely to adversely affect arroyo toad

Concurrence with these determinations is requested.

8. LITERATURE CITED

Brenzel, K.N. 2001. Sunset Western Garden Book. Sunset Publishing Corporation, Menlo Park, California. 768 pp.

Calflora. 2009. Calflora, the on-line gateway to information about native and introduced wild plants in California. Internet database available at http://calflora.org/.

California Department of Fish and Game. 2009a. RareFind 3.1.1, California Natural Diversity Data Base. Sacramento, California (updated monthly by subscription service).

California Department of Fish and Game. 2009b. California's Plants and Animals. Habitat Conservation Planning Branch, California Department of Fish and Game, Sacramento, California. http://www.dfg.ca.gov/hcpb/species/search_species.shtml.

California Department of Fish and Game. 2009c. California's Wildlife. California Wildlife Habitat Relationships System, Biogeographic Data Branch, California Department of Fish and Game. Internet database available at http://www.dfg.ca.gov/whdab/html/cawildlife.html.

California Native Plant Society. 2009. Inventory of Rare and Endangered Plants, 7th edition. Rare Plant Scientific Advisory Committee, David P. Tibor, convening editor. California Native Plant Society. Sacramento, California. Internet database available at http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi.

Cowardin, L.M., V. Carter, and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. Office of Biological Services, U. S. Fish and Wildlife Service, Washington, District of Columbia.

Council of Science Editors. 2006. Scientific style and format: the CSE manual for authors, editors, and publishers, 7th edition. Rockefeller University Press, Reston, Virginia. 658 pp.

County of San Diego. 2008. County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements - Biological Resources.

County of San Diego. 2008. County of San Diego Report Format and Content Requirements - Biological Resources.

County of San Diego. 2009. SanBIOS database. San Diego Department of Planning and Land Use.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station. Vicksburg, Mississippi. 92 pp.

Hickman, J.C., editor. 1993. The Jepson Manual, Higher Plants of California. University of California Press, Berkeley, California. 1,400 pp.

Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California. State of California, The Resources Agency, Nongame Heritage Program, Department of Fish and Game, Sacramento, California. 156 pp.

Jameson Jr., E.W., and H.J. Peeters. 2004. Mammals of California, revised edition. California Natural History Guides No. 66. University of California Press, Berkeley, California. 429 pp.

Lanner, R.M. 2002. Conifers of California. Cachuma Press, Los Olivos, California. 274 pp.

Mayer, K.E., and W.F. Laudenslayer, Jr, editors. 1988. A Guide to Wildlife Habitats of California.
State of California, Resources Agency, Department of Fish and Game, Sacramento, California. 166 pp.

Nafis, G., editor. 2009. California Reptiles and Amphibians. Published by CaliforniaHerps.com. Internet website, http://www.californiaherps.com/index.html.

NatureServe. 2009. NatureServe Explorer: An online encyclopedia of life, Version 7.1. NatureServe, Arlington, Virginia. Internet database available at http://www.natureserve.org/explorer.

Pavlik, B.M., P.C. Muick, S.G. Johnson, and M. Popper. 1991. Oaks of California. Cachuma Press and the California Oak Foundation. Los Olivos, California. 184 pp.

Powell, J.A., and C.L. Hogue, 1979. California Insects. University of California Press, Berkeley, California. 388 pp.

Sawyer, J.O., and T. Keeler-Wolf. 1995. A manual of California vegetation. California Native Plant Society, Sacramento, California. Available electronically at http://davisherb.ucdavis.edu/cnpsActiveServer/index.html.

Sibley, D.A. 2003. The Sibley Field Guide to Birds of Western North America. Alfred A. Knopf, Inc., New York, New York.

Stebbins, R.C. 2003. A Field Guide to Western Reptiles and Amphibians, 3rd edition. Houghton-Mifflin Co., Boston, Massachusetts.

Stuart, J.D., and J.O. Sawyer. 2001. Trees and Shrubs of California. California Natural History Guides. University of California Press, Berkeley, California. 467 pp.

The Natural Resources Agency. 2009. 2009 California Environmental Quality Act (CEQA) Statute and Guidelines. Codified in CEQA (Public Resources Code 21000-21177) and the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387). Available electronically at http://leginfo.ca.gov and http://ceres.ca.gov/ceqa/index.html.

Thorp, J.H., and A.P. Covich. 2001. Ecology and classification of North American freshwater invertebrates, 2nd edition. Academic Press, San Diego, California. 1,056 pp.

United States Fish and Wildlife Service. 2009. FWS Endangered and Threatened Species Critical Habitat Portal. Internet database available at http://criticalhabitat.fws.gov/

United States Fish and Wildlife Service. 2009. National Wetlands Inventory Program, Division of Habitat and Resource Conservation. Internet site at http://www.fws.gov/wetlands/.

University of California at Berkeley. 2009a. Jepson Online Interchange for California Floristics. Jepson Flora Project, University Herbarium and Jepson Herbarium, University of California at Berkeley. Internet database available at http://ucjeps.berkeley.edu/interchange.html.

University of California at Berkeley. 2009b. CalPhotos. Biodiversity Sciences Technology Group, University of California at Berkeley. Internet database available at http://calphotos.berkeley.edu/.

9. QUALIFICATIONS OF SURVEYORS AND REPORT PREPARERS

G.O. GRAENING, Ph.D.
Dr. Graening holds a PhD in Biological Sciences and a Master of Science in Biological and Agricultural Engineering. Dr. Graening is an adjunct Professor at California State University at Sacramento, and is an active researcher in the area of conservation biology and groundwater ecology; his publication list is available online at http://www.naturalinvestigations.com/pubs.htm. Dr. Graening is also a Certified Arborist (ISA # WE-6725A) and a Registered Environmental Assessor I (DTSC # 08060). Dr. Graening has 12 years of experience in environmental assessment, including independent contractual work, previous employment with *The Nature Conservancy*, Tetra Tech, Inc., and CH2MHill, Inc., and post-doctoral research at two universities.

MARGRIET WETHERWAX, M.S.
Ms. Wetherwax holds a Masters Degree in Advanced Plant Systematics and a Bachelor of Science in Botany. Since 1995, Ms. Wetherwax has been employed at the Jepson Herbarium (University of California at Berkeley) as a plant taxonomist and museum scientist. Ms. Wetherwax is managing editor and illustration editor of the Jepson Flora Project and The Jepson Desert Manual, as well as a contributing author to The Jepson Manual: Higher Plants of California and the Flora of North America North of Mexico Project.

10. EXHIBITS

EXHIBIT 1: LOCATION OF PROJECT

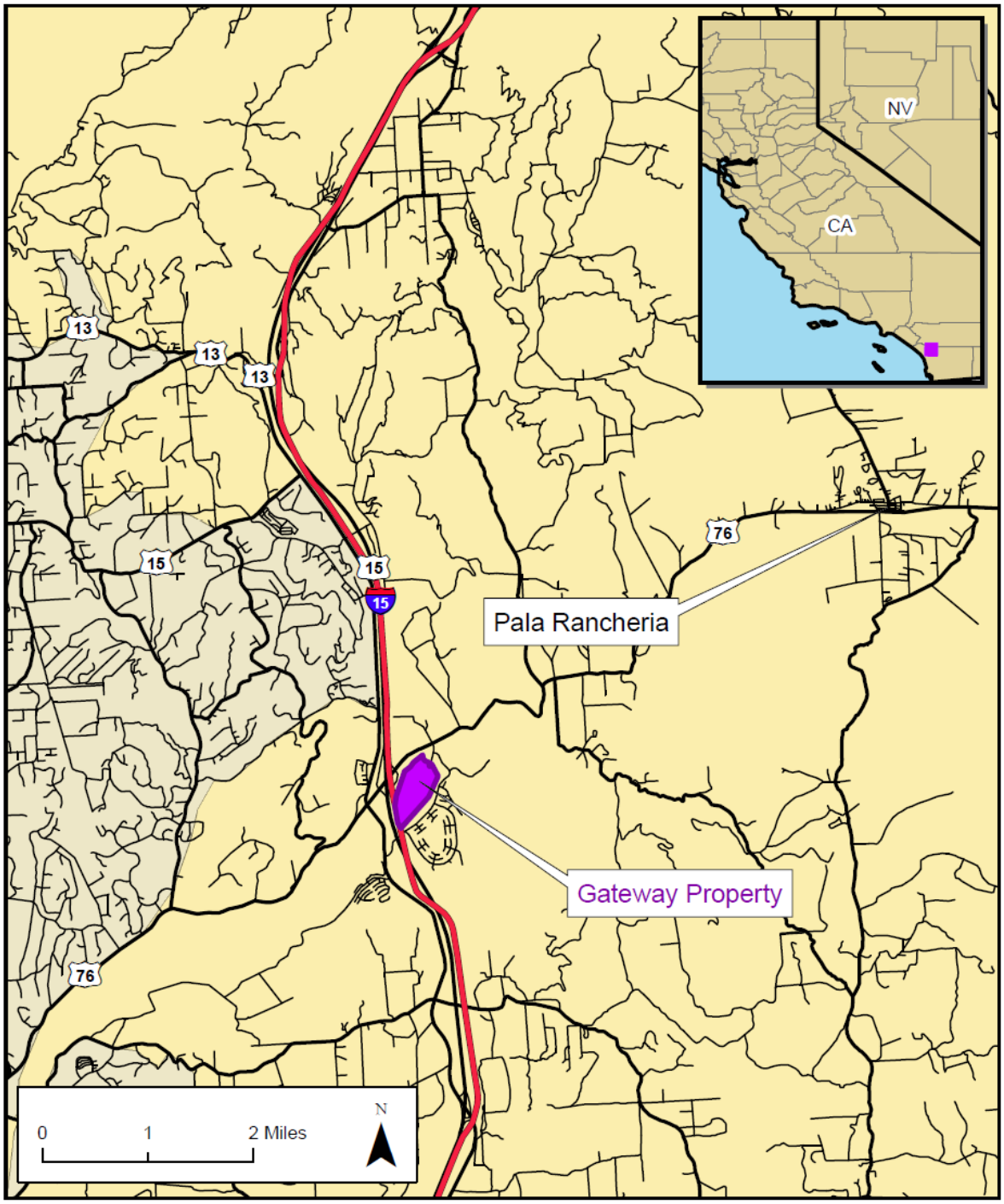


EXHIBIT 2: FEATURES OF PROJECT

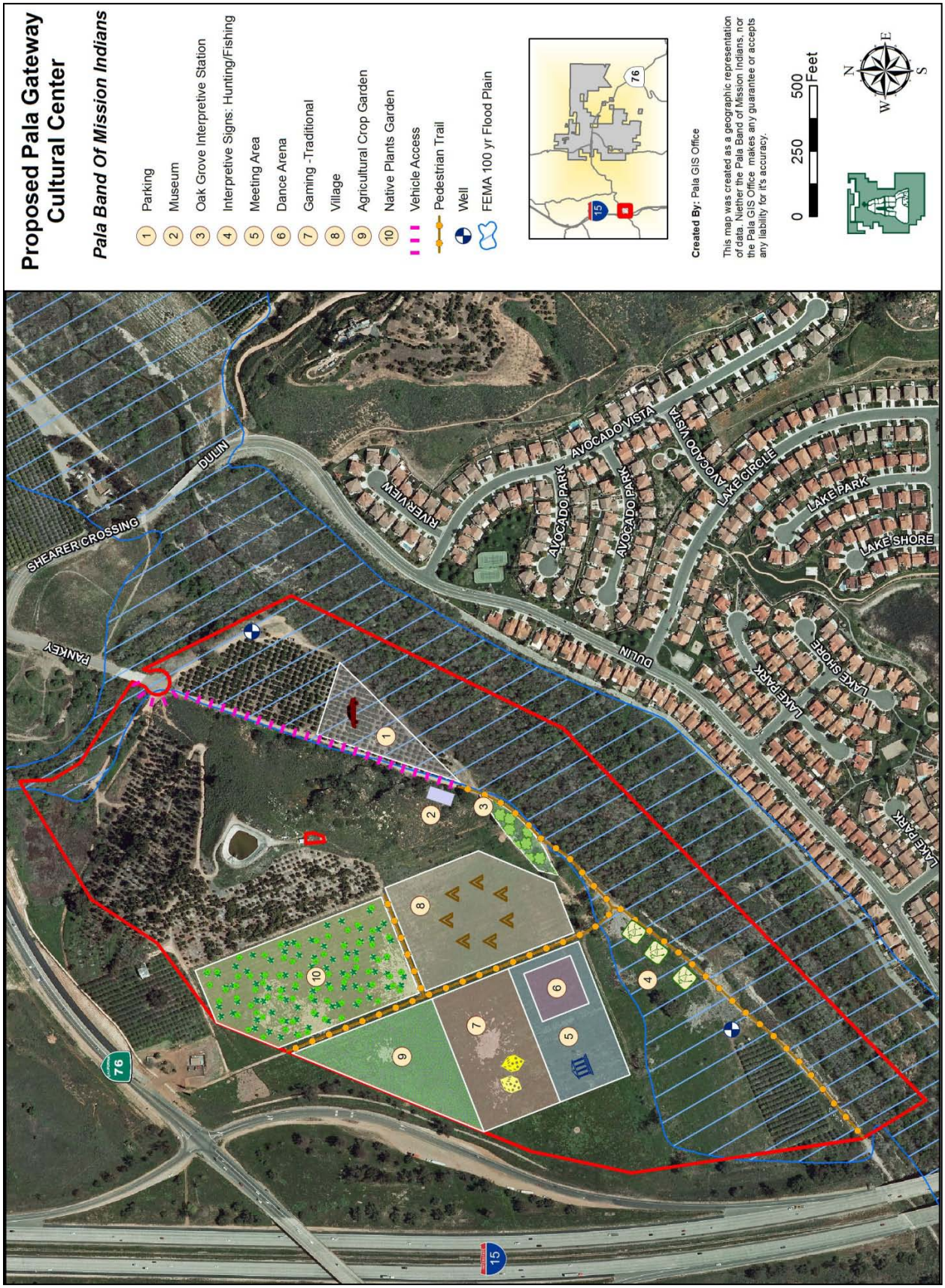


EXHIBIT 3: MAP OF VEGETATION TYPES AND HABITATS WITHIN THE ACTION AREA

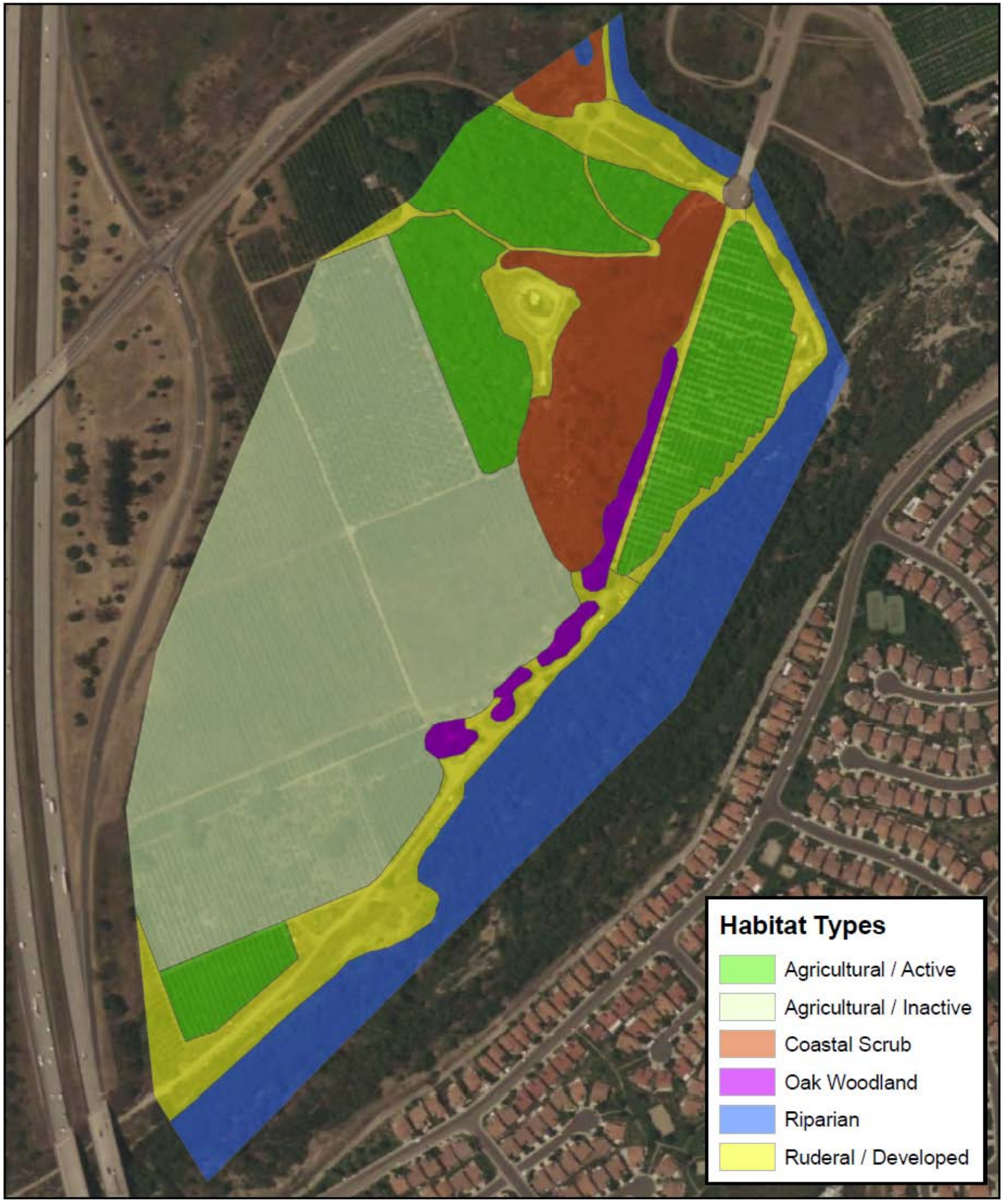


EXHIBIT 4: PHOTOGRAPHS FROM THE GENERAL FIELD SURVEY

Patches of oak woodland occur along the upper edges of the floodplain

View looking west from the hill of the agricultural lands that were recently cleared of orchards

View looking southwest from the hill down at the citrus orchard and the riparian zone of the San Luis Rey River and unnamed tributary

View of the interior of the riparian forest within the San Luis Rey River corridor

View looking north in the citrus orchard of the hill and its coastal scrub habitat

