

# Significant Ecological Area Biota Report

## Proposed Action Paintball Park Canyon Country, Los Angeles County

Prepared for:

**County of Los Angeles  
Department of Regional Planning**

On Behalf of:

**Action Paintball**

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# I. Project Description

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## BACKGROUND

A portion of the proposed Action Paintball Park is located within the Santa Clara River Significant Ecological Area (SEA #23). As part of the County's current General Plan update program, SEAs has been established throughout the County to protect biological resources and conserve biological diversity within Los Angeles County. The Significant Ecological Area Technical Advisory Committee (SEATAC), a committee of County staff and volunteer biologists, reviews proposed projects on properties that lie within (all or part) or adjacent to designated SEAs for consistency with County resource protection policies and guidelines. The purpose of this report is to present the findings of a biological resource assessment for SEATAC review and to support the California Environmental Quality Act (CEQA) documentation and the required environmental review of the proposed paintball park project (hereafter referred to as the project). This report has been prepared in accordance with the guidelines set forth in the County of Los Angeles Department of Regional Planning Biota Report Guidelines.

## LOCATION

The proposed project site is located in the Canyon Country region of unincorporated Los Angeles County (see **Figure 1, Regional Map**). In the vicinity of the site, Soledad Canyon Road exists to the north of the site; vacant land is found to the east and west; and a Union Pacific/MetroLink railroad track is found to the south (see **Figure 2, Vicinity Map**). Development in the vicinity consists of residential enclaves, sand and gravel quarries, and limited ranching. Vacant land predominates the vicinity due to the presence of the Santa Clara River flood plain and steep topography at its margins.

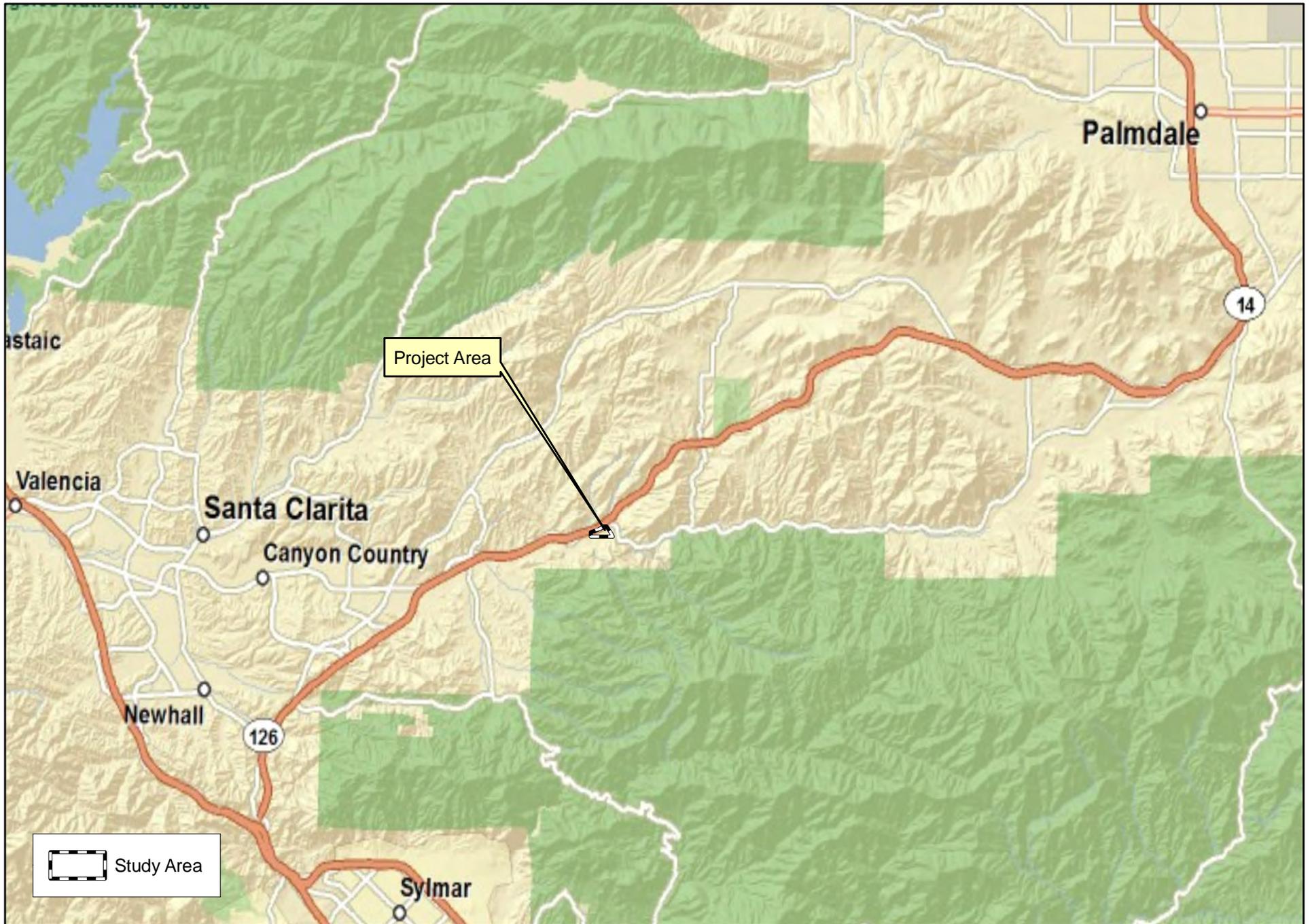
The project site encompasses two adjacent parcels (APNs 3210-017-043 and 3210-017-055) that are approximately 24.5 and 26.0 acres in size, respectfully and total 50.5 acres (study area). The majority of the area is located within the braided river bottom of the Santa Clara River; however, a relatively small portion of the site consists of steep slopes rising from the river bottom along the northern edge of the property. The proposed paintball park occupies approximately 11.8 acres (project area) within the study area. The USGS map location of the site is described as occupying a portion of the northern one-half of Section 17 of the USGS Agua Dulce 7.5-minute quadrangle. Access is provided to the parcel directly off of Soledad Canyon Road.