EXHIBIT 5: INFORMAL DELINEATION OF POTENTIALLY-JURISDICTIONAL WATER FEATURES

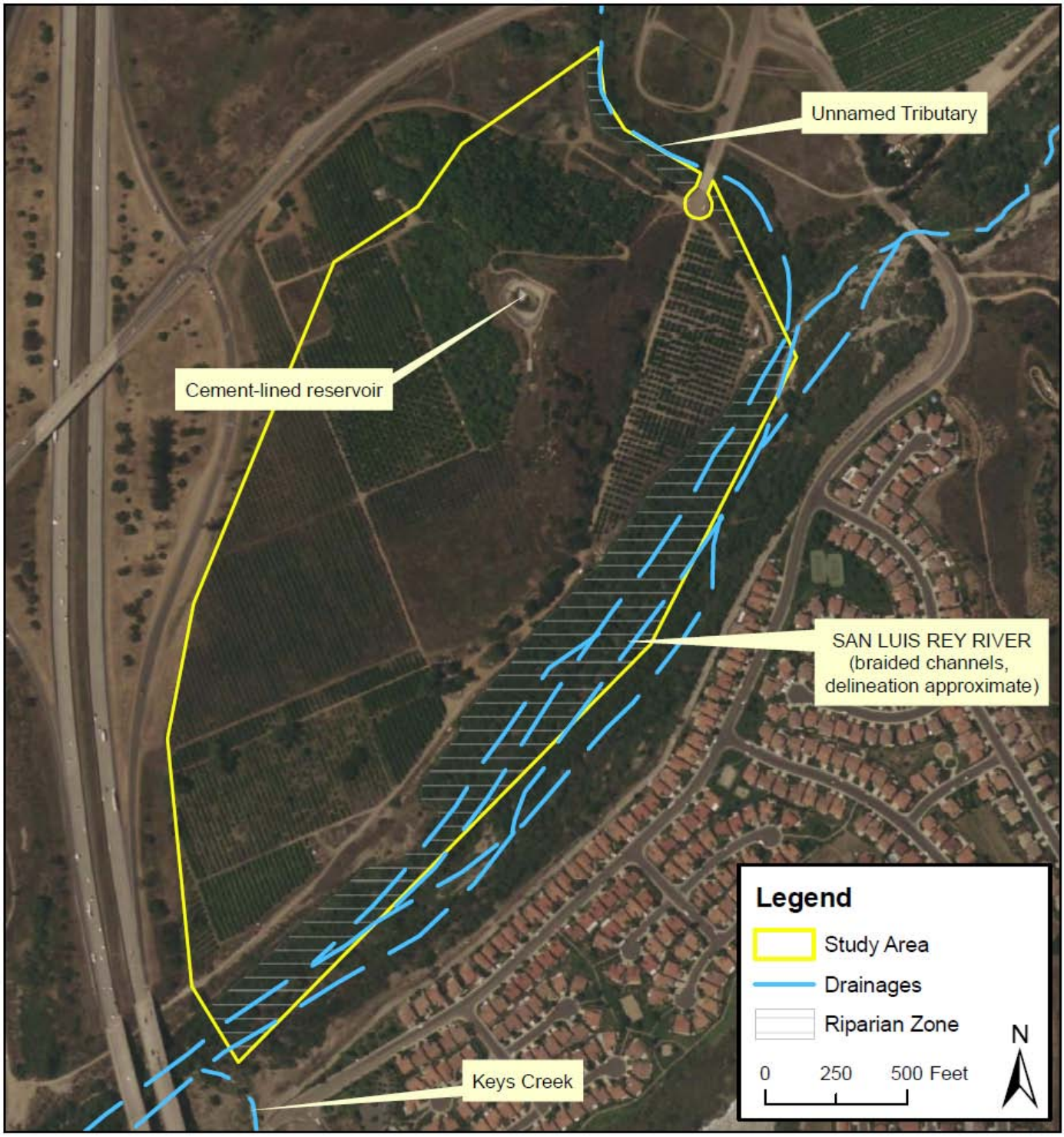


EXHIBIT 6: MSCP HABITAT MODEL (INSET) AND INTERPRETATION OF MODEL CATEGORIES AT A FINER SCALE

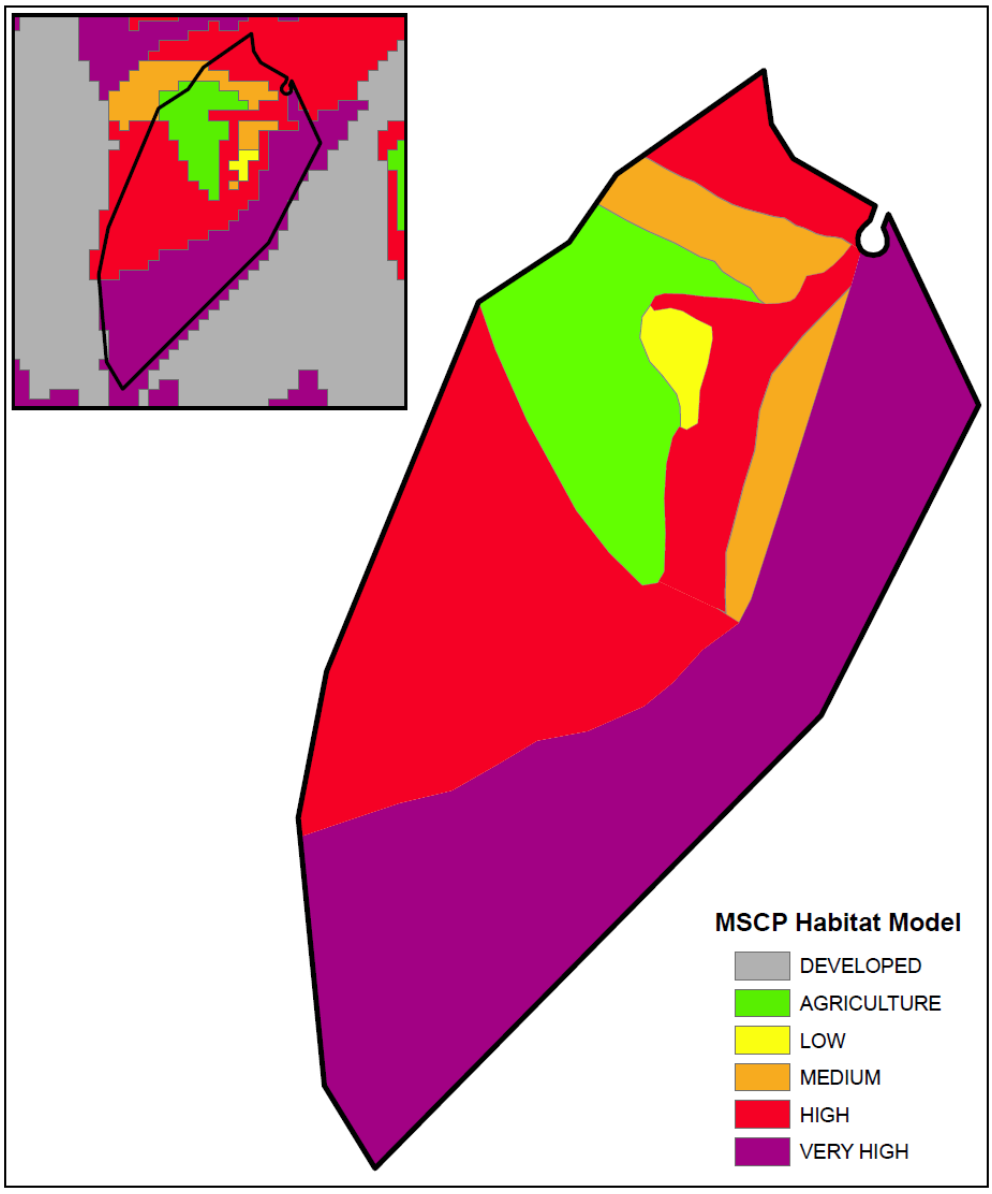


EXHIBIT 7: USFWS CRITICAL HABITAT BOUNDARIES

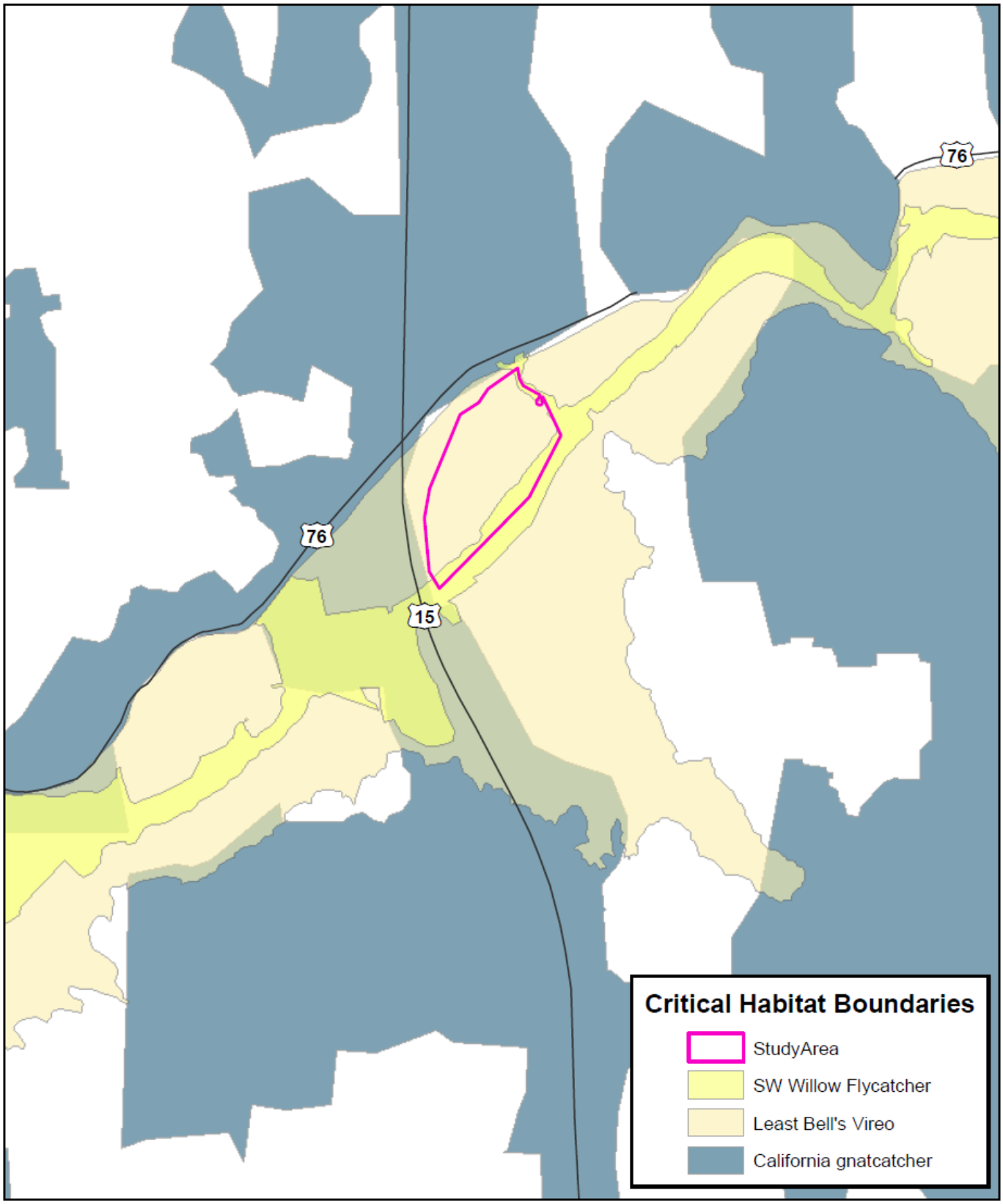


EXHIBIT 8: CNDDB RECORDS OF SPECIAL-STATUS SPECIES WITHIN A 10-MILE RADIUS OF THE ACTION AREA

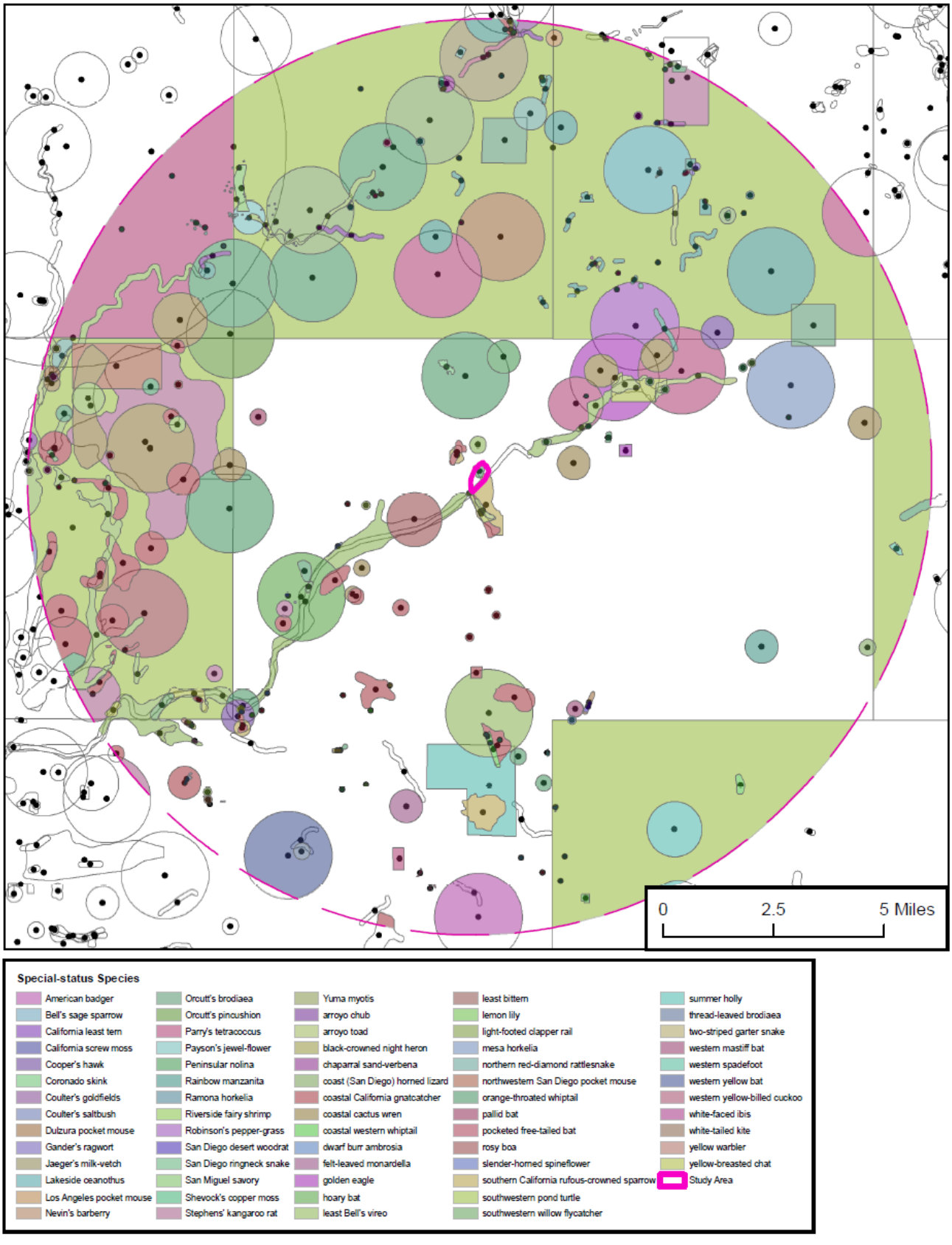


EXHIBIT 9: HISTORIC LOCATIONS OF SPECIAL-STATUS SPECIES SIGHTINGS (STATE AND COUNTY DATABASES)

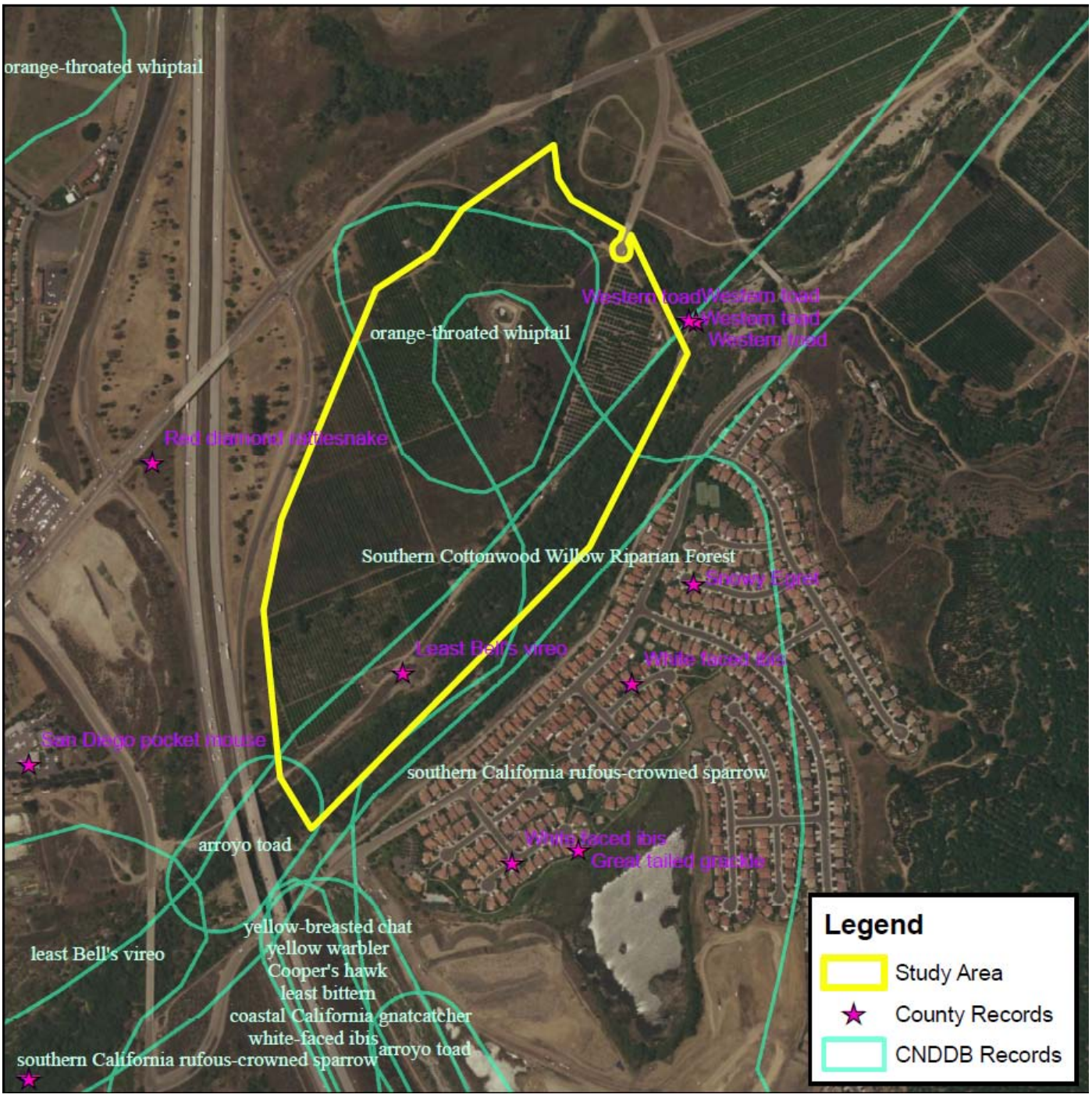


EXHIBIT 10: SUMMARY OF LIKELIHOOD FOR SPECIAL-STATUS SPECIES TO OCCUR IN ACTION AREA

Scientific Name **Common Name**	**Status**	**General Habitat & Microhabitat** (copied verbatim from CDFG's RareFind3 Species Accounts)	**Potential to Occur in Action Area**
Abronia villosa var. aurita chaparral sand-verbena	CNPS 1B.1	chaparral, coastal scrub. sandy areas. 80-1600m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards or on hillsides. Species not detected during field surveys.
Accipiter cooperii Cooper's hawk	CSC	woodland, chiefly of open, interrupted or marginal type. nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	**High**. Suitable habitat exists within Action Area. Species not detected during field surveys, but CNDDB reports historic sighting adjacent to Action Area.
Actinemys marmorata pallida southwestern pond turtle	CSC	inhabits permanent or nearly permanent bodies of water in many habitat types; below 6000 ft elev. require basking sites such as partially submerged logs, vegetation mats, or open mud banks. need suitable nesting sites.	**None**. No suitable habitat exists within Action Area. Species not detected during field surveys. CNDDB classifies as "Possibly Extirpated"
Aimophila ruficeps canescens southern California rufous-crowned sparrow	CSC	resident in southern California coastal sage scrub and sparse mixed chaparral. frequents relatively steep, often rocky hillsides with grass & forb patches.	**High**. Suitable habitat exists within Action Area. Species not detected during field surveys, but CNDDB reports historic sighting within Action Area.
Ambrosia pumila dwarf burr ambrosia	FE, CNPS 1B.1	chaparral, coastal scrub, valley and foothill grassland. sandy loam or clay soil. in valleys; persists where disturbance has been superficial. sometimes on margins or near ver.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards or on hillsides. Species not detected during field surveys.
Amphispiza belli belli Bell's sage sparrow	CSC	nests in chaparral dominated by fairly dense stands of chamise. found in coastal sage scrub in south of range. nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. territories about 50 yds apart.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Anaxyrus californicus arroyo toad	FE	semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	**High**. Suitable habitat exists within Action Area. Species not detected during field surveys, but CNDDB reports historic sighting adjacent to Action Area.
Aquila chrysaetos golden eagle	CSC	rolling foothills, mountain areas, sage-juniper flats, & desert. cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	**Low**. Marginal suitable habitat exists within Action Area. Species not detected during field surveys.
Antrozous pallidus pallid bat	CSC	deserts, grasslands, shrublands, woodlands & forests. most common in open, dry habitats with rocky areas for roosting. roosts must protect bats from high temperatures. very sensitive to disturbance of roosting sites.	**Low**. No suitable roosting habitat exists within Action Area. Species not detected during field surveys.
Arctostaphylos rainbowensis Rainbow manzanita	CNPS 1B.1	chaparral. previously called *A. peninsularis* or considered a hybrid between *A. glandulosa* & *A. glauca*. usually found in gabbro chaparral in Riverside and San Diego Counties. 270-790m.	**Low**. No gabbro chaparral habitat exists within Action Area. Species not detected during field surveys.
Aspidoscelis hyperythra orange-throated whiptail	CSC	inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. prefers washes & other sandy areas with patches of brush & rocks. perennial plants necessary for its major food-termites	**High**. Suitable habitat exists within Action Area. Species not detected during field surveys, but CNDDB reports historic sighting within Action Area.