## RECREATION ELEMENTS

The proposed project is a recreational facility for the sport of paintball combat and requires a Conditional Use Permit (CUP). The site is accessible via a short driveway off of Soledad Canyon Road to an unimproved parking lot. As shown in **Figure 3, Site Plan**, the recreational facility will be comprised of:

- Playing fields.
- Parking lot with 255 spaces
- Snack shop

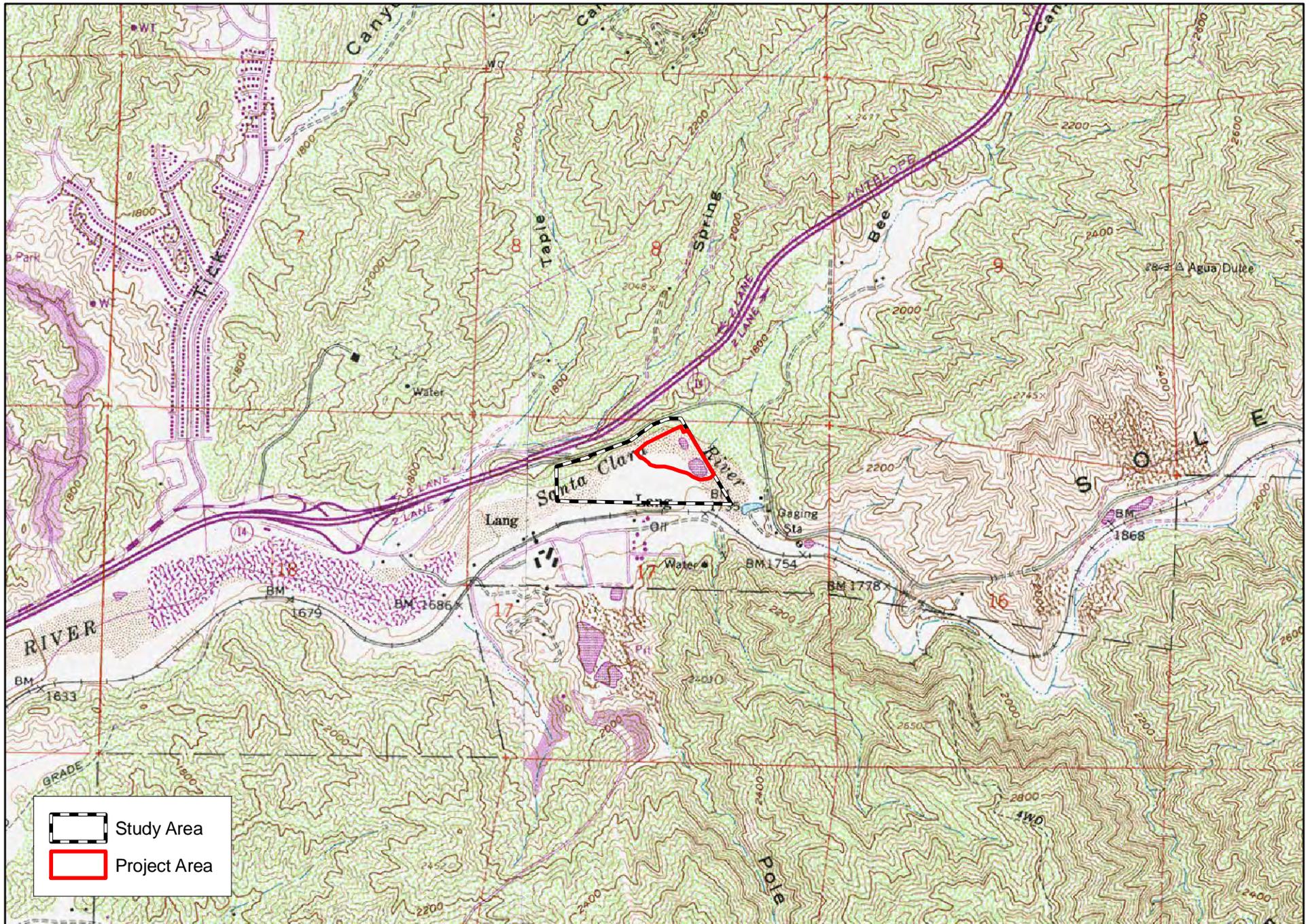
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Source: ESRI Street Map, 2009.