Scientific Name **Common Name**	**Status**	**General Habitat & Microhabitat** (copied verbatim from CDFG's RareFind3 Species Accounts)	**Potential to Occur in Action Area**
Aspidoscelis tigris stejnegeri coastal western whiptail	CSC	found in deserts & semiarid areas with sparse vegetation and open areas. also found in woodland & riparian areas. ground may be firm soil, sandy, or rocky.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Astragalus pachypus var. jaegeri Jaeger's milk-vetch	CNPS 1B.1	coastal scrub, chaparral, valley and foothill grassland, cismontane woodland. dry ridges and valleys and open sandy slopes; often in grassland and oak-chaparral. 365-915m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards and on hillsides. Species not detected during field surveys.
Atriplex coulteri Coulter's saltbush	CNPS 1B.2	coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. ocean bluffs, ridgetops, as well as alkaline low places. 10-440m.	**Unlikely**. Suitable coastal habitat does not exist within Action Area. Species not detected during field surveys.
Berberis nevinii Nevin's barberry	FE, CE, CPS 1B.1	chaparral, cismontane woodland, coastal scrub, riparian scrub. on steep, n-facing slopes or in low grade sandy washes. 290-1575m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards and hillsides. Species not detected during field surveys.
Brodiaea filifolia thread-leaved brodiaea	FT, CE, CPS 1B.1	cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. usually associated with annual grassland and vernal pools; often surr by shrubland habitats. clay soils. 25-860m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards and on hillsides. Species not detected during field surveys.
Brodiaea orcuttii Orcutt's brodiaea	CNPS 1B.1	vernal pools, valley and foothill grassland, closed-cone coniferous forest, cismontane woodland, chaparral, meadows. mesic, clay habitats; sometimes serpentine; usu in vernal pools and small drainages. 30-1615m.	**Unlikely**. No suitable water features exist within Action Area. Species not detected during field surveys.
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren	CSC	southern California coastal sage scrub. wrens require tall *Opuntia* cactus for nesting and roosting.	**Low**. Suitable habitat exists within Action Area, but *Opuntia* cacti are lacking. Species not detected during field surveys.
Caulanthus simulans Payson's jewel-flower	CNPS 4.2	chaparral, coastal scrub. frequently in burned areas, or in disturbed sites such as streambeds; also on rocky, steep slopes. 90-2200m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Ceanothus cyaneus Lakeside ceanothus	CNPS 1B.2	closed-cone coniferous forest, chaparral. 100-1515m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Chaenactis glabriuscula var. orcuttiana Orcutt's pincushion	CNPS 1B.1	coastal bluff scrub, coastal dunes. sandy sites. 3-100m.	**Unlikely**. Suitable coastal habitat does not exist within Action Area. Species not detected during field surveys.
Chaetodipus californicus femoralis Dulzura pocket mouse	CSC	variety of habitats including coastal scrub, chaparral & grassland in San Diego Co. attracted to grass-chaparral edges.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Chaetodipus fallax fallax northwestern San Diego pocket mouse	CSC	coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego Co. sandy, herbaceous areas, usually in association with rocks or coarse gravel.	**High**. Suitable habitat exists within Action Area. Species not detected during various field surveys, but CNDDB reports historic sighting adjacent to Action Area.

Scientific Name **Common Name**	**Status**	**General Habitat & Microhabitat** (copied verbatim from CDFG's RareFind3 Species Accounts)	**Potential to Occur in Action Area**
Charina trivirgata rosy boa	CSC	desert & chaparral from the coast to the mojave & colorado deserts. prefers moderate to dense vegetation & rocky cover. habitats with a mix of brushy cover & rocky soil such as coastal canyons & hillsides, desert canyons, washes & mountains	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Coccyzus americanus occidentalis western yellow-billed cuckoo	FC, CE	riparian forest nester, along the broad, lower flood-bottoms of larger river systems. nests in riparian jungles of willow, often mixed with cottonwoods, w/ lower story of blackberry, nettles, or wild grape.	**High**. Suitable habitat exists within Action Area. Species not detected during field surveys.
Comarostaphylis diversifolia ssp. diversifolia summer holly	CNPS 1B.2	chaparral. often in mixed chaparral in California, sometimes post-burn. 30-550m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Crotalus ruber ruber northern red-diamond rattlesnake	CSC	chaparrral, woodland, grassland, & desert areas from coastal San Diego County to the eastern slopes of the mountains. occurs in rocky areas & dense vegetation. needs rodent burrows, cracks in rocks or surface cover objects.	**High**. Suitable habitat exists within Action Area. Species not detected during field surveys, but CNDDB reports historic sighting adjacent to Action Area.
Dendroica petechia brewsteri yellow warbler	CSC	riparian plant associations. prefers willows, cottonwoods, aspens, sycamores, & alders for nesting & foraging. also nests in montane shrubbery in open conifer forests.	**High**. Suitable habitat exists within Action Area. Species not detected during field surveys, but CNDDB reports historic sighting adjacent to Action Area.
Diadophis punctatus similis San Diego ringneck snake	CSC	open, fairly rocky areas. use boards, flat rocks, woodpiles, stable talus, rotting logs & small ground holes for cover. prefer areas with surface litter or herbaceous vegetation. often in somewhat moist areas near intermittent streams.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Dipodomys stephensi Stephens' kangaroo rat	FE, CT	primarily annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover. prefers buckwheat, chamise, brome grass & filaree. will burrow into firm soil.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards and on hillsides. Species not detected during field surveys.
Dodecahema leptoceras slender-horned spineflower	FE, CE, CNPS 1B.1	chaparral, coastal scrub (alluvial fan sage scrub). flood deposited terraces and washes; assoc include *Encelia*, *Dalea*, *Lepidospartum*, etc. 200-760m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Elanus leucurus white-tailed kite	CSC	rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Empidonax traillii extimus southwestern willow flycatcher	FE, CE	riparian woodlands in southern California.	**High**. Suitable habitat exists within Action Area. Species not detected during field surveys.
Eumeces skiltonianus interparietalis Coronado skink	CSC	grassland, chaparral, pinon-juniper & juniper sage woodland, pine-oak & pine forests in coast ranges of southern Calif. prefers early successional stages or open areas. found in rocky areas close to streams & on dry hillsides.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Eumops perotis californicus western mastiff bat	CSC	many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral etc. roosts in crevices in cliff faces, high buildings, trees & tunnels.	**Low**. No suitable roosting habitat exists within Action Area. Species not detected during field surveys.

Scientific Name **Common Name**	**Status**	**General Habitat & Microhabitat** (copied verbatim from CDFG's RareFind3 Species Accounts)	**Potential to Occur in Action Area**
Gila orcuttii arroyo chub	CSC	Los Angeles basin south coastal streams. slow water stream sections with mud or sand bottoms. feeds heavily on aquatic vegetation & associated invertebrates.	**None**. No habitat exists within Action Area. Species not detected during field surveys.
Horkelia cuneata ssp. puberula mesa horkelia	CNPS 1B.1	chaparral, cismontane woodland, coastal scrub. sandy or gravelly sites. 70-810m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Horkelia truncata Ramona horkelia	CNPS 1B.3	chaparral, cismontane woodland. habitats in California include: mixed chaparral, vernal streams, and disturbed areas near roads. clay soil. 400-1300m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Icteria virens yellow-breasted chat	CSC	summer resident; inhabits riparian thickets of willow & other brushy tangles near watercourses. nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	**High**. Suitable habitat exists within Action Area. Species not detected during field surveys, but CNDDB reports historic sighting adjacent to Action Area.
Ixobrychus exilis least bittern	CSC	colonial nester in marshlands and borders of ponds and reservoirs which provide ample cover. nests usually placed low in tules, over water.	**Low**. Suitable habitat does not exist within Action Area. Species not detected during field surveys, but CNDDB reports historic sighting adjacent to Action Area.
Lasiurus cinereus hoary bat	CSC	prefers open habitats or habitat mosaics, with access to trees for cover & open areas or habitat edges for feeding. roosts in dense foliage of medium to large trees. feeds primarily on moths. requires water.	**Low**. Little if any habitat exists within Action Area; standing water is lacking. Species not detected during field surveys.
Lasiurus xanthinus western yellow bat	CSC	found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. roosts in trees, particularly palms. forages over water and among trees.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Lepidium virginicum var. robinsonii Robinson's pepper-grass	CNPS 1B.2	chaparral, coastal scrub. dry soils, shrubland. 1-945m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Lepidium virginicum var. robinsonii Robinson's pepper-grass	CNPS 1B.2	chaparral, coastal scrub. dry soils, shrubland. 1-945m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Lilium parryi lemon lily	CNPS 1B.2	lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest. wet, mountainous terrain; gen in forested areas; on shady edges of streams, in open boggy meadows & seeps. 1300-2790m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Monardella hypoleuca lanata felt-leaved monardella	CNPS 1B.2	chaparral, cismontane woodland. occurs in understory in mixed chaparral, chamise chaparral, and southern oak woodland; sandy soil. 300-1575m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Myotis yumanensis Yuma myotis	CSC	optimal habitats are open forests and woodlands with sources of water over which to feed. distribution is closely tied to bodies of water. maternity colonies in caves, mines, buildings or crevices.	**Low**. No suitable roosting habitat exists within Action Area. Standing water is lacking. Species not detected during field surveys.

Scientific Name **Common Name**	**Status**	**General Habitat & Microhabitat** (copied verbatim from CDFG's RareFind3 Species Accounts)	**Potential to Occur in Action Area**
Neotoma lepida intermedia San Diego desert woodrat	CSC	coastal scrub of southern California from San Diego County to San Luis Obispo County. moderate to dense canopies preferred. they are particularly abundant in rock outcrops & rocky cliffs & slopes.	**Moderate**. Suitable habitat exists within Action Area, but as an isolated patche in between orchards. Species not detected during field surveys.
Nolina cismontana Peninsular nolina	CNPS 1B.2	chaparral, coastal scrub. primarily on sandstone and shale substrates; also known from gabbro. 140-1275m.	**Low**. Some suitable habitat exists within Action Area, but substrate is lacking. Species not detected during field surveys.
Nycticorax nycticorax black-crowned night heron	CSC	colonial nester, usually in trees, occasionally in tule patches. rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots.	**Low**. No suitable foraging or rookery habitat exists within Action Area. Species not detected during field surveys.
Nyctinomops femorosaccus pocketed free-tailed bat	CSC	variety of arid areas in southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian. rocky areas with high cliffs.	**Low**. Some suitable habitat exists within Action Area, but roosting habitat is lacking. Species not detected during field surveys.
Packera ganderi Gander's ragwort	CNPS 1B.2	chaparral. recently burned sites and gabbro outcrops. 400-1200m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Perognathus longimembris brevinasus Los Angeles pocket mouse	CSC	lower elevation grasslands & coastal sage communities in and around the Los Angeles basin. open ground with fine sandy soils. may not dig extensive burrows, hiding under weeds & dead leaves instead.	**Moderate**. Suitable habitat exists within Action Area, but Action Area is outside of species' distribution. Species not detected during field surveys.
Phrynosoma coronatum (blainvillii population) coast (San Diego) horned lizard	CSC	inhabits coastal sage scrub and chaparral in arid and semi-arid climate condition. prefers friable, rocky, or shallow sandy soils.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Plegadis chihi white-faced ibis	CSC	shallow fresh-water marsh. dense tule thickets for nesting interspersed with areas of shallow water for foraging.	**Low.** Suitable habitat does not exist within Action Area. Species not detected during field surveys, but CNDDB reports historic sighting adjacent to Action Area.
Polioptila californica californica coastal California gnatcatcher	FT	obligate, permanent resident of coastal sage scrub below 2500 ft in southern California. low, coastal sage scrub in arid washes, on mesas & slopes. not all areas classified as coastal sage scrub are occupied.	**High**. Suitable habitat exists within Action Area. Species not detected during field surveys, but CNDDB reports historic sighting adjacent to Action Area.
Rallus longirostris levipes light-footed clapper rail	FE, CE	found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation. requires dense growth of either pickleweed or cordgrass for nesting or escape cover; feeds on molluscs and crustaceans.	**Unlikely**. Suitable coastal habitat does not exist within Action Area. Species not detected during field surveys.
Satureja chandleri San Miguel savory	CSC	chaparral, cismontane woodland, coastal scrub, rip woodland, valley and foothill grassland. rocky, gabbroic or metavolcanic substrate. 120-1005m.	**Moderate**. Suitable habitat exists within Action Area, but as isolated patches in between orchards. Species not detected during field surveys.
Schizymenium shevockii Shevock's copper moss	CNPS 1B.2	cismontane woodland. moss on metamorphic rocks, mesic sites. on rocks along roads, in same habitat as *Mielichhoferia elongata*. 750-1400m.	**Low.** Suitable habitat is lacking within Action Area. Species not detected during field surveys.

Scientific Name **Common Name**	**Status**	**General Habitat & Microhabitat** (copied verbatim from CDFG's RareFind3 Species Accounts)	**Potential to Occur in Action Area**
Spea hammondii western spadefoot	CSC	occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. vernal pools are essential for breeding and egg-laying.	**None.** No suitable habitat or vernal pools within Action Area. Species not detected during field surveys.
Sternula antillarum browni California least tern	FE, CE	nests along the coast from San Francisco bay south to northern Baja California. colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, land fills, or paved areas.	**Low.** Suitable habitat is lacking within Action Area. Species not detected during field surveys.
Streptocephalus woottoni Riverside fairy shrimp	FE	endemic to w Riv, Ora & Sdg counties in areas of tectonic swales/earth slump basins in grassland & coastal sage scrub. inhabit seasonally astatic pools filled by winter/spring rains. hatch in warm water later in the season.	**None.** No suitable habitat or vernal pools within Action Area. Species not detected during field surveys.
Taxidea taxus American badger	CSC	most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. need sufficient food, friable soils & open, uncultivated ground. prey on burrowing rodents. dig burrows.	**High**. Suitable habitat exists within Action Area. Burrow typical of badger detected during field surveys.
Tetracoccus dioicus Parry's tetracoccus	CNPS 1B.2	chaparral, coastal scrub. stony, decomposed gabbro soil. 150-1000m.	**Low**. Some suitable habitat exists within Action Area, but substrate is lacking. Species not detected during field surveys.
Thamnophis hammondii two-striped garter snake	CSC	coastal California from vicinity of Salinas to northwest Baja California. from sea to about 7,000 ft elevation. highly aquatic, found in or near permanent fresh water. often along streams with rocky beds and riparian growth.	**None.** No suitable habitat or standing water within Action Area. Species not detected during field surveys.
Tortula californica California screw moss	CNPS 1B.2	chenopod scrub, valley and foothill grassland. moss growing on sandy soil. 10-1460m.	**Unlikely.** No suitable habitat within Action Area. Species not detected during field surveys.
Vireo bellii pusillus least Bell's vireo	FE, CE	summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. nests placed along margins of bushes or on twigs projecting into pathways, usually willow, baccharis, mesquite.	**High**. Suitable habitat exists within Action Area. Species not detected during field surveys, but CNDDB reports historic sighting adjacent to Action Area.

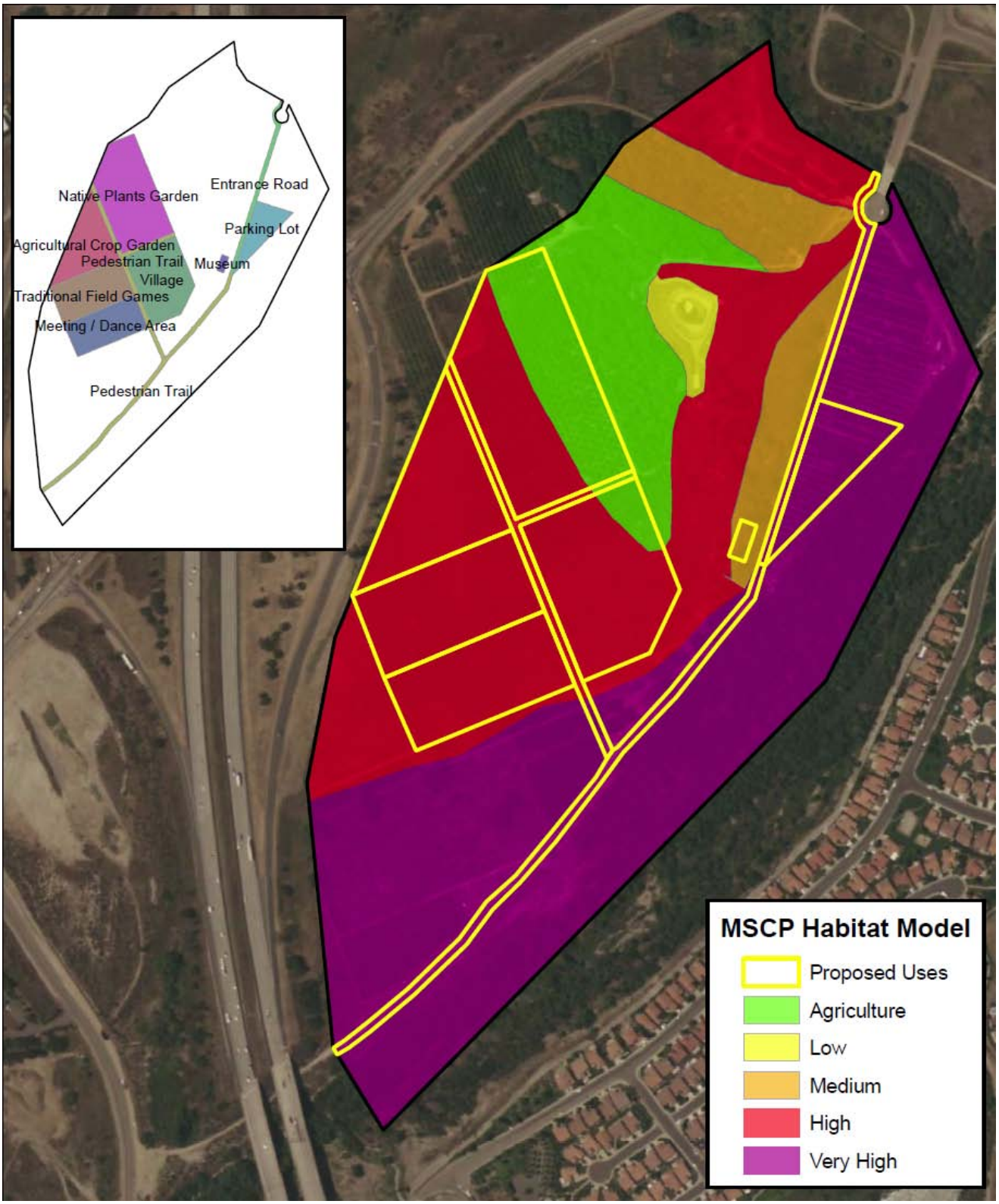
EXHIBIT 11: LIST OF FLORA AND FAUNA OBSERVED WITHIN THE ACTION AREA

Scientific Name	Common Name
Adenostoma fasciculatum	Chamise
Ambrosia psilostachya	Western ragweed
Artemisia californica	California sagebrush
Arundo donax	Giant reed (invasive)
Avena fatua	Wild oat
Baccharis pilularis	Coyotebrush
Baccharis salicifolia	Mulefat
Brassica nigra	Black mustard
Brickellia californica	California brickelbush
Bromus spp.	Chess grass
Carduus pycnocephalus	Italian thistle (invasive)
Carex spissa	San Diego sedge
Centaurea spp.	Star thistle
Chamaesyce sp.	Spurge
Chrysothamnus	Rabbitbrush
Cirsium sp.	Thistle
Citrus sp.	Citrus (cultivated)
Cortaderia sp.	Pampas grass
Crassula sp.	Jade plant (ornamental)
Crocosmia	Crocosmia (ornamental)
Cucurbitaceae	Melon, cultivated
Cuscuta sp.	Dodder
Cynodon dactylon	Bermuda grass
Cyperus sp.	Nutsedge
Datura stramonium	Jimsonweed
Dudleya pulverulenta pulverulenta	California chalk lettuce
Encelia californica	Bush sunflower
Eriodictyon californicum	Yerba santa
Eriogonum fasciculatum foliolosum	California buckwheat
Erodium botrys	Long-beak filaree
Eremocarpus setigerus	Turkey mullein
Erigeron cf. foliolosus	Fleabane (non-flowering material)
Eriogonum gracile var. incultum	Slender buckwheat
Eucalyptus	Blue gum eucalyptus
Ficus sp.	Fig, cultivated
Foeniculum vulgare	Fennel
Galium porrigens	Climbing bedstraw
Heliotropium cuassavicum	Chinese parsley
Juncus xiphioides	Iris leaved rush
Lolium multiflorum	Italian ryegrass
Macadamia tetraphylla	Macadamia (cultivated)
Malosma laurina	Laurel sumac
Marrubium vulgare	White horehound
Mesembryanthemum sp.	Iceplant (ornamental)
Nerium oleander	Oleander
Nicotiana sp.	Tree tobacco (invasive)
Oenothera glazioviana	Red sepaled evening primrose
Opuntia sp.	Prickly pear
Opuntia californica	Snake cholla
Pellaea sp.	cliffbrake
Phoenix sp.	Date palm (ornamental)
Phoradendron sp.	Mistletoe

Scientific Name	Common Name
Platanus racemosa	Western sycamore
Pluchea odorata	Marsh fleabane
Polypogon monspeliensis	Annual rabbitsfoot grass
Populus fremontii	Cottonwood
Prunus sp.	Stonefruit
Quercus agrifolia	Coast live oak
Ricinus communis	Castor bean
Rhus integrifolia	Lemonade sumac
Rorippa nasturtium-aquaticum	Watercress
Rumex crispus	Curly dock
Salix lasiolepis	Arroyo willow
Salix gooddingii	Goodding's Willow
Salix exigua	Narrow leaved Willow
Salvia apiana	White sage
Sambucus mexicanus	Blue elderberry
Schinus molle	Peruvian peppertree (ornamental)
Tamarix aphylla	Salt cedar
Toxicondendron diversilobum	Poison oak
Typha latifolia	Cattail
Urtica sp.	Stinging nettle
Vitis californica	California wild grape
Vitis vinifera	Grape, cultivated
Washingtonia sp.	Palm (ornamental)
Xanthium strumarium	Cocklebur (invasive)
Yucca sp.	Yucca, ornamental

Scientific Name	Common Name
Aphelocoma californica	Western scrubjay
Argiope sp.	Orbweaver spider
Araneae	Several other spider species
Buteo jamaicensis	Red-tailed hawk
Canis latrans	Coyote, scat, skull
Calypte anna	Anna's Hummingbird
Carpodacus mexicanus	house finch
Cathartes aura	Turkey vulture
Chamaea fasciata	Wrentit
Corvus brachyrhynchos	American crow
Falco sparverius	American kestrel (song only)
Formicidae	Several ant species
Gryllidae	cricket
Hirundo rustica	Barn swallow (empty nest)
Hymenoptera spp.	Several social bee species
Neotoma sp.	Packrat, middens only
Mimus polyglottos	Mockingbird
Odocoileus hemionus	Black-tailed deer, tracks only
Orthoptera	Grasshopper
Pentatomidae	Stink bug
Psaltriparus minimus	Bushtit
Procyon lotor	Raccoon, tracks only
Sceloporus occidentalis	Western fence lizard
Sciurus griseus	Gray squirrel, nest only
Spermophilus beecheyi	Ground squirrel, colonies
Sylvilagus audubonii	Audubon's cottontail
Taxidea taxus	American badger (burrow only)
Tyrannus verticalis	Western kingbird (song only)
Vanessa sp.	Painted lady butterfly
Zenaida macroura	Mourning dove

EXHIBIT 12: PROPOSED LAND USES (INSET), AND OVERLAY OF PROPOSED LAND USES ON MSCP HABITAT MODEL



APPENDIX B

CULTURAL RESOURCE ASSESSMENT (CONFIDENTIAL REPORT)

APPENDIX C

FARMLAND CONVERSION RATING FORM

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 3/24/10
Name Of Project Pala Gateway	Federal Agency Involved Bureau of Indian Affairs
Proposed Land Use Cultural Center Complex	County And State San Diego, CA
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 3/24/10

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).*	Yes ☑	No ☐	Acres Irrigated 69537 / Average Farm Size 80
Major Crop(s) avocados, citrus, flowers,wine gra	Farmable Land In Govt. Jurisdiction Acres: 112,974 % 8		Amount Of Farmland As Defined in FPPA Acres: 91,812 % 3
Name Of Land Evaluation System Used CA Revised Storie Index	Name Of Local Site Assessment System San Diego County LESA System		Date Land Evaluation Returned By NRCS 3/29/10

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	76.4			
B. Total Acres To Be Converted Indirectly	0.0			
C. Total Acres In Site	76.4	0.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	22.0			
B. Total Acres Statewide And Local Important Farmland	6.6			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.0			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	DATA NOT AVAILABLE			
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	65	0	0	0

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points				
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
TOTAL SITE ASSESSMENT POINTS	160	0	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	65	0	0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	160	0	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	65	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ☐

Reason For Selection:

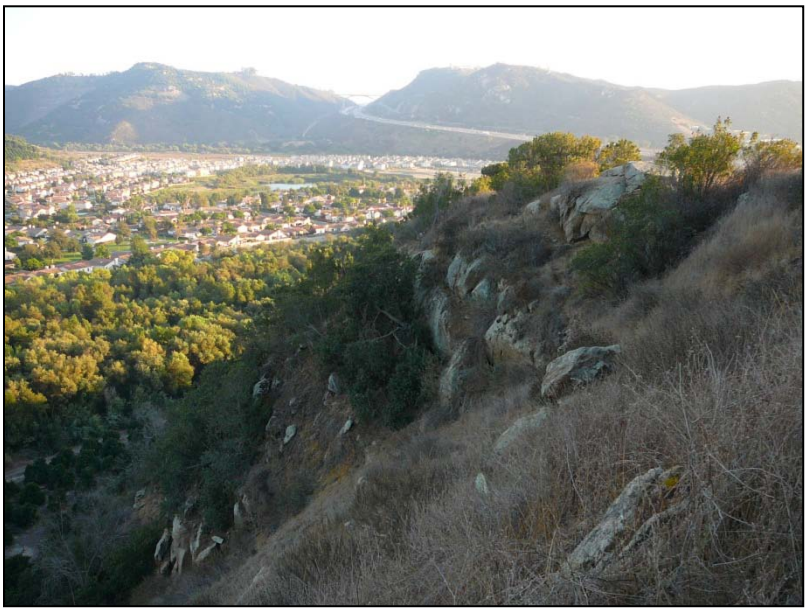
This form was electronically produced by National Production Services Staff

APPENDIX D

PHASE I HAZARDOUS MATERIALS ASSESSMENT

PHASE I ENVIRONMENTAL SITE ASSESSMENT
FOR THE
PALA GATEWAY PROPERTY

13 October 2009



Prepared for:

Environmental Data Systems, Inc.

and

Pala Band of Mission Indians

Prepared by:

NATURAL INVESTIGATIONS CO.
WWW.NATURALINVESTIGATIONS.COM

Natural Investigations Company
1017 Carter Street, Folsom, CA 95630
(916) 452-5442

TABLE OF CONTENTS

EXECUTIVE SUMMARY

This report presents the findings of a Phase I Environmental Site Assessment (ESA) for the Pala Gateway property located in the southeast corner of the intersection of Interstate 15 and State Route 76, in Fallbrook, San Diego County, California. The subject property ("Property") consists of three joined parcels, totaling approximately 90.5 acres, Assessor's Parcel Numbers 125-063-02, 125-063-09, and 125-100-10. Natural Investigations Company has performed this Phase I ESA in conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) Practice E 1527-05 and in accordance with the prevailing standard of care for completing such assessments in California at this time. Exceptions to, or deletions from, this practice are described in Section 10 of this report. It is Natural Investigations Company's opinion that there is one historic recognized environmental condition, but no current recognized environmental conditions, in connection with the Property pursuant to the ASTM Practice E 1527-05.

The use of the Property for agricultural operations since the 1920s is an historic recognized environmental condition. Agricultural operations on the Property involved the regular storage and use herbicides and pesticides, the fueling of farm equipment with above ground diesel fuel storage tanks, and the application of waste oil to the ground for weed control; such operations resulted in the detection of some shallow soil contamination, reported in the Phase I ESA performed by MAZ Environmental in 2006. In 2007, Kleinfelder, Inc., performed a limited Phase II ESA investigation. Results of soil and groundwater sampling revealed no residual herbicides or pesticides, but some samples did contain total petroleum hydrocarbons in the diesel range and some contained heavy metals; arsenic in particular was detected at significant concentrations. Kleinfelder (2007) did not recommend further investigation for the following reasons. The concentrations and types of residual petroleum hydrocarbons found at the site (diesel and oil) would not typically require remediation. Similar arsenic concentrations have been found in soil samples of natural reference sites. Converse Consultants, Inc. (2007) found similar contamination on the Pankey Farm north, and upgradient, of the Property. Similarly, Converse Consultants Inc. (2007) did not recommend further investigation, and concluded that the petroleum product contamination was considered a low risk. Therefore, no further site investigation is recommended.

Records review, database searches, or interviews failed to identify any environmental conditions in connection with the Property other than *de minimis* use of solid waste on the riverbank for erosion control. No significant data gaps or data failures were identified that affect the ability of the Environmental Professional to identify recognized environmental conditions. There are no unusual circumstances where greater certainty is required regarding recognized environmental conditions. Therefore, no additional assessment is recommended at this time. Based on the findings of this supplemental Phase I ESA, no new areas or concerns were noted that were not already addressed in the 2007 Limited Phase II ESA.

However, ground disturbance or excavation during construction of the proposed project and associated property improvements could pose a risk to human health for construction personnel if contaminants or unknown objects are encountered. Hazards include ignition of flammable liquids or vapors, inhalation of toxic vapors in confined spaces such as trenches, skin contact with contaminated soil or water, or the excavation of undocumented obstructions such as underground storage tanks (USTs), piping, or solid waste, that might pose a hazard of explosion or ground collapse.

A Health and Safety Plan (HASP) prepared for the construction process, consistent with general industry standards and the Occupational Safety and Health Administration, could address any risks to construction personnel and public safety such that these health and safety risks could be mitigated to a less-than-significant level.

This summary should only be read in conjunction with the full text of the report. The scope of work, significant assumptions, limitations, and exceptions should be understood prior to reading the site-specific information, findings, opinions, and conclusions.

1. INTRODUCTION

1.1. PURPOSE

The Small Business Liability Relief and Brownfields Revitalization Act of 2002 directed the United States Environmental Protection Agency to promulgate a rule defining due diligence for compliance with the Comprehensive Environmental Response, Compensation and Liability Act. In 2005 this rule, referred to as the All Appropriate Inquiry Rule, was adopted. This Rule states that ASTM Practice E 1527-05 complies with the requirements for All Appropriate Inquiry, and in some cases, this ASTM Practice is more stringent than the All Appropriate Inquiry Rule.

The ASTM (2005) defines the purpose of the Phase I ESA as quoted:
"*The purpose of this practice is to define good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)(42 U.S.C. §9601) and petroleum products. As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability (hereinafter, the 'landowner liability protections,' or 'LLPs'): that is, the practice that constitutes 'all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice' as defined at 42 USC § 9601(35)(B)*." (page 1, ASTM, 2005).

1.2. DETAILED SCOPE OF SERVICES

The ASTM (2005) describes the general scope of services in the following excerpts:
"*A Phase I Environmental Site Assessment shall have four components: records review; site reconnaissance; interviews; and report*." (page 12, ASTM, 2005).

"*In defining a standard of good commercial and customary practice for conducting an environmental site assessment of a parcel of a property, the goal of the processes established by this practice is to identify recognized environmental conditions. The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a threat to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies*." (page 1, ASTM, 2005).

"*The scope of this practice includes research and reporting requirements that support the user's ability to qualify for the LLPs. As such, sufficient documentation of all sources, records, and resources utilized in conducting the inquiry required by this practice must be provided in the written report*." (page 2, ASTM, 2005).

The scope of services was limited to a qualitative evaluation of environmental conditions of the Study Area. The specific scope of services performed for this Phase I ESA included the following tasks:

- Records research, including review of title records (title report provided by user), historical aerial photography, topographic maps, fire insurance maps and municipal and county case files;
- Requisition and analysis of an environmental database query report from a reputable research company;
- Site reconnaissance, including photographic documentation;
- Interviews, where possible, with previous and current property owners and tenants;
- Interaction with applicable municipal and state agency personnel to review available environmental records and permits;
- Preparation and submittal of a Phase I ESA report summarizing the results of the records research, site reconnaissance, and interviews, the rendering of a professional opinion on any recognized environmental conditions and impacts upon the property, and the inclusion of all reference material.

The scope of services does not include other services that are not described in this report. Section 1.4 details limitations, exceptions, and significant assumptions to the performance of this Phase I ESA.

1.3. SIGNIFICANT ASSUMPTIONS

Natural Investigations Company made the following assumptions for this assessment:

- No site-specific hydrological data on the direction of groundwater flow was readily available. In the absence of such empirical data, the direction of groundwater flow is typically assumed to mirror surface water flow. In other words, the water table typically follows surficial topography (Delleur 2007). Therefore, the direction of onsite groundwater flow was inferred to be to the southwest, which is the predominant topographic slope on the Property.
- Not all portions of the southern border of the Property were physically walked; the riparian vegetation was too thick to penetrate in some areas without a machete. These areas were viewed from the river terrace above.

1.4. LIMITATIONS AND EXCEPTIONS

ASTM Standard Practice E 1527-05 cites limitations and exceptions in the performance of a Phase I ESA. Some of the most important limitations are quoted in the following excerpts:

"*This practice does not address whether requirements in addition to appropriate inquiry have been met in order to qualify for the LLPs (for example, the duties specified in 42 U.S.C. § 9607(b)(3)(a) and (b)*." (page 1, ASTM, 2005).

"*This practice does not address requirements of any state of local laws or of any federal laws other than the all appropriate inquiry provisions of the LLPs. Users are cautioned that federal, state, and local laws may impose environmental assessment obligations that are beyond the scope of this practice. Users should also be aware that there are likely to be other legal obligations with regard to hazardous substances or petroleum products discovered on property that are not addressed in this practice and that may pose risks of civil and/or criminal sanctions for non-compliance*." (pages 1-2, ASTM, 2005).

"*No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property, and this practice recognizes reasonable limits of time and cost*." (page 9, ASTM, 2005).

"*Appropriate inquiry does not mean an exhaustive assessment of a clean property. There is a point at which the cost of information obtained or the time required to gather it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. One of the purposes of this practice is to identify a balance between the competing goals of limiting the costs and time demands inherent in performing an environmental site assessment and the reduction of uncertainty about unknown conditions resulting from additional information*." (page 9, ASTM, 2005).

"*Not every property will warrant the same level of assessment. Consistent with good commercial or customary practice, the appropriate level of environmental site assessment will be guided by the type of property subject to assessment, the expertise and risk tolerance of the user, and the information developed in the course of the inquiry*" (page 10, ASTM, 2005).

"*This practice does not include any testing or sampling of materials (for example, soil, water, air, building materials*." (page 12, ASTM, 2005).

"*An environmental professional is not required to verify independently the information provided but may rely on information provided unless he or she has actual knowledge that certain information is incorrect or unless it is obvious that certain information is incorrect based on other information obtained in the Phase I Environmental Site Assessment or otherwise actually known to the environmental professional*." (page 12, ASTM, 2005).

"*There may be environmental issues or conditions at a property that parties may wish to assess in connection with commercial real estate that are outside of the scope of this practice (the non-scope considerations). As noted by the legal analysis in Appendix X1 of this practice, some substances may be present on the property in quantities and under conditions that may lead to contamination of the property or of nearby properties but are not included in CERCLA's definition of hazardous substances (42 U.S.C. § 9601(14)) or do not otherwise present potential CERCLA liability. In any case, they are beyond the scope of this practice*." (page 21, ASTM, 2005).

"*Whether or not a user elects to inquire into non-scope considerations in connection with this practice or any other environmental site assessment, no assessment of such non-scope considerations is required for appropriate inquiry as defined by this practice*." (page 21, ASTM, 2005).

"*There may be standards of protocols for assessment of potential hazards and conditions associated with non-scope conditions developed by governmental entities, professional organizations, or other private entities*." (page 21, ASTM, 2005).

"*Following are several non-scope considerations that persons may want to assess in connection with commercial real estate. No implication is intended as to the relative importance of inquiry into such non-scope considerations, and this list of non-scope considerations is not intended to be all-inclusive: asbestos-containing materials; radon; lead-based paint; lead in drinking water; wetlands; regulatory compliance; cultural and historical resources; industrial hygiene; health and safety; ecological resources; endangered species; indoor air quality; biological agents; and mold*." (page 22, ASTM, 2005).

No other exceptions are noted.

1.5. SPECIAL TERMS AND CONDITIONS

There are no special terms or conditions noted for this Phase I ESA. Natural Investigations completed this new Phase I ESA to supplement and update the existing Phase I ESA completed in 2006 by MAZ Environmental, Inc. This Phase I ESA was performed primarily to supply information on hazards and hazardous materials to assist in the preparation of an environmental assessment report for NEPA compliance purposes.

1.6. USER RELIANCE

ASTM Standard Practice E 1527-05 describes the use of a Phase I ESA as:

"*This practice is intended for use on a voluntary basis by parties who wish to assess the environmental condition of commercial real estate taking into account commonly known and reasonably ascertainable information. While use of this practice is intended to constitute all appropriate inquiry for purposes of the LLPs, it is not intended that its use be limited to that purpose. This practice is intended primarily as an approach to conducting an inquiry designed to identify recognized environmental conditions in connection with a property*."

ASTM Standard Practice E 1527-05 defines the "User" as:
"*The party seeking to use Practice E 1527 to complete an environmental site assessment of the property. A user may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager. The user has specific obligations for completing a successful application of this practice as outlined in Section 6*."

In the case of this contracted assessment, the User is Environmental Data Services, Inc., who is contracted by the Pala Band of Mission Indians to assist in compliance with the National Environmental Policy Act.

This report and other instruments or service are prepared and made available for the sole use of the User and their agents in accordance with the contract under which these services have been provided. The contents should not be used or relied upon by any other persons without the express written consent and authorization of the User. Any reliance on this report by Third Parties shall be at the Third Party's sole risk.

This report should not be relied upon after 180 days from the date of issuance, unless supplemental services are performed as defined in ASTM E 1527-05 Sections 4.6 and 4.7.

1.6.1. Continuing Obligations Of The User

In order to retain landowner liability protections, the User (or more specifically, the landowner) must satisfy a number of statutory requirements that are generally referred to as Continuing Obligations, which are outside the Scope of Services of the Phase I ESA. The five general obligations are: (1) complying with land use restrictions and institutional controls; (2) taking reasonable steps with respect to hazardous substance releases; (3) providing full cooperation, assistance, and access to persons that are authorized to conduct response actions or natural resource restoration; (4) complying with information requests and administrative subpoenas; and (5) providing legally required notices (page 29, ASTM, 2005). Failure to comply with these or other statutory post-acquisition requirements will jeopardize liability protection. Note that the Phase I ESA does not address CERCLA requirements other than appropriate inquiry. The ASTM Practice E 1527-05 explains:
"*This practice does not address whether requirements in addition to all appropriate inquiry have been met in order to qualify for the LLPs (for example, the duties specified in 42 U.S.C. §9607(b)(3)(a) and (b) and cited in Appendix X1, including the continuing obligation not to impede the integrity and effectiveness of activity and use limitations (AULs), or the duty to take reasonable steps to prevent releases, or the duty to comply with legally required release reporting obligations).*" (page 1)

1.7. DISCLAIMER

Natural Investigations Company, as an independent and impartial contractor, has completed this Phase I ESA in accordance with ASTM guidelines and in accordance with the prevailing standard of care for completing such assessments in California at this time. Phase I ESAs are non-

comprehensive by nature and are unlikely to identify all environmental problems or eliminate all risk. This report is a qualitative assessment; it is not possible to absolutely confirm that no hazardous substances or petroleum products exist at the Property. This report should not be regarded as a guarantee that no further contamination beyond that which could be detected within the scope of this assessment is present at the Property. Although risk can never be eliminated, more detailed and extensive investigations (e.g. Phase II ESAs) yield more information, which may help the User understand and better manage risks associated with real estate. No warranty, either expressed or implied, is made. Land use, site conditions, and other factors will change over time. Events may also occur after the reconnaissance visit to the Property, which may result in contamination of the Property. Additional information, which was not found or available to Natural Investigations Company at the time of report preparation, may result in a modification of the conclusions and recommendations presented.