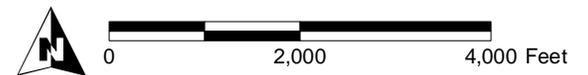
**Figure 1** | **Regional Map**  
Action Paintball Park

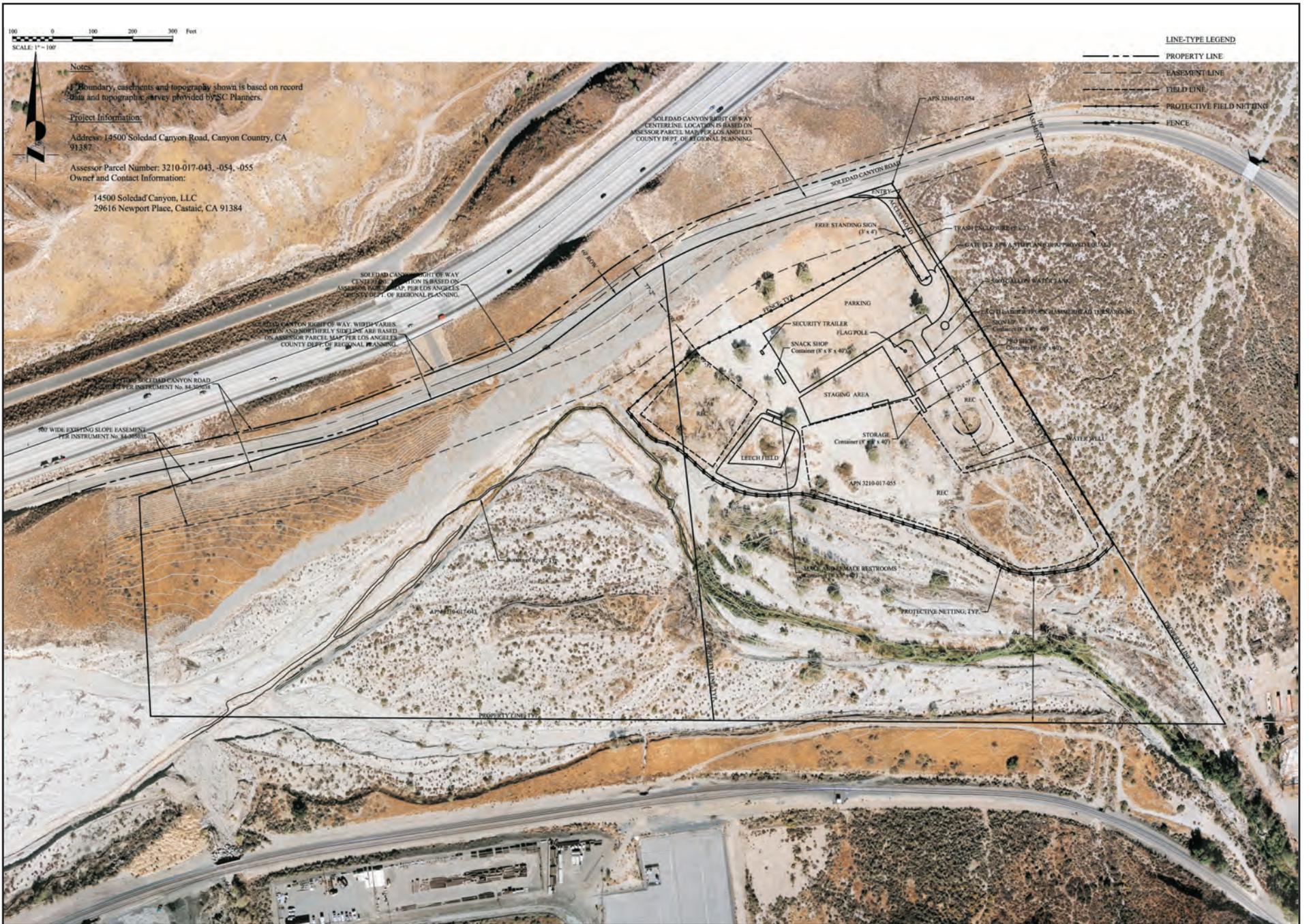




**Figure 2** | Vicinity Map  
Action Paintball Park

Source: USGS Topographic Series (Mint Canyon and Agua Dulce, CA)

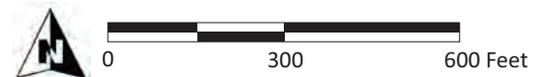




Source: Mike Baldi Engineers, 2011.

**Figure 3**

**Site Plan**  
 Action Paintball Park



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- Pro shop
- Picnic/rest area
- Staging area
- Fixed foundation restrooms with septic system disposal/leach field
- Two water wells
- Generator for electrical service.

As proposed, no clearing, grubbing or grading will occur; and, six converted mobile containers will house the snack and pro shops, restrooms, office, and storage. Although it remains to be confirmed, it does not appear that fuel modification will be required due to the location of facilities in areas devoid of shrub cover. The facility is proposed to be operated during daylight hours only, Thursday through Sunday, and to have a maximum capacity of 250 visitors.

## CONSERVATION ELEMENTS

The facility has incorporated several design features to avoid and minimize adverse effects on sensitive and regulated biological resources, including:

### Siting of Facilities/Play Features

- All facilities and activities associated with the paintball park shall be located outside of California Department of Fish and Game (CDFG) and U.S. Army Corps of Engineers regulated waters and associated riparian vegetation (i.e., on the upper terrace, outside the active wash area, and away from sensitive habitats.
- The clearing or thinning of all but the non-native herbaceous plant species, giant reed (*Arundo donax*), and tamarisk (*Tamarix sp.*) shall not occur.
- The location of the septic system/leach field shall be at least 100 linear outside of the top of bank of the active wash (i.e., no closer than CDFG jurisdiction).

### Design Considerations

- No night-lighting within and around the park shall be incorporated and no nighttime use of the facility shall be permitted.
- Four physical barriers shall be placed between the playing fields and riverbed: (1) an inner fence around the immediate individual fields; (2) specially-designed protective netting similar to golf driving range netting with a six inch space between the bottom of the net and ground surface to intercept wayward shots and allow small animals to move through the area; (3) sterile straw waddles for erosion control placed several feet away from the netting in areas where runoff could enter the river and which will be replaced annually; and (4) plastic mesh fencing (silt fencing) during the rainy season between the straw waddles and the riverbed to provide further protection from erosion). Ample signage shall also be attached to the inner fence and protective netting which states access to areas beyond the play area is prohibited.

- The parking area shall have perimeter barriers to prevent run-off from carrying petroleum products (primarily oil from vehicles) from reaching the river.