The property owner is solely responsible for notifying all governmental agencies, and the public at large, of the existence, release, treatment, or disposal of, any hazardous substance or petroleum product occurring on the Site, either before, during, or after Natural Investigation Company's services. Natural Investigation Company assumes no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury which results from pre-existing materials being encountered or being present on the Site, or from the discovery of such hazardous substances or petroleum products.

2. SITE DESCRIPTION

2.1. LOCATION AND LEGAL DESCRIPTION

The subject property (hereafter, "Property") of this Phase I ESA is located in the unincorporated town of Fallbrook, San Diego County (hereafter, "County"), California (Figure 2-1). The Property consists of three joined parcels, totaling approximately 90.5 acres, without a physical address yet assigned by the County: the approximate address range is the upper 4000s block of Pala/Temecula Road on the northern boundary and the upper 3000s number block of Pankey Road on the eastern boundary. The Assessor's Parcel Number (APN) and acreage of each parcel is: 125-063-02, 0.85 acres (a dirt road); 125-063-09, 62.47 acres (the upper portion of the Property); APN 125-100-10, 27.21 acres (the lower portion of the Property).

2.2. SITE AND VICINITY GENERAL CHARACTERISTICS

The County Assessor's office assigns APN 125-063-09 and 125-100-10 the zoning of "Agricultural" and the land use type "Special/Misc. Irrigated Farmland".

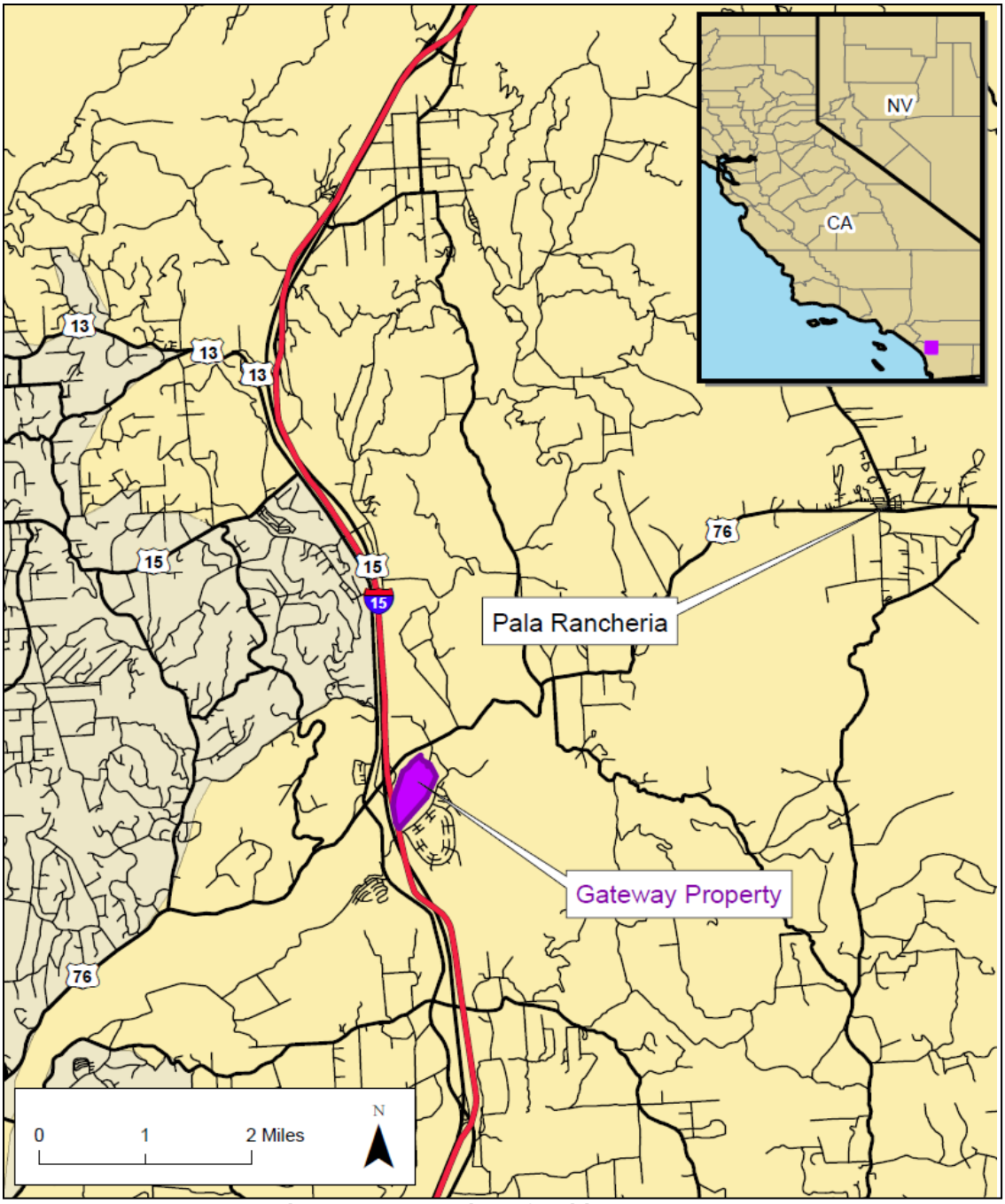


Figure 2-1. Location of Subject Property

2.3. CURRENT USE OF THE PROPERTY

The Property is currently used for agricultural production, for telecommunications relay, and other utility easements. The majority of the arable land is currently fallow (with orchard trees removed or mulched in place).

2.4. DESCRIPTIONS OF IMPROVEMENTS ON THE PROPERTY

Structures on the Property consist of the following: an open shed housing electronic fuseboxes; an abandoned mechanics shed (see following figure); two wind machines (see following figure); and several generators and telecommunications vaults and associated cell towers. Other improvements consist of: a cement-lined reservoir; dirt roads; overhead powerlines; groundwater pump and irrigation systems.

MAZ Environmental (2006) describes previous land uses as follows:

"*According to Mr. Pankey, his family bought a cattle ranch that included the Property in 1947. His father constructed the reservoir located in the northeastern portion of the Property in 1948. During the early 1950s they began farming the Property. The lower areas were cultivated with lima beans and black-eyed peas and avocados and citrus trees were planted on the hillsides. By 1970 avocados and citrus orchards were planted on the lower areas of the Property, replacing the beans and peas. By 1978 the construction of the I-15 northbound off ramp was underway, but was not yet connected to the highway. Use of the Property remained largely unchanged through the 1980s to the present*." (p. 4, MAZ Environmental 2006).

The following structures reported to be present in 2006 by MAZ Environmental (2006) could not be located or detected during the site visit:

"*According to Mr. Pankey, a small ranch operations area was located on the southern portion of the Property in approximately 1978. The facilities included a sheet metal work shop/storage shed and four above ground diesel fuel storage tanks (ASTs); one 6,000-gallon, two 5,000-gallon, and one 4,000-gallon. Mr. Pankey informed us that the ASTs were emptied in 1986 and removed in 2004*." (p. 4, MAZ Environmental 2006).

2.5. CURRENT USES OF THE ADJOINING PROPERTIES

Current uses of adjoining properties are as follows: to the north, an abandoned house with warning/trespassing advisory signage by Caltrans, the Highway 76 Fruit Stand (at 4881 Highway 76), and the SR 76 corridor, and fallow fields of the Pankey Farm (Meadowood subdivision is in planning stage); to the east, a small riparian corridor, the intersection of Pankey Road and Shearer Crossing, and agricultural operations (primarily orchards); to the south, after crossing San Luis Rey River, Shearer Crossing Road turns into Dulin Road, which leads into the planned community of Lake Rancho Viejo; and to the west, the Interstate 15 corridor, and the community

of Pala Mesa, including a Mobil fuel station and Pala Mesa Market, and the Old Highway 395 corridor.

The following utility services serve the region at the time of the assessment:

- Electricity: San Diego Gas and Electric Company
- Natural Gas: private aboveground storage tanks filled by vendor, or connection to gas pipeline provided by San Diego Gas and Electric Company
- Potable Water: private wells, or connection to municipal sources provided by San Luis Rey Water District or the adjacent Rainbow Municipal Water District
- Wastewater: private septic system/leach fields, or connection to the sanitary sewer system of San Luis Rey Water District or the adjacent Rainbow Municipal Water District
- Solid Waste: private waste removal service such as Fallbrook Waste and Recycling Services.

3. USER-PROVIDED INFORMATION

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the User must provide the following information (if available) to the environmental professional (Natural Investigations Company). Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete:

- Environmental cleanup liens that are filed or recorded against the site.
- Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry.
- Specialized knowledge or experience of the person seeking to qualify for the LLP.
- Commonly known or reasonably ascertainable information about the property.
- Relationship of the purchase price to the fair market value of the property if it were not contaminated.
- The degree of obviousness of the presence of likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation. (p. 33)

3.1. REQUESTED DOCUMENTS AND INFORMATION

In order to facilitate, and document, the collection of this information, Natural Investigations Company requested documents listed in the previous Section. The following documents were provided by the Tribe to Natural Investigations Company for this assessment:

- title report
- zoning report
- previous Phase I ESA and Phase II ESA.

3.2. TITLE RECORDS, ENVIRONMENTAL LIENS, OR ACTIVITY AND USE LIMITATIONS

User's responsibilities, defined by the ASTM E 1527-05 standard, include the following:
"*Any environmental liens or activity and use limitations so identified shall be reported to the environmental professional conducting a Phase I Environmental Site Assessment. Unless added by a change in the scope of work to be performed by the environmental professional, this practice does not impose on the environmental professional the responsibility to undertake a review of recorded land title records and judicial records for environmental liens or activity and use limitations*." (p. 11, ASTM, 2005)

The Property's title report was provided by the Tribe (Appendix 15.1.1):

- Chicago Title Company. 2006. Reference: Pala Gateway, Preliminary Report. San Diego, California. Order No. 603041203-U50.

In 2006, the property was owned in feet title by DMH Fallbrook 90 LLC. Numerous easements are recorded (Chicago Title Co. 2006). San Diego County has liens or easements for property taxes, public highway, and water course. San Diego Gas and Electric Company has numerous easements for public utilities and ingress and egress (overhead electric lines). Rainbow Municipal Water District has an easement for pipelines and ingress and egress (sanitary sewer pipeline). The State of California has easements for encroachment, "slope", "slope purposes", and "drainage" (the I-15 corridor). Airtouch Cellular has a lease (cell towers). Discovery Bank has a deed of trust to secure indebtedness (mortgage lien). Discovery Bank also recorded this document:

- "*A document entitled 'Hazardous Substances Certificate and Indemnity Agreement', dated August 19, 2005 executed by DMH Fallbrook 90 LLC, and Discovery Bank, subject to all the terms, provisions and conditions therein contained, recorded September 16, 2005 as File No. 2005-0804618 of official recordings*." (page 8, Chicago Title Co. 2006).

An environmental lien is a charge, security, or encumbrance upon the title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon the property. No environmental liens or activity and use limitations were made aware to Natural Investigations Company. No evidence of environmental liens was identified during the interview process, title review, or records review.

3.3. SPECIALIZED KNOWLEDGE OR ACTUAL KNOWLEDGE

User's responsibilities, defined by the ASTM E 1527-05 standard, include the following:
"*If the user is aware of any specialized knowledge or experience that is material to recognized environmental conditions in connection with the property, it is the user's responsibility to communicate any information based on such specialized knowledge or experience to the environmental professional*." (p. 11, ASTM, 2005)

"*If the user is aware of any commonly known or reasonably ascertainable information within the local community about the property that is material to recognized environmental conditions in connection with the property, it is the user's responsibility to communicate such information to the environmental professional*." (p. 11, ASTM, 2005)

Two previous assessments were provided by the Tribe (see Appendix 15.1.1), and are incorporated by reference:

- MAZ Environmental, Inc. 2006. Phase I Environmental Site Assessment, I-15 Property, Fallbrook, California. Prepared for City Home.
- Kleinfelder, Inc. 2007. Report of Findings, Limited Phase II Environmental Site Assessment, Pala Gateway Property Site, Pala, California. Prepared for the Pala Band of Mission Indians. 8 pp. + appendices.

Interviews by MAZ Environmental (2006) revealed the following:

> "*According to Mr. Pankey, standard equipment maintenance activities, such as changing oil, were reportedly conducted onsite as needed. During the period from the 1950s through the 1970s, the waste oil was reportedly discharged to the ground surface. After the 1970s, the waste oil was collected and painted on the metal farm equipment to prevent rusting. From 1986 to the present, the waste oil generated onsite was collected and stored in 35- to*

55-gallon plastic drums prior to being picked up and transported off-site for recycling by Asbury Environmental Services." (pp. 4-5).

Site reconnaissance by MAZ Environmental (2006) detected the following:

"*Piles of wood and metal debris were present in the vicinity of the northern and southern residential areas. Small areas of minor petroleum hydrocarbon surface staining from leaking vehicles were apparent around the residences.....Staining from the well motor was observed on the concrete motor mount slab....Minor staining of surface soils in the vicinity of the compressor was observed*." (p. 5, MAZ Environmental 2006).

MAZ Environmental (2006) listed various herbicides and pesticides historically used on the Property. Interviews revealed that, "*Mr. Pankey recalls that during the 1970s...Paraquat was used for weed control through approximately 1995, and from approximately 1975 through 1980, diesel was mixed with weed killer to control the weeds between the rows in the orchard*." (p. 7). MAZ Environmental (2006) had the following conclusions:

"*Possible subsurface contamination resulting from pesticide/herbicide use onsite and on the adjacent farmland to the east. "Possible subsurface contamination resulting from storage of diesel fuel in the above ground storage tanks previously located onsite*." (p.8)

MAZ Environmental (2006) had the following recommendations:

"*Conduct a site visit with Mr. Pankey to obtain information regarding the locations the aboveground storage tanks and current and past activities conducted onsite. Obtain information from the Department of Agriculture (Sacramento office) regarding the pesticides/herbicides historically used onsite. Conduct a field investigation to obtain screening-level data regarding the presence of associated pollutants on agricultural and storage lands of the Property*." (p. 9).

Kleinfelder (2007) took 15 soil samples and one water sample on the Property, and tested the samples for total petroleum hydrocarbons (TPH) in the gasoline range and diesel range, organochlorine and organophosphorous pesticides, chlorinated herbicides, and CCR Title 22 metals. Sampling locations are shown in Figure 3-1, and included random locations in the northern and southern orchards, the site of the former fueling station, and the site of the former maintenance shed and vehicle storage. Kleinfelder (2007) reported TPH as diesel in 4 soil samples at concentrations ranging from 7.3 to 390 mg/kg. Metals were detected in some or all of the soils samples; arsenic in particular was detected at significant concentrations. All other samples were non-detect for all analytes analyzed. Kleinfelder (2007) made the following recommendations:

"*Based on Kleinfelder's experience, the concentrations and types of residual TPH found at the site (diesel and oil) would not typically require remediation. Additional assessment of this area could be performed at the Tribe's discretion...No further assessment of herbicides or pesticides is recommended... No further assessment of metals is recommended*." (p. 6)

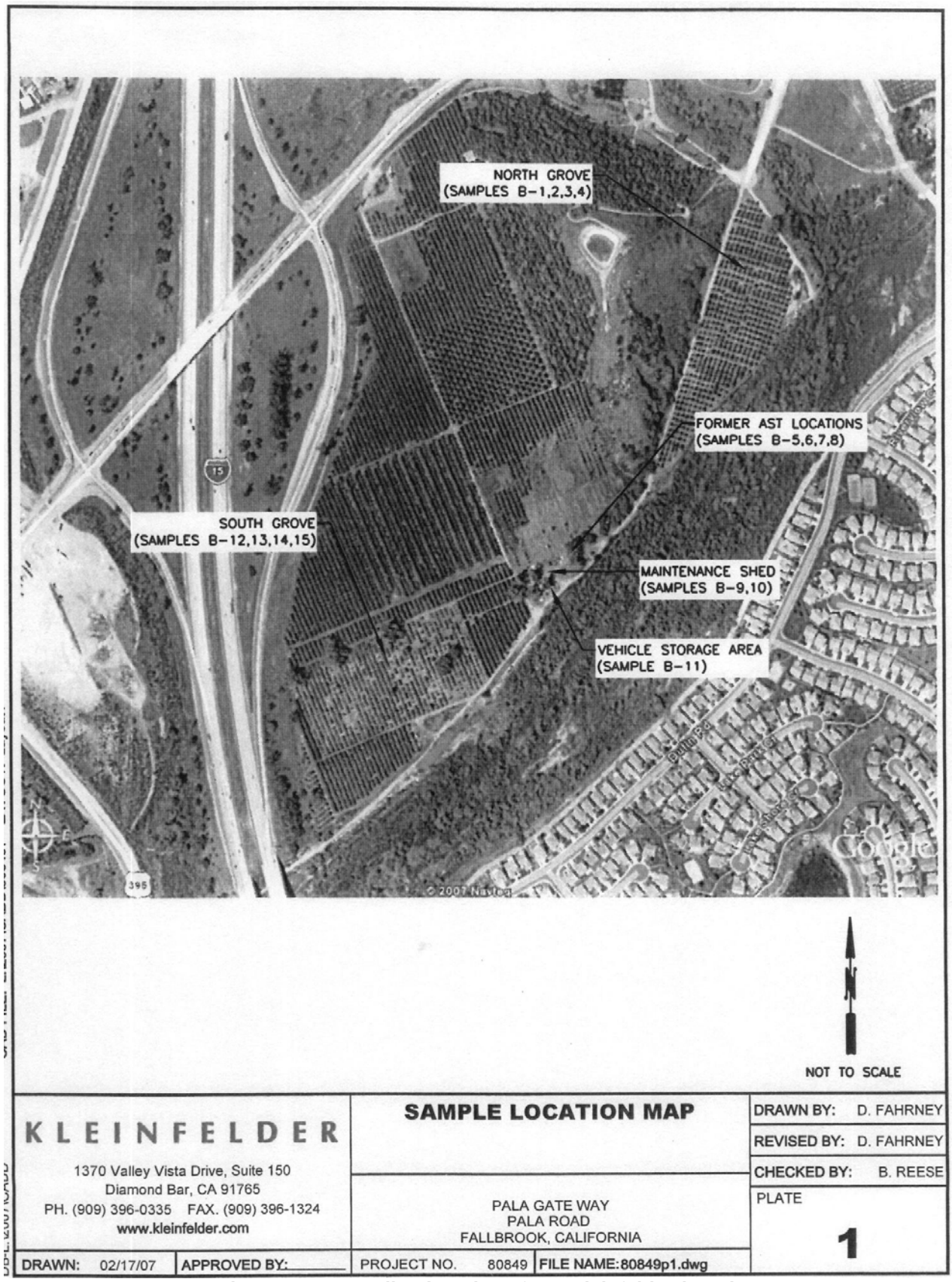


Figure 3-1. Sampling locations from Kleinfelder (2007)

3.4. VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

User's responsibilities, defined by the ASTM E 1527-05 standard, include the following:
"*The user should try to identify an explanation for a lower price which does not reasonable reflect fair market value if the property were not contaminated, and make a written record of such explanation*." (p. 11, ASTM, 2005)

No valuation reductions for environmental issues were made aware to Natural Investigations Company. No valuation reductions were identified during the interview process or by the title review.

3.5. OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

The owner of the Property is Pala Gateway Holdings LLC, which is assumed to be controlled by the Tribe. Kleinfelder (2007) lists Ken Riddle as the "site caretaker."

3.6. REASON FOR PERFORMING PHASE I ESA

User's responsibilities, defined by the ASTM E 1527-05 standard, include the following:
"*Either the user shall make known to the environmental professional the reason why the user wants to have the Phase I Environmental Site Assessment performed or, if the user does not identify the purpose of the Phase I Environmental Site Assessment, the environmental professional shall assume the purpose is to qualify for an LLP to CERCLA liability and state this in the report*." (page 11, ASTM, 2005).

Natural Investigations Company performed this Phase I ESA at the request of Mr. Joe Broadhead, Environmental Data Services Inc., for use in the preparation of an environmental assessment report for the Tribe for compliance with the National Environmental Policy Act, as part of the application process for this Property to be taken into federal trust status for the Tribe.

4. RECORDS REVIEW

4.1. STANDARD ENVIRONMENTAL RECORD SOURCES

As part of this assessment, Natural Investigations Company retained the services of Environmental Data Resources Incorporated (EDR), which queries and maintains comprehensive environmental databases and historical information, including proprietary databases, aerial photography, topographic maps, Sanborn Maps, and city directories. EDR's Phase I ESA standard package - "Radius Map with GeoCheck" was performed on 28 September 2009. An additional 0.5 mile extension of the search radius was ordered because of the large size of the subject property. In this report, EDR presents the results of searches of all reasonably ascertainable environmental databases (federal, state, local, and private) for records of potential environmental impacts of the Property and vicinity. EDR performed these database searches within the prescribed radii of ASTM Practice E 1527-05 (ASTM, 2005). The databases queried by EDR included the following:

Federal ASTM Standard and Supplemental – National Priority List (NPL); proposed NPL; Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS); CERCLIS No Further Remedial Action Planned; Corrective Action Report; Resource Conservation and Recovery Act (RCRA) Information; RCRA Large Quantity Generator; Emergency Response Notification System; Superfund Consent Decrees; Records of Decision; NPL Deletions, Hazardous Materials Information Reporting System; Material Licensing Tracking System; Mines Master Index File; Federal Superfund Liens; PCB Activity Database System; Department of Defense Sites; Indian Reservations; Uranium Mill Tailings Sites; Engineering Controls Sites List; Open Dump Inventory; Formerly Used Defense Sites; RCRA Administrative Action Tracking System; Toxic Chemical Release Inventory System; Toxic Substances Control Act (TSCA); Section 7 Tracking Systems; Federal Insecticide, Fungicide, and Rodenticide Act / TSCA; US Brownfields; US Institutional Control Sites; Voluntary Clean-up Program Properties; State ASTM Standard

and Supplemental – Proposition 65 Records; Toxic Pits Cleanup Act Sites; Bond Expenditure Plan; List of Underground Storage Tank (UST) Facilities; Voluntary Cleanup Program Facilities; Leaking UST on Indian Land; UST on Indian Land; Waste Discharge System; Deed Restriction Listing; Properties Needing Further Evaluation; No Further Action Determination; Well Investigation Program Case List; Emissions Inventory Data; School Property Evaluation Program; Former Manufactured Gas Sites.

The complete EDR Radius Map report is provided in Appendix 15.2.1. Results are summarized in EDR's overview map in the following figure; numbered/lettered elements in EDR's maps correspond to numbered/lettered cases in EDR's report. The Property was not listed in any databases queried by EDR.

Numerous properties in the vicinity of the Property are listed in various databases, as summarized in the following cases:

- Mapped element #A1. I-15 N/B On ramp at SR76, 20-Aug-1991, unspecified release incident, CHMIRS database
- #A2. HWY 76 Overpass above I-15, 11-Nov-1988, unspecified release incident, CHMIRS database
- #A3. HWY 76 0.5 mile East of I-15, 18-Apr-1989, CHMIRS database
- #A4. Highway 15 & 76, 24-Nov-1992, Ryder Truck Rental, diesel release to soil, ERNS database
- #5. Pankey Farms, 3264 Shearer Crossing, registered hazmat business plan, San Diego Co. HMMD
- #6. Granite Construction, 3264, Shearer Crossing, disposal to transfer station of 1,400 tons of organic solids, HAZNET database
- #B7. Mobil Service Station, 4730 Highway 76, registered fuel tanks, UST and SWEEPS UST databases
- #B8. 4730 Highway 76, 6-July-2007, gasoline release at service station, "customer drive off caused this spill", CHMIRS database
- #9. Rainbow MWD-Hydro, 3707 Old Hwy 395, waste discharge permit, NPDES and CA WDS databases
- #C10. Pala Mesa Mkt., 4775 Via Belmonte, registered fuel tanks, HIST UST database
- #C11. Pala Mesa Market, recycler of oil-containing waste, registered fuel tanks, HAZNET, San Diego Co. HMMD, and SWEEPS UST databases
- #D12. ExxonMobil Oil Corp, 4730 Hwy 76, contaminated soil from site clean-up to transfer station, HAZNET database
- #D13. Mobil Station, 4730 Hwy 76., gasoline release, remedial workplan submitted, LUST and CHMIRS databases
- #14. Rainbow Municipal Water Dist., 4555 Highway 76, registered fuel tanks, HIST UST and SWEEPS UST databases

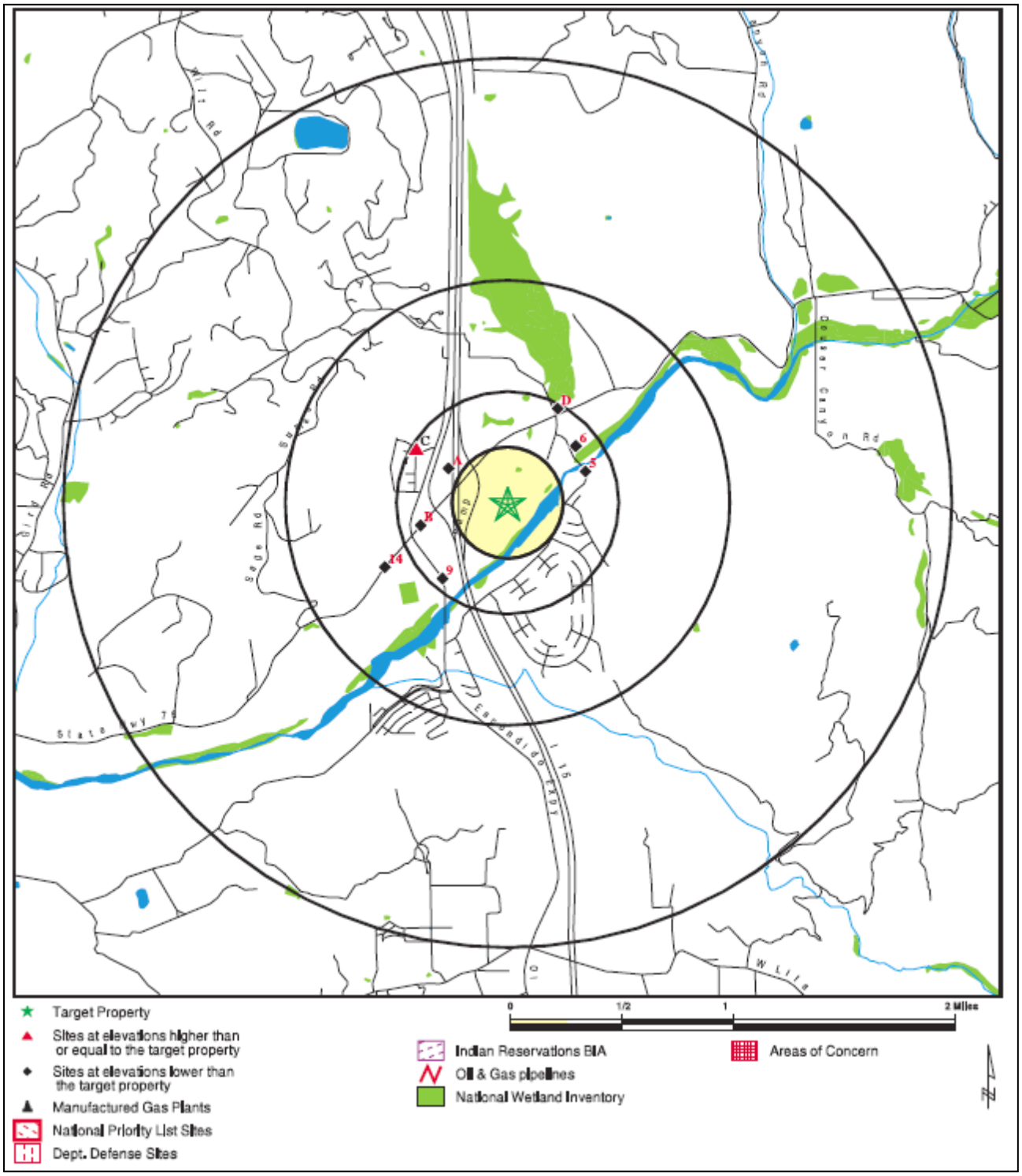


Figure 4-1. Overview Map, EDR Radius Report

4.2. ADDITIONAL ENVIRONMENTAL RECORD SOURCES

4.2.2. Regional Water Quality Control Board Record Search

4.2.2.1. GeoTracker Database

GeoTracker is a geographic information system (GIS) maintained by the California State Water Resources Control Board (SWRCB) that provides online access to environmental data at the Internet address (URL) = http://www.geotracker.swrcb.ca.gov\. GeoTracker is the interface to the Geographic Environmental Information Management System (GEIMS), a data warehouse which tracks regulatory data about underground fuel tanks, fuel pipelines, and public drinking water supplies. GeoTracker and GEIMS were developed pursuant to a mandate by the California State Legislature (AB 592, SB 1189) to investigate the feasibility of establishing a statewide GIS for leaking underground fuel tank (LUFT) sites. GEIMS can store extensive data related to LUFT sites, or any other contaminant release. In addition, GEIMS is used to store and display information from various agencies including water quality information, water use information, and infrastructure data needed to assess both water supplies and contaminant sites. For the SWRCB's groundwater quality assessment goal, GEIMS has been populated with LUFT, public drinking water wells, and fuel pipelines for California. Site information from the Spills, Leaks, Investigations, and Cleanups (SLIC) Program is also included in GeoTracker. The GeoTracker database was queried for environmental data pertaining to the Site on 10 October 2009. Using both spatial queries and text-based searches of bounding street addressees in GeoTracker, no reported cases were found on the Property or adjoining properties (see following figure). The nearest reported cases are at the Mobil service station in the northwest corner of the I-15 / SR76 junction.

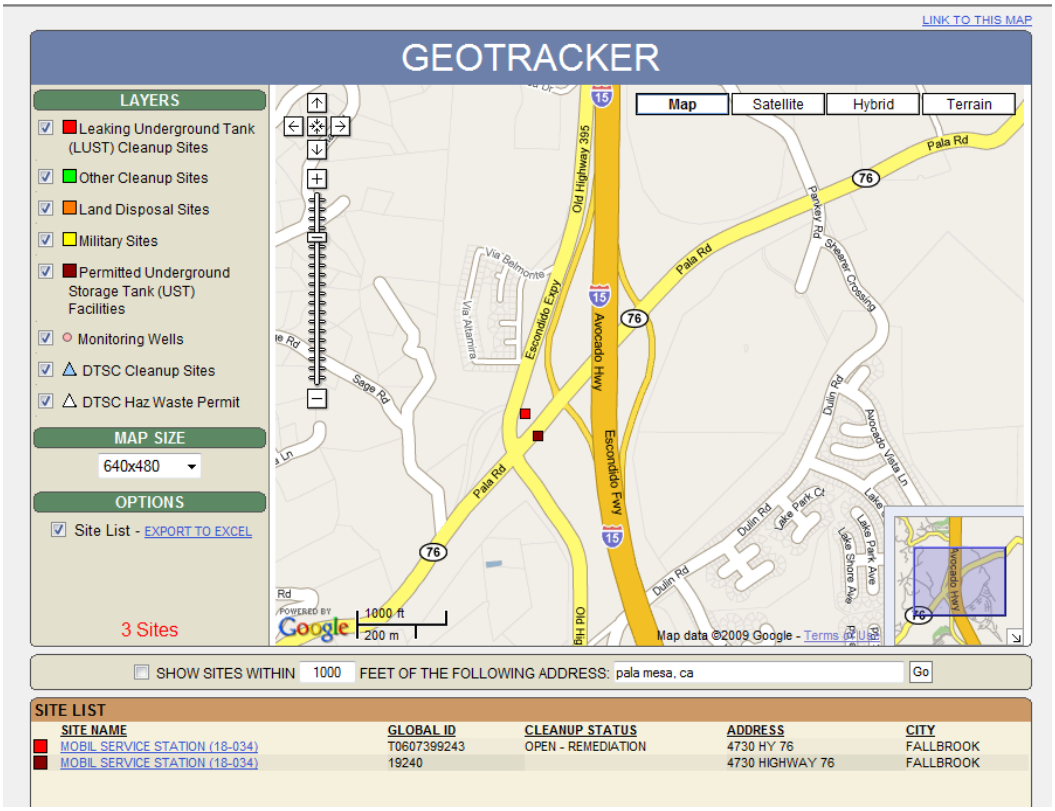


Figure 4-2. Spatial results of GeoTracker query

4.2.3. County / CUPA Records Search

The Unified Program (http://www.calepa.ca.gov/CUPA/) consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. Cal/EPA and other state agencies set the standards for their programs while local governments implement the standards—these local implementing agencies are called Certified Unified Program Agencies (CUPA). For San Diego County, the County's Hazardous Materials Division is the CUPA.

The Hazardous Materials Division has made available on the Internet the Hazardous Materials Establishment Database, which contains database information such as: CUPA Facility Permit Number, Business Address, Business Name, Hazardous Waste & Materials Inventory (for active sites only), Underground Storage Tank Information. The database is updated on a quarterly basis, and is available on the Internet at URL = http://www.sdcounty.ca.gov/deh/doing_business/hazmat_search.html. Case files were reviewed on 10 October 2009 (see Appendix 15.2.2 for selected copies of the case file documentation). The following text summarizes available case file information pertinent to the Property and vicinity:

- the Pankey Farm is a registered business using hazardous materials

The Hazardous Materials Division has made available on the Internet the Scanned Files Search, which is a digitizing of the former paper files, including written Inspection Reports, Notices, Correspondence, Permit Applications, Underground Storage Tank Permits, Enforcement Case Information (completed cases), etc. The database is updated on a quarterly basis, and is available on the Internet at URL = http://www.sdcounty.ca.gov/deh/doing_business/hazmat_search.html. The only pertinent files were:

- the Pankey Farm has hazmat business plans on file (as late as 2008), hazmat inventory lists including registered fuel tanks, and regular inspections

4.2.4. Other Sources

Internet search engine research was performed on 10 October 2009. Using the search word "Pankey", the following was returned:

- Fallbrook Produce Stands: Vic & Elena Pankey's Farm Stand, 4881 Highway 76, fruit and vegetables
- Manta Small Business Database: Pankey Ranch Inc., 5328 Highway 76, Fallbrook, CA 92028; Business Categories—Citrus and Avocado Farm; Citrus fruits in Fallbrook, CA

Using the search word "Pankey Road", the following was returned:

- Fallbrook-Bonsall Village News, Issue 30, Volume 13. Wednesday, July 22nd, 2009, "Pankey (Pala) Fire contained at six acres; mower said to be cause; mop-up underway"; "CAL FIRE has reported that the Pankey Fire, the brush fire burning east of Interstate 15, off State Route 76 and Pankey Road currently involves 5 acres. Crews are battling the blaze both on the ground and from the air."

Using the search word "Shearer Crossing", the following was returned:

- planning documents for the Meadowood subdivision, Pardee Homes.
- Converse Consultants, Inc. 2007. Phase I and Limited Phase II Environmental Site Assessment Report—Meadowood Project, Pankey Ranch Property, Approximately 388.5 Acres, Fallbrook, California. Prepared for Pardee Homes.

The Converse Consultants (2007) Phase I and II ESA involved the parcels accessed by Shearer Crossing to the north of Pala Road, the Pankey Ranch, which consists of approximately 389 acres. Some of the findings of the Converse Consultants (2007) Phase I and II ESA that are relevant to this study are reproduced as follows:

- The Property has been used for agricultural purposes since at least 1928. According to San Diego County, Agriculture, Weights, and Measurement (SDCAWM) records reviewed, the Property appears to utilize herbicides, miticides, and insecticides permitted by the SDCAWM. Analytical results obtained during the Limited Phase II ESA conducted in 2002 indicated no detectable or low concentrations of agricultural chemical residues onsite, including organophosphorous pesticides, organochlorine pesticides, and chlorinated acid herbicides in onsite soils. Based on these analytical results, there appears to be a low potential for environmental impact to the Property from current or historical agricultural operations.
- Smudge pots were observed at several locations on the Property. Staining and hydrocarbon odors were observed and detected in the vicinity of the smudge pots during the assessment in 2002. Based on the results of the Limited Phase II ESA, the surficial soil in the immediate vicinity of the smudge pots appears to have been impacted by total petroleum hydrocarbons (TPH). The concentrations of TPH detected in the limited number of samples in the vicinity of the smudge pots are considered a low risk due to: the TPH was detected only in the surficial soil; the concentrations detected were generally in the heavier hydrocarbon range and represent a low order of toxicity; the concentrations of TPH do not pose a fire or explosion hazard. Converse recommends excavation and disposal of the surficial soil in the vicinity of the smudge pots.
- The concentrations of TPH detected in the limited number of samples near the pesticide/nutrient storage area are considered insignificant due to: the relatively low concentrations detected; the TPH was detected only in the surficial soil and decreased significantly with depth; the concentrations detected were generally in the heavier hydrocarbon range and represent a low order of toxicity. The concentrations of TPH do not pose a fire or explosion hazard.
- Arsenic was detected in onsite soils during the Limited Phase II ESA, however, based on the average concentration of arsenic below the average concentration established by the Kearney Foundation for California soils and the close distribution of the analytical results, the arsenic concentrations appear to be naturally occurring rather than anthropogenic.

Findings from the Converse Consultants (2007) assessment are similar to the findings of the Kleinfelder (2007) assessment. This is not surprising since the same entity, the Pankey Family, owned and operated both properties in a similar manner.

4.3. PHYSICAL SETTING SOURCES

The Study Area is located in the Peninsular Ranges geomorphic province. The Property is situated at the confluence of the San Luis Rey River and an unnamed tributary; the Property sits on a gently sloping river terrace accentuated with a steep mount (granitic rock outcrop) in the center. The topography of the Property is extremely variable (see following figure). The mount rises to an elevation of approximately 490 feet above mean sea level; the terrace slopes generally from the northeast at an elevation of approximately 255 feet to the southeast at an elevation of about 250 feet. The elevation of the channel of the San Luis Rey River drops about another 10 feet to 240 feet.

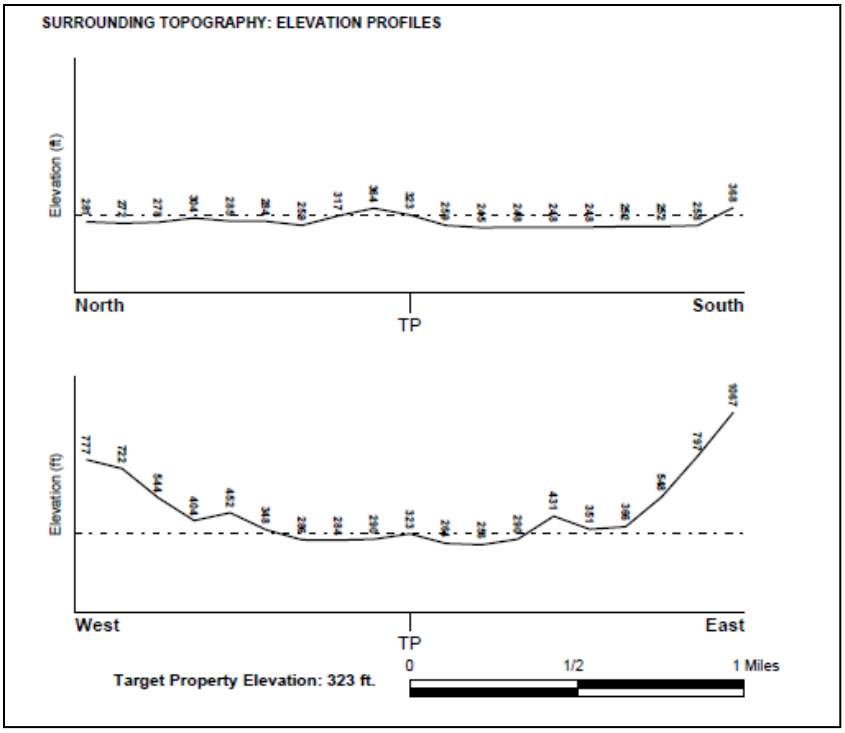


Figure 4-3. Topographic profiles from EDR Report

The geology setting of the Property is described as follows: "*The recent alluvium deposits, located in the vicinity of the San Luis Rey River flood plain, consist of unconsolidated stream river channel and alluvial fan deposits. The higher elevations of the Property are believed to be underlain by Mesozoic granitic rocks consisting of light colored coarse-grained granodiorite with scattered, small, dark inclusions; weathers to large boulders of disintegration*." (p. 3, MAZ Environment 2006)

A significant portion of the Property is located within the 100-year floodplain of the San Luis Rey River; this portion of the Property is designated Zone A on Federal Emergency Management Agency Flood Insurance Rate Maps Nos. 06073C0484F and 06073C0483F (see following figure). FEMA defines Zone A as follows, "*Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage*."