### **Landscaping and Operations**

- Any ornamental and decorative landscape plantings shall be limited to the play area and shall be derived, in the form of seeds, from native species indigenous to the area. Further, the area immediately surrounding the main administration buildings, if landscaped, shall emphasize plant palettes that require minimal irrigation so as to control and/or limit the ability of invasive plants and animals (such as the Argentine ant) to establish themselves on site. An appropriate and recommended source for plant palettes for this purpose would be the Drought-Tolerant Perennial Plants Native to Los Angeles County & Surrounding Areas, Approved for Use in Landscaping and Revegetation, Master List maintained by the Los Angeles County Department of Regional Planning.
- At no time shall alterations be made to the natural flow of water across the site other than the placement of erosion control materials.
- An annual program to remove giant reed and tamarisk from the riverbed shall be implemented to enhance the riparian habitat in the riverbed.
- Education materials such as brochures and leaflets that inform players about sensitive resources associated with the river habitats shall be distributed to all visitors.
- At the end of all days during which paintball play occurs the facility shall be thoroughly policed to collect and dispose of expended and unexpended paintballs.

### **SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS**

With the incorporation of project design features that consist of conservation elements, the project is not expected to result in potentially significant impacts to biological resources.

## II. SETTING

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### CHARACTERISTICS OF THE SITE

#### SEA Boundaries

The majority of both parcels overlap with the Santa Clara River SEA, as illustrated in **Figure 4**, *Location in Relation to Santa Clara River SEA*. Approximately 45.6 acres of the study area fall within the designated SEA. The entire project area lies within the SEA. The Santa Clara River SEA was so designated due to its encapsulation of significant ecological resources, including the habitat for threatened and endangered species and natural riparian communities that are highly limited in their distribution.

#### Watershed Characteristics

The entire project area and the majority of the study area are located within the bed of the Santa Clara River just below Soledad and Bee canyons where the river braids across a broad alluvial wash. In total, the Santa Clara River watershed encompasses approximately 1,600 square miles. The river's headwaters take drainage from the northern slopes of the San Gabriel Mountains inside the Angeles National Forest. From its headwaters the river receives flows from a number of tributaries, the larger ones being Boquet, Placerita, San Francisquito creeks near Santa Clarita, and Castaic, Piru, and Sespe creeks below Interstate 5. Approximately 83 miles downstream from its headwaters the Santa Clara River empties into the Pacific Ocean near Ventura.