Numerous public and private groundwater wells were identified in EDR's query of readily-available databases (see following figure): approximately 30 wells were identified in the USGS database; 28 wells were identified in the State database; no public water supplies were noted. Two wells are indicated on the Property. No specific hydrogeologic data was readily available. MAZ Environmental (2006) reports, "*Based on information obtained during an interview with Mr. Victor Pankey, the depth to groundwater varies seasonally, but is approximately 70 feet below ground surface. Direction of groundwater flow is to the southwest*." (p. 3).

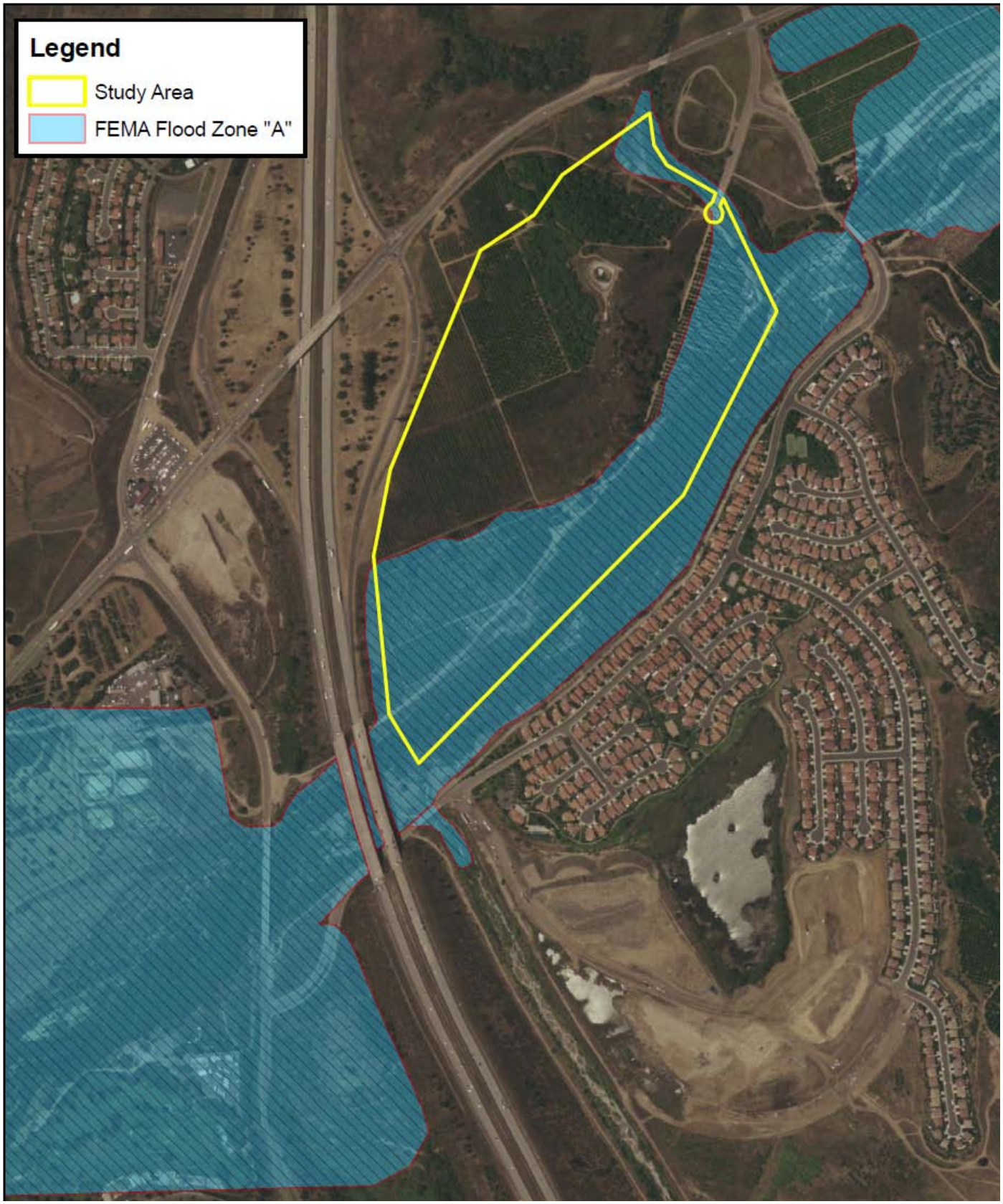


Figure 4-4. FEMA Flood Insurance Rate Map Showing a Portion of the Property in Zone A

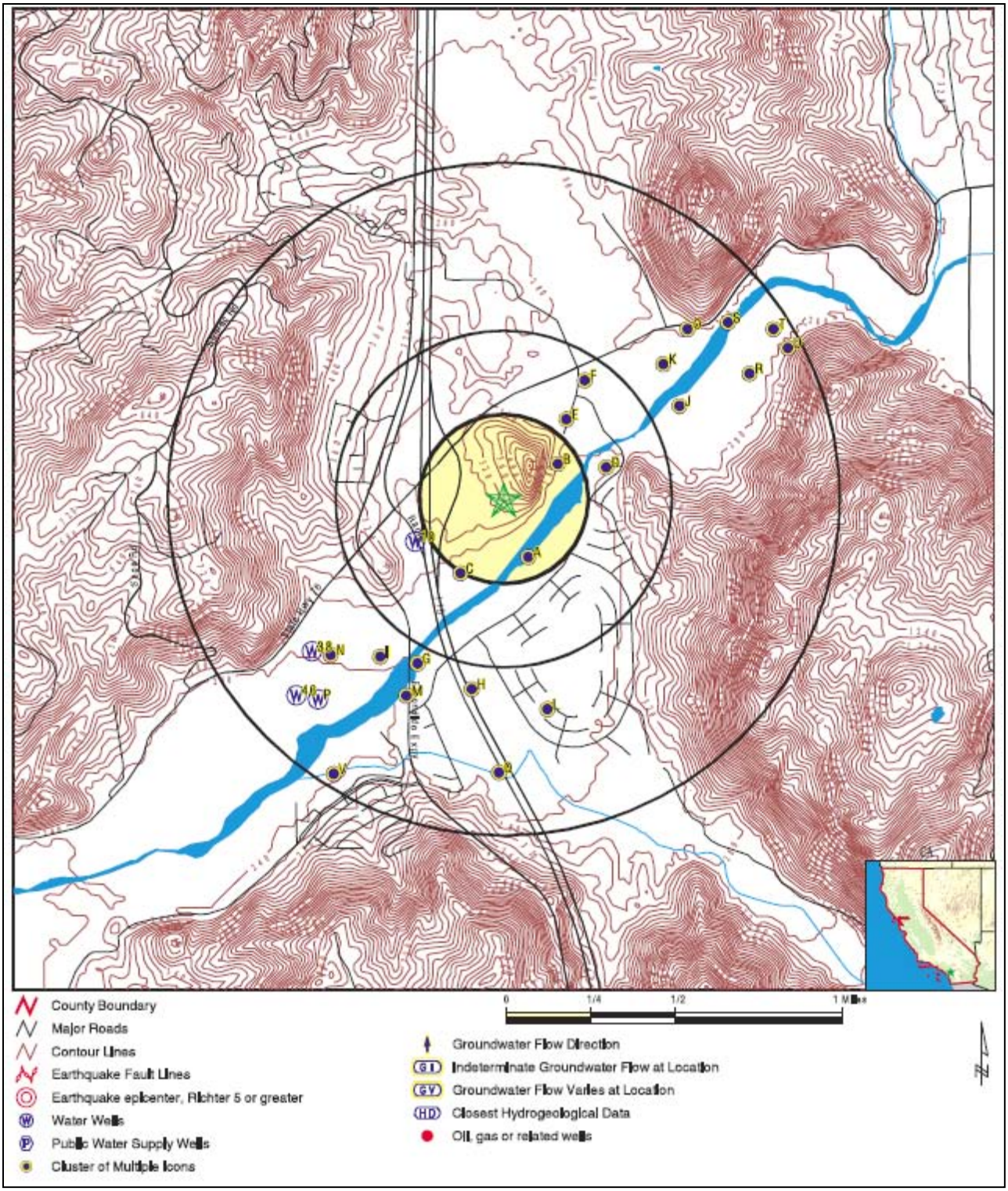


Figure 4-5. Hydrologic data map from EDR Report

4.4. HISTORICAL USE INFORMATION ON THE PROPERTY

4.4.5. Topographic Map Analysis

Historical and current topographic maps of the Study Area were analyzed to determine any of the following: topography and inferred surface water and ground water flow direction; current and historical land use; and current and historical structures, utilities, and roads. All available USGS topographic quadrangle maps were obtained through EDR (see Appendix 15.3.1 for the map excerpts). An analysis of map details follows.

- In the 1:125,000 scale USGS 30-minute quadrangle "San Luis Rey" dated 1901, no land uses on the Property or vicinity are evident.
- In the 1:250,000 scale USGS 60-minute quadrangle "Southern California" dated 1904, no land uses on the Property or vicinity are visible at this scale.
- In the 1:50,000 scale USGS 15-minute quadrangle "Temecula" dated 1947, one unimproved road is visible on the Property, as well as Shearer Crossing. No other land uses on the Property or vicinity are evident.
- In the 1:25,000 scale USGS 7.5' quadrangle "Bonsall" dated 1949, Shearer Crossing Road is indicated. No land uses on the Property or vicinity are evident.
- In the 1:25,000 scale USGS 7.5' quadrangle "Bonsall" dated 1968, orchards are indicated on the majority of the Property. A water tank is indicated on the hilltop, and several unimproved roads are shown throughout the Property. No other land uses on the Property or vicinity are evident.
- Pala Road and Shearer Crossing Road are indicated.

No visual clues as to any possible recognized environmental conditions were evident from any of these topographic maps.

4.4.6. Aerial Photography Analysis

Historical aerial photographs of the Study Area were analyzed to determine the following: current and historical land use; any current and historical structures, utilities, and roads; and any current or historical drum storage, above ground tanks, garbage dumps or landfills, or pits, ponds, or lagoons. A chronology of historical aerial photographs were obtained through EDR (see Appendix 15.3.2 for the photographic scans), beginning with 1939.

No visual clues as to any possible recognized environmental conditions were evident from any of these aerial photos. Kleinfelder (2007) performed an extensive aerial photo analysis of the Property as part of their Phase II ESA; no obvious signs of environmental concerns were visible in any of the photos.

The historic aerial photographic sequence is presented next.

The aerial photo dated 1939 by Fairchild shows the Property and vicinity to be used as rangeland, with extensive riparian zones along the major drainages. SR76 is the only major road visible. No structures are visible on the Property at this resolution.

The aerial photo dated 1946 by Jack Ammann shows SR76 and the Escondido Highway under construction. The major landuse of the Property still appears to be rangeland. Some neighboring properties show indications of row-crop farming. No structures are visible on the Property at this resolution.

The aerial photo dated 1953 by Park shows the Property beginning to be planted in orchards; the rest still appears to be rangeland. The reservoir is now evident, including a dirt access road. Other dirt roads are visible. The entire riparian canopy is gone from the San Luis Rey River and tributaries. Some neighboring properties show indications of row-crop farming. No structures are visible on the Property at this resolution.

The aerial photo dated 1963 by Cartwright shows the Property extensively converted to orchard and also perhaps row crops. The Escondido Highway appears to have been widened. Most neighboring properties show indications of row-crop farming. No structures are visible on the Property at this resolution.

The aerial photo dated 1974 by AMI shows orchards established over most of the Property. Some dredging or fill appears to have occurred on riverbank south of the south orchard. The northern residence may be viewable; no other structures are visible on the Property at this resolution.

The aerial photo dated 1989 by USGS shows major changes. The Escondido Highway appears to have been expanded to become Interstate 15, and the subdivision Lake Rancho Viejo is under construction. No structures are visible on the Property at this resolution.

The aerial photo dated 1994 by USGS shows further construction of homes at Lake Rancho Viejo. No structures are visible on the Property at this resolution. All available land on the Property is in orchard.

The aerial photo dated 2002 by USGS shows most of the orchards in decline on the Property. No structures are visible on the Property at this resolution. The Lake Rancho Viejo subdivision is mostly built out.

The aerial photo dated 2005 by USGS shows some orchards remaining, others in decline or removed. No structures are visible on the Property at this resolution, although light colored areas do correspond to interview accounts of structures, some with metal roofs.

4.4.7. Fire Insurance (Sanborn Company) Maps

Fire insurance maps are historic city and building layout maps produced for private fire insurance companies (primarily the Sanborn Company). These historic city maps can indicate the presence of structures on, or uses of, properties at specified dates. EDR now owns the Sanborn Company, and provides any available fire insurance maps for the target address (in this case, a spatial query of the Study Area). EDR's Sanborn Map query reported no coverage for the Property or vicinity. (Appendix 15.3.3).

4.4.8. City Directories

City directories have been published for cities and towns across the US since the 1700s. Originally a list of residents, the city directory developed into a tool for locating individuals and businesses in a particular urban or suburban area. Current directories are generally divided into three sections: a business index, a list of resident names and addresses, and a street index. With each address, the directory lists the name of the resident or, if a business is operated from this address, the name and type of business. While city directory coverage is comprehensive for large cities, it may be incomplete or unavailable for small towns and unincorporated, rural areas. The target addresses were the 3000 to 4000 block of Pankey Road and the Pankey Road/Shearer Crossing intersection. EDR found no listings in City Directories from 1980 to the present (Appendix 15.3.4).

4.4.9. Recorded Land Title Records

See Section 3.2 for a summary of the title report. Title records of the Property were searched by Dr. Graening on 28 September 2009 at the County of San Diego Assessor's Office. An attempt was made to build the chain of title back at least 50 years from the present, with focus upon the names of entities in deeds and leases that might indicate industrial uses, and any statement of reduced value or liens on the title, especially environmental protection liens recorded pursuant to CERCLA. The results of this title are as follows.

According to the grant deed 4 April 2007, Pala Gateway Holdings, LLC is the current landowner; it was sold by DMH Fallbrook 90 L.L.C. (75% interest) & WGA Pala Gateway L.P. (25% interest). DMH Fallbrook 90 LLC bought the land from the E. E. Pankey Trust in 2005. According to MAZ Environmental (2006), the Pankey Family bought the Property in 1947. According to the Assessor's Master Property Records, the 62.47-acre parcel 125-063-09 was part of a larger 233-acre parcel (APN 125-061-17, and previously APN 125-060-01). The 27.21-acre parcel (APN 125-100-10) was owned by E. Pankey since 1956 (previously APN 125-100-01). Utility easements are present on the titles, including: APN 125-063-02, 0.85 acre, a road easement, connecting to the Pankey Road cul-de-sac; and APN 125-063-10, a utility easement on the mount. No indication of industrial uses was detected from chain of title review.

4.4.10. Building Permits

Building permits were obtained by Converse Consultants (2007) for the larger Pankey Farm operation that included other properties. No recognized environmental conditions were detected from this permit review.

4.4.11. Data Gaps or Data Failure

There were no significant data gaps and there were no data failures in the compilation of historical data sources for the Property.

4.5. HISTORICAL USE INFORMATION ON ADJOINING PROPERTIES

Historical use information on adjoining properties is summarized in other sections of this report.

5. SITE RECONNAISSANCE

5.1. METHODOLOGY AND LIMITING CONDITIONS

The ASTM (2005) explains that, "*The objective of the site reconnaissance is to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the property*" (page 16, ASTM, 2005). The site reconnaissance is limited to visual and/or physical observation of the exterior and interior of the Property and its improvements, the past and current uses of the Property and adjoining properties, and the condition of the Property. The site reconnaissance evaluated the Property and adjoining properties for potential hazardous substances use, storage, disposal, or accidental release, including the following: presence of tank and drum storage; PCB-containing transformers or electrical equipment; evidence of soil or pavement staining or stressed vegetation; ponds, pits, lagoons, or sumps; suspicious odors; fill and depressions; or any other condition indicative of potential contamination. The site reconnaissance did not evaluate the presence of asbestos-containing materials, radon, lead-based paint, mold, or structural defects.

On 28 and 29 September 2009, Dr. G. O. Graening performed a Site reconnaissance of the Property. All accessible portions of the Property were observed by a pedestrian survey; adjoining properties were observed by a combination of pedestrian survey and windshield (automobile) survey. Photographic documentation accompanies the following summary of the site reconnaissance.

5.2. EXTERIOR OBSERVATIONS

5.2.1. Stained Soil / Distressed Vegetation / Odors

No stained soils or distressed vegetation was noted. On the southern portion of the Property, a sewage odor was noticeable along the main orchard road were the municipal sanitary sewer pipeline vented through manhole access. The San Luis Rey River corridor occasionally smelled of cow manure.

5.2.2. Roads

Roads within the Property are all dirt roads; none are paved with asphalt or concrete. None of the roads displayed any suspicious staining.

5.2.3. Potable Water Supply

Regionally, potable water is supplied by Rainbow Municipal Water District. A water well was visible in the south orchard. Previous interviews with Mr. Pankey indicated that a total of three water wells existed on the Property.

5.2.4. Sewage Disposal System

Several historic residences were located on the Property; it is not known whether they were serviced by septic systems/leachfields or by a municipal sanitary sewer system. The Rainbow

Municipal Water District has a municipal sanitary sewer pipeline, and corresponding title easement, through the Property, beginning at the Pankey Road cul-de-sac, traversing the main orchard road, and continuing under the I-15 bridge crossing of the San Luis Rey River.

5.2.5. Storage Tanks and Drums

No drum storage was noted on the Property or adjoining properties during the site reconnaissance. The following storage tanks were noted: 1 compressed air tank was located in the mechanics shed; and 2 tanks were located adjacent to the reservoir (assumed to be pressure tanks)(see following photo).

5.2.6. Hazardous Substances and Petroleum Products

No petroleum product usage or storage was noted on the Property or adjoining properties during the site reconnaissance. The nearest commercial uses sighted were the Mobil fuel station and mart at the northwest corner of I-15 and SR-76. There was no evidence of the former ASTs that were mentioned in the MAZ Environmental (2006) Phase I ESA. The current groundwater well pump appears to be electrically powered, and not diesel powered. A small open shed, metal-roofed, is adjacent to the pump, and houses electrical switchboxes.

No hazardous substances were noted on the Property except for the following, which are considered insignificant (*de minimis*): a roll-off dumpster at the southern orchard contained demolition debris, and bags of ammonium salts fertilizer; and several empty 50-pound bags labeled “copper sulfate crystal” were found near the reservoir; this compound is used to control algal growth in ponds, and it is also used as a fungicide on certain food crops (e.g. berries).

5.2.7. Electrical or Mechanical Equipment Likely to Contain Fluids

No poly-chlorinated biphenyl (PCB)-containing equipment (electric or hydraulic) was observed during the site reconnaissance. Pole-mounted transformers were observed (see photo below), but all appear to be modern and non-leaking. Pole-mounted electrical lines run throughout the Property, primarily to serve the telecommunications facilities on the hilltop. Several generators and switch boxes are also present (see the following photo).