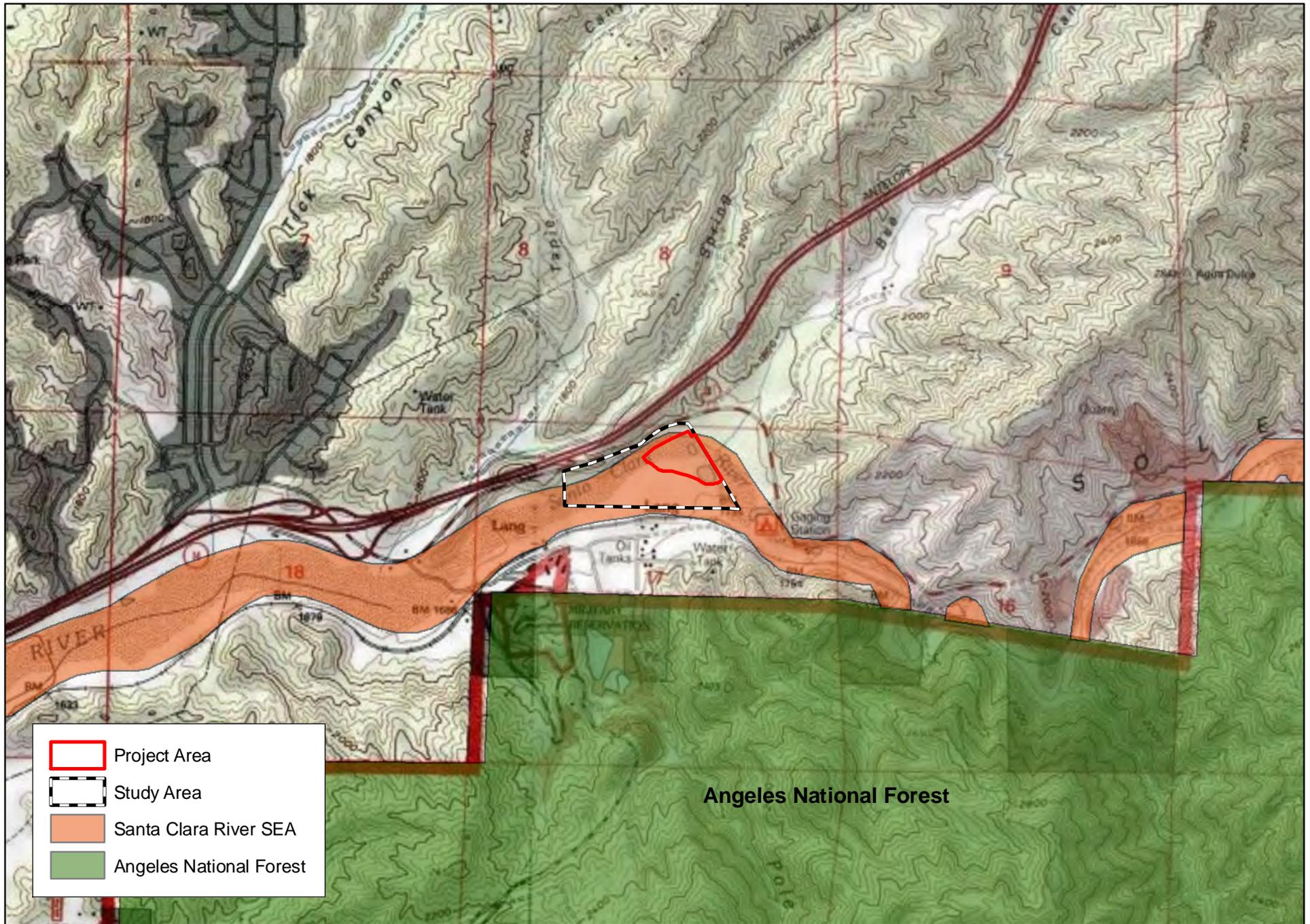
In the vicinity of the study area, the flows in the river are extremely dynamic, including periods of episodic flooding with flows upwards of 165,000 cubic feet per second following storm events, and periods of time when the river bed is dry. This is typical of most of the large river systems exiting the San Gabriel Mountains. At the time of the site visits in April, 2009 and August, 2011, surface flows were present.

#### Landforms, Geology and Soils

The material underlying the majority of the study area is unconsolidated alluvium, consisting of rock, cobble, and sand. This material is fairly deep as evidenced by sand and gravel mining operations located approximately 0.5 mile downstream. Surrounding the river bed are steep-sloped foothills and mountains that are often cut by narrow canyons and rise up several hundred feet above the river bed.

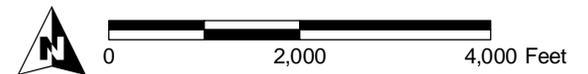
Soils within the study area are mostly mapped as Riverwash which is excessively drained and common to large wash systems. Enclaves of Cortina sandy loam and Cortina cobbly sandy loam are also found in the study area. These soil types are also characteristic of wash systems being found on alluvial fans, excessively drained, and with 0-9 percent slopes. Within the limited upland portions of the study area, two variants of Ojai loam are present. One is the Ojai loam thin surface variant which is well drained and found on slopes and terraces with 30-50 percent slopes. The other is Ojai loam which is well drained and found on slopes and terraces with 2-9 percent slopes (see **Figure 5**, *Soils Map*)(Google Earth 2005).