5.2.8. Pits/Ponds/Lagoons

No pits, ponds, or lagoons were observed during the site reconnaissance, other than the cement-lined water reservoir on the hilltop (see following photo).

5.2.9. Storm Water

No municipal stormwater facilities were noted on the Property or on adjacent properties, except for Lake Rancho Viejo, which has a storm sewer system. One drop-inlet and pipe discharge was noted on the Property on the dirt road that accesses the hilltop. Drainage improvements associated with nearby highways consist primarily of vegetated swales.

5.2.10. Solid Waste

No municipal solid waste service was noted for the Property. One privately-contracted "roll-off" dumpster was noted in the south orchard. Significant amounts of solid waste materials have been dropped off at the edge of the bank of the San Luis Rey River (see following photos). Most of the visible material consists of demolished concrete slabs and boulders from unknown sources. Large equipment tires are also common on the riverbank. This debris appears to have been placed for erosion control.

5.3. INTERIOR OBSERVATIONS

The interiors of structures on the Property were not inspected, other than the mechanics shed, which housed only a compressed air tank and some metal piping.

6. INTERVIEWS

The ASTM explains that, "*The objective of interviews is to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the property*" (page 16, ASTM, 2005). The following text summarizes interviews performed by Natural Investigations Co.

6.1. INTERVIEW WITH OWNERS / SITE MANAGERS / OCCUPANTS

6.1.1. Interviews with Owners / Site Managers / Occupants

No new interviews with historic or current property owners, site managers, or occupants were performed. The extensive interviews performed by MAZ Environmental (2006) and Converse (2007) were assumed to be sufficient for purposes of this supplemental assessment.

6.1.2. Landowner Questionnaire of Hazards / Hazardous Substances

The questionnaire entitled “Landowner Questionnaire of Hazards / Hazardous Substances” was e-mailed to the Tribe in early October (Appendix 15.4.1). A response was not received; however, the Tribe did provide numerous supporting documents (see Section 3.1).

6.2. OTHER INTERVIEWS

No other interviews were conducted by Natural Investigations Company. The following summarizes interviews performed by previous assessors.

Converse (2007) interview summaries with William Pankey noted that pesticides and nutrients are applied on the orchards using a helicopter. Septic systems were used by residences on the northern portion of the larger Pankey Farm (Meadowood Site). Mr. William Pankey stated that the

properties he purchased in 1946 were already in agriculture use. Mr. Pankey stated that agricultural chemicals permitted by the SDCAWM are applied to onsite crops.

7. FINDINGS

A brief summary of findings is provided below. Details are not included or fully developed in this section; the report must be read in its entirety for a comprehensive understanding of the items contained herein.

7.1. *DE MINIMIS* ENVIRONMENTAL CONDITIONS

De minimis environmental conditions are conditions that are not believed to present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies (ASTM, 2005). De *minimis* environmental conditions warrant discussion, but do not qualify as recognized environmental conditions.

One minimal, or *de minimis*, condition exists on the Property pursuant to the ASTM standard:

- Copious amounts of solid waste are deposited on the southern boundary of the Property at the edge of the bank of the San Luis Rey River. Most of the visible material consists of demolished concrete slabs and boulders from unknown sources. Large equipment tires are also common in the fill. This debris appears to have been placed for erosion control. Due to the unknown nature of the contents and density of this fill, caution should be exercised if any construction activities are performed in these areas.

7.2. HISTORIC RECOGNIZED ENVIRONMENTAL CONDITIONS

One historic recognized environmental condition was found in connection with the Property pursuant to the ASTM Practice E 1527-05. The use of the Property for agricultural operations since the 1920s is an historic recognized environmental condition. These operations began before the current seller, the Pankey Family Trust, acquired the Property in 1947. Agricultural operations on the Property involved the regular storage and use herbicides and pesticides, the fueling of farm equipment with above ground diesel fuel storage tanks, and the application of waste oil to the ground for weed control. The Phase I ESA performed by MAZ Environmental in 2006 reported soil staining by petroleum hydrocarbons. MAZ Environmental (2006) concluded that there was possible subsurface contamination resulting from pesticide/herbicide use onsite and resulting from use of petroleum products. In 2007, Kleinfelder, Inc., performed a limited Phase II ESA investigation. Results of soil and groundwater sampling revealed no residual herbicides or pesticides, but some samples did contain total petroleum hydrocarbons in the diesel range and some contained heavy metals; arsenic in particular was detected at significant concentrations. Kleinfelder (2007) did not recommend further investigation. Similar arsenic concentrations have been found in soil samples of natural reference sites. The concentrations and types of residual TPH found at the site (diesel and oil) would not typically require remediation. Converse Consultants Inc. (2007) found similar contamination on the Pankey Farm north, and upgradient, of the Property. Similarly, Converse Consultants, Inc. (2007) did not recommend further investigation, and concluded that the petroleum product contamination was considered a low risk due to: the relatively low concentrations detected; the contamination was detected only in the surficial soil; the contamination was generally in the heavier hydrocarbon range and represented a low order of toxicity; and such concentrations of total petroleum hydrocarbons do not pose a fire or explosion hazard. Based on these analytical results, there appears to be a low

potential for environmental impact to the Property from historical agricultural operations. No further site investigation is recommended.

7.3. RECOGNIZED ENVIRONMENTAL CONDITIONS

No current recognized environmental conditions were found in connection with the Property pursuant to the ASTM Practice E 1527-05.

8. OPINION AND RECOMMENDATION

It is Natural Investigations Company's opinion that there is one historic recognized environmental condition and no current recognized environmental conditions in connection with the Property pursuant to the ASTM Practice E 1527-05. Records review, database searches, or interviews failed to identify any environmental conditions in connection with the Property other than *de minimis* use of solid waste on the riverbank for erosion control. The use of the Property for agricultural operations since the 1920s, and some petroleum product staining of soil, is an historic recognized environmental condition. However, no further site investigation is recommended.

No significant data gaps or data failures were identified that affect the ability of the Environmental Professional to identify recognized environmental conditions. There are no unusual circumstances where greater certainty is required regarding recognized environmental conditions. Therefore, no additional assessment is recommended at this time. Based on the findings of this Phase I ESA, no new areas or concerns were noted that were not already addressed in the 2007 Limited Phase II ESA.

8.1. CONCERN WITH CONSTRUCTION-RELATED HAZARDS

However, ground disturbance or excavation during construction of the proposed project and associated property improvements could pose a risk to human health for construction personnel if contaminants or unknown objects are encountered. Hazards include ignition of flammable liquids or vapors, inhalation of toxic vapors in confined spaces such as trenches, skin contact with contaminated soil or water, or the excavation of undocumented obstructions such as underground storage tanks, piping, or solid waste, that might pose a hazard of explosion or ground collapse.

A Health and Safety Plan (HASP) prepared for the construction process, consistent with general industry standards and the Occupational Safety and Health Administration, could address any risks to construction personnel and public safety such that these health and safety risks could be mitigated to an acceptable level. This site-specific HASP for each construction phase (especially for excavations) would describe in detail the health and safety guidelines, procedures, and work practices that must be adhered to and the work to be performed, and would also include special details governing certain work, such as working in confined spaces. Should contaminants be found, appropriate measures would be taken to mitigate potential effects on Specific Plan implementation/parcel redevelopment. This may include excavation of contaminated soils and disposal at an appropriate facility. The contaminants of concern are most likely petroleum hydrocarbons in the diesel range, heavy metals (primarily arsenic), and herbicide/pesticide residues. At a minimum, the HASP should address appropriate personal protective equipment (PPE), monitoring to protect on-site workers, and the appropriate level of worker training (e.g., Hazardous Waste Operations and Emergency Response training). Monitoring may include visual and olfactory observation (e.g., soil staining or unusual odors), or air monitoring with hand-held devices (e.g., photo-ionization detector) to detect volatile hydrocarbons. Health-risk based action

levels should be identified for various contaminants that will trigger modifications to work practices. Work practice modifications may include the cessation of construction activities until soil or groundwater sampling is performed, or an increase in the level of PPE or worker training. A Sampling and Analysis Plan may accompany the HASP to determine if constituents of concern are present and at what concentrations. The HASP should also address procedures to follow if unknown objects (e.g., USTs and associated piping) are encountered, and the use of specialized contractors to decommission and remove such USTs and perform confirmation sampling. The HASP may be submitted to the San Diego County Hazardous Materials Division for approval prior to the start of soil disturbance. The implementation of an adequate HASP could reduce the health risk to construction personnel by these historic recognized environmental concerns to a less-than-significant level.

9. CONCLUSIONS

Natural Investigations Company has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-05 of three joined parcels, totaling approximately 90.5 acres, Assessor's Parcel Numbers 125-063-02, 125-063-09, and 125-100-10. There were data failures or deviations from the standard practice. This assessment has revealed that there is one historic recognized environmental condition and no current recognized environmental conditions in connection with the Property pursuant to the ASTM Practice E 1527-05. The use of the Property for agricultural operations is an historic recognized environmental condition. Based on the findings of this Phase I ESA, no new areas or concerns were noted that were not already addressed in the 2007 Limited Phase II ESA. No further site investigation is recommended.

A potential safety hazard may exist to construction personnel of encountering unknown buried USTs during excavations or the health hazard of contact with hazardous materials / petroleum products in contaminated soils or groundwater from previous agricultural operations. These issues can be mitigated to a less-than-significant level by the implementation of a comprehensive Health and Safety Plan.

10. DEVIATIONS

There were no deletions or deviations from the standard practice.

11. ADDITIONAL SERVICES

Phase I ESAs are non-comprehensive by nature and are unlikely to identify all environmental problems or eliminate all risk. Natural Investigations Company offers a range of investigative and consulting services to suit the needs of our clients, including more quantitative investigations. Although risk can never be eliminated, more detailed and extensive investigations yield more information, which may help the User understand and better manage risks associated with their property. Since such detailed services involve greater expense and time, we ask that our clients participate in the identification of the level of service that will provide them with an acceptable level of risk. Please contact the signatory of this report if you would like to discuss the issue of risk further. Land use, site conditions, and other factors will change over time. This report should not be relied upon after 180 days from the date of issuance, unless additional services are performed as defined in ASTM E 1527-05 Section 4.7.

12. REFERENCES

American Society for Testing and Materials. 2005. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Designation E 1527-05. West Conshohocken, Pennsylvania. 35 pp.

Converse Consultants, Inc. 2007. Phase I and Limited Phase II Environmental Site Assessment Report—Meadowood Project, Pankey Ranch Property, Approximately 388.5 Acres, Fallbrook, California. Prepared for Pardee Homes. Prepared by Converse Consultants, Inc., San Diego, California. Converse Project No. 02-41-220-01

Delleur, J.W. 2007. The Handbook of Groundwater Engineering, Second Edition. CRC Press.

Kleinfelder, Inc. 2007. Report of Findings, Limited Phase II Environmental Site Assessment, Pala Gateway Property Site, Pala, California. Prepared for the Pala Band of Mission Indians. 8 pp. + appendices.

MAZ Environmental, Inc. 2006. Phase I Environmental Site Assessment, I-15 Property, Fallbrook, California. Prepared for City Home, Inc.

13. SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

As required by 40 CFR 312.21(d), this report shall include the following statements of the environmental professional responsible for conducting the Phase I ESA and preparation of the report (page 21, ASTM, 2005):

I declare that, to the best of my professional knowledge, I meet the definition of 'Environmental Professional' as defined in §312.10 of 40 CFR.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

G. O. Graening, PhD
Registered Environmental Assessor I Number 08060

14. QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

Dr. G. O. Graening is a Registered Environmental Assessor I (Registration Number 08060) by the California Department of Toxic Substances Control. Dr. Graening holds a PhD in Biological Sciences and a Master of Science in Engineering. Dr. Graening has over 13 years of experience in environmental research and site assessment, including preparation of program-level Phase I ESAs, limited Phase II ESA investigations, as well as environmental impact assessments for National Environmental Policy Act compliance and California Environmental Quality Act compliance. Dr. Graening has completed the 40-hour OSHA Hazardous Waste Operations and Emergency Response certification (with 8-hour annual refresher courses). Dr. Graening's full résumé, and the Company's statement of qualifications, is available on the Internet at the Company's website (www.naturalinvestigations.com).

APPENDIX E

TRAFFIC COUNTS

KUNZMAN ASSOCIATES, INC.
OVER 30 YEARS OF EXCELLENT SERVICE

January 20, 2010

Mr. Joe Broadhead
ENVIRONMENTAL DATA SYSTEMS
2619 24th Street
Sacramento, CA 95818

Dear Mr. Broadhead:

INTRODUCTION

The firm of Kunzman Associates, Inc. is pleased to provide this trip generation analysis for the Pala Gateway Cultural Center project in the County of San Diego. Kunzman Associates, Inc. has been asked to determine the expected trip generation for the project site.

Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with those terms unique to transportation engineering, a glossary of terms is provided in Appendix A.

PROJECT DESCRIPTION

The Pala Gateway Cultural Center is located south of SR-76, east of the I-15 Freeway, and west of Pankey Road in the County of San Diego. The hours of operation for the project are projected to be from 9:00 AM to 5:00 PM Monday to Saturday. The approximately 90.53 acre project is proposed to be developed with the following 10 elements (see Figure 1):

1. Parking Lot: The parking lot will consist of no more than 100 parking spaces for passenger cars, and up to 5 parking spaces for tour/school buses or recreational vehicles. The entrance to the parking lot will be from a driveway down the Pankey Road cul-de-sac and down a short stretch of roadway.
2. Museum: The museum/interpretive center will be located at the end of the driveway from the Pankey Road cul-de-sac. It is proposed to be built from 2,000 to 4,000 feet in size and will include exhibit, office, and storage space. It will include restroom facilities and be compliant with the Americans with Disabilities Act. The museum will be the focal point of the Pala Gateway Cultural Center project, with interpretive exhibits, an information desk, and offices for staff.
3. Oak Grove Interpretive Station: The existing oak grove provides a perfect opportunity to introduce interpretation of traditional native subsistence patterns. Acorns were the main food source of the Luiseno people. Signage and demonstration areas will be located throughout the

1111 TOWN & COUNTRY ROAD, SUITE 34, ORANGE, CA 92868
PHONE: (714) 973-8383 • FAX: (714) 973-8821

WWW.TRAFFIC-ENGINEER.COM

oak grove to explain the significance of the oak tree to the traditional lifestyle. The oak grove will include traditional food processing areas such as bedrock mortars and milling slicks along with interpretive signage.

4. Interpretive Signs (Hunting/Fishing): Located within the flood plain will be an area showcasing the significance of traditional methods of hunting and fishing. This location was chosen for its proximity to the riverbank. The interpretation here will be limited to signage and demonstration areas, but without significant permanent structures that could be damaged by floods.
5. Meeting Area: Part of the tribal traditional culture includes dedicated meeting areas for ritual and ceremonial use. There will not be any permanent structures in this area, but will be kept cleared and prepared for use. While in use, willow-brush armadas, or shade-houses, will be erected. These structures are to be constructed for temporary use only and then taken down when the occasion for which they were built has passed.
6. Dance Arena: A dance arena is an integral part of the traditional meeting space. The dance arena, similar to the meeting area, is delineated by willow-brush shades or fencing, which is taken down at the end of the event. This area would be put to use for traditional bird-song gatherings, fiestas, and powwows.
7. Gaming (Traditional): Another aspect of traditional gatherings is the gaming element. This includes the traditional peon and hand games practiced throughout Southern California. No gathering is complete without these games, and a space is always dedicated for their use. Several bonfires will be built to illuminate individual games, and several games go on at once, throughout the night. A dedicated space is necessary for these games.
8. Village: The village will be the centerpiece of the Pala Gateway Cultural Center, outside the museum itself. It will consist of 8-10 traditional, domed, semi-subterranean willow-brush huts, arranged in two facing semi-circles around a round central plaza. Made of traditional materials, the huts should last for a long time with maintenance. This area will be key for interpretive tours and potential living history re-enactments.
9. Agricultural Crop Garden: With the advent of Mission colonization, European modes of agriculture were introduced to the local people and quickly became an alternative mode of subsistence. This area will demonstrate the type of village garden that became common in the years after the mission system arrived, and persisted after it collapsed. Common crops include fruit trees, corn, squash, and beans.
10. Native Plants Garden: Acorn subsistence was supplemented with a wide variety of native plants. Additionally, the native pharmacopeia came exclusively from local plants. This garden will feature some of the most significant native plants, such as sage, buckwheat, elderberry, yerba santa, lemonade berry, chokecherry, wild cucumber, and more. Interpretive signs will explain how these plants were used.

DRIVEWAY COUNTS

To quantify the trip generation, driveway traffic counts at a similar existing facility (see Appendix B) were conducted for Kunzman Associates, Inc. on Thursday, January 14, 2010. The San Diego Archeological Center located at 16666 San Pasqual Valley Road in the City of Escondido was used as this facility is similar to the proposed Pala Gateway Cultural Center. This approximately 30,000 square foot museum and research facility located on approximately 160 acres of land east of the San Diego Wild

Animal Park is open from 9:00 AM to 5:00 PM Tuesday to Friday and 10:00 AM to 2:00 PM on Saturdays. This facility has activities, events, and exhibits similar to that which will be offered at the Pala Gateway Cultural Center. According to its website:

> *"The San Diego Archaeological Center is a museum where visitors can learn the story of how people have lived in San Diego County for the past 10,000 years. In addition to its role as a museum, the Center serves as an education and research facility and is the only local organization dedicated to the collection, study, curation and exhibition of San Diego County's archaeological artifacts.*
>
> *The Center Museum has changing exhibits and hands-on activities that explore 10,000 years of history of the San Diego region through the archaeological record. Learn about the life-ways of early Native American hunter-gatherers who lived in our region and the many groups and immigrants who have contributed to our region's archaeological record.*
>
> *Learn the basics of archaeology, explore our hands-on research area or view our new curatorial vaults and research area through the viewing portal. The Center actively curates archaeological collections and you may have a unique opportunity to see staff and interns cataloging and researching artifacts during your visit.*
>
> *There are activities for children including an artifact matching game, archaeological related crafts and equipment and games and exploration materials for budding archaeologists to expand their knowledge."*

The San Diego Archeological Center provides two driveways off San Pasqual Valley Road. The west driveway is an exit only driveway and the east driveway is an entrance only driveway. Manual 24-hour tube counts were conducted at both driveways to determine the inbound and outbound traffic for the San Diego Archeological Center (see Appendix B).

The peak hours for the driveway traffic counts are 7:00 AM to 9:00 AM for the morning peak hour and 4:00 PM to 6:00 PM for the evening peak hour. The existing driveway traffic counts were conducted at the San Diego Archeological Center at 15-minute intervals for the 24 hour period on Thursday, January 14, 2010.

PROJECT TRIP GENERATION

The Pala Gateway Cultural Center project in the County of San Diego is smaller in size but similar in use as the existing San Diego Archeological Center in the City of Escondido. It has been assumed that the Pala Gateway Cultural Center project trip generation will be similar to the trip generation at the San Diego Archeological Center.

Table 1 shows the project trip generation summary for the peak hours based upon the driveway counts of the San Diego Archeological Center (see Appendix B). As shown in Table 1, the San Diego Archeological Center generates approximately 92 daily vehicle trips, 10 vehicles per hour occurred during the morning peak hour and 9 vehicles per hour occurred during the evening peak hour.

CONCLUSIONS

The Pala Gateway Cultural Center project in the County of San Diego is smaller in size but similar in use as the existing San Diego Archeological Center in the City of Escondido. It has been assumed that the Pala Gateway Cultural Center project trip generation will be similar to the trip generation at the San Diego Archeological Center.

The Pala Gateway Cultural Center project is projected to generate approximately 92 daily vehicle trips, 10 vehicles per hour will occur during the morning peak hour and 9 vehicles per hour will occur during the evening peak hour.

Based upon the SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region, the proposed project does not need to conduct a traffic impact analysis because the estimated trip generation does not exceed 1,000 daily trips or 100 peak hour trips, or 500 daily trips or 50 peak hour trips for projects not in conformance with the land use and/or transportation element of the general or community plan.

It has been a pleasure to service your needs on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 973-8383.

Sincerely,

KUNZMAN ASSOCIATES , INC.

Carl Ballard
Principal Associate

#4617

KUNZMAN ASSOCIATES, INC.

William Kunzman, P.E.
Principal
Professional Registration
Expiration Date 3-31-2010