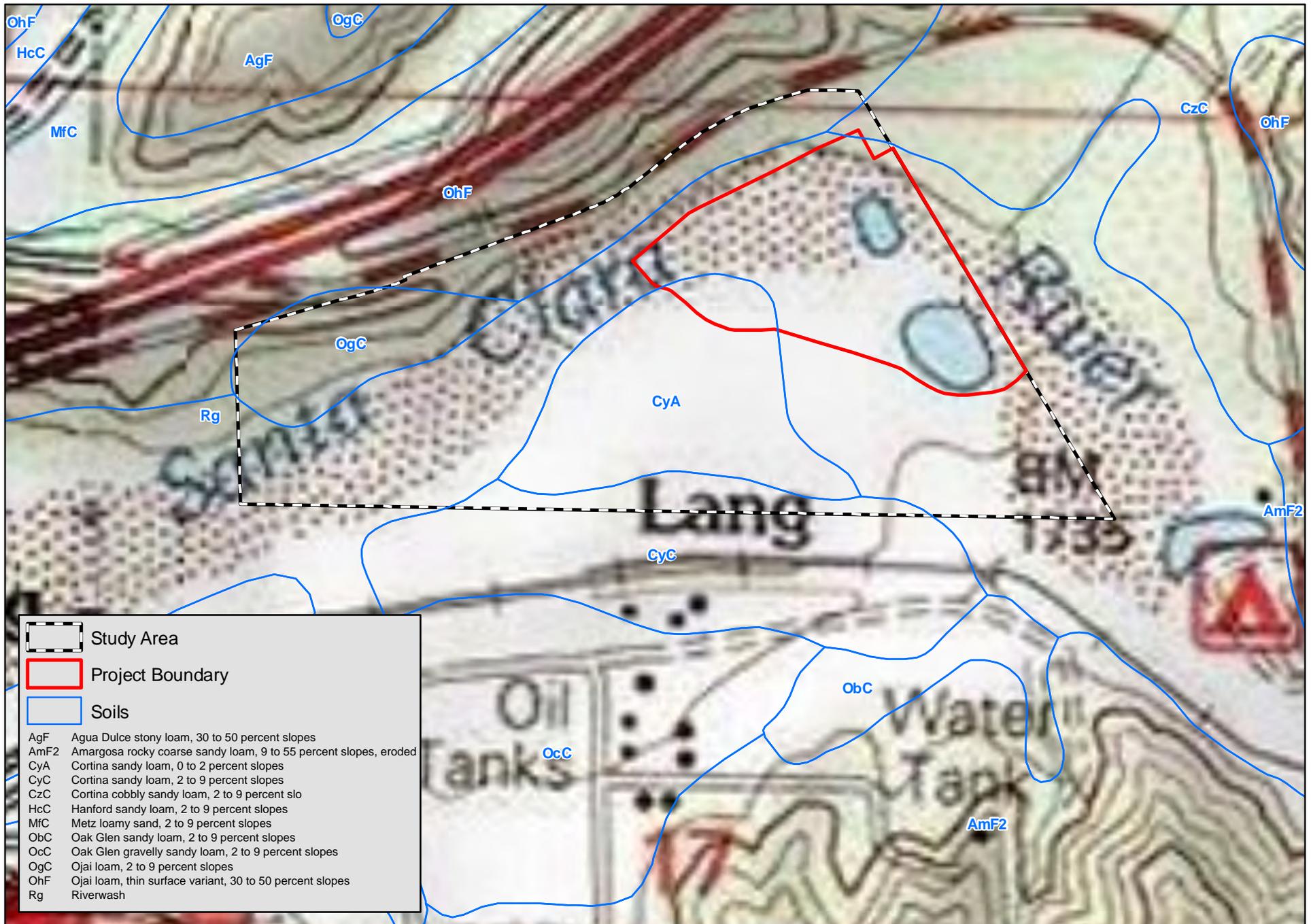
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**Figure 4** | Location in Relation to Santa Clara River SEA  
Action Paintball Park

Source: L.A. County, 2000; USGS Topographic Series (Mint Canyon, Agua Dulce, CA).





**Figure 5**

**Soils Map**  
Action Paintball Park

Source: USGS Topographic Series (Mint Canyon and Agua Dulce, CA); USDA NRCS SSURGO, 2005



## CHARACTERISTICS OF THE SURROUNDING AREA

### Existing Land Uses

Existing land uses in the vicinity of the study area include ranching, farming, sand and gravel mining, and vacant open space (see **Figure 6**, *Surrounding Land Uses*). Improved roadways providing access to the study area are Soledad Canyon Road and State Route 14. There is a Union Pacific/Metrolink railroad line off site to the south. Approximately 1 mile downstream from the study area is a relatively large residential development. Otherwise, residential, industrial and commercial developments are absent from the surrounding area.

### Open Space Reserves

The most noteworthy open space reserve in the area is the Angeles National Forest which is just south of the study area. Approximately 4 miles to the northeast is Vasquez Rocks County Park. As mentioned earlier, the County of Los Angeles has designated an SEA over the majority of the study area as well as the upstream and downstream areas of the Santa Clara River, including the bed, banks and alluvial wash areas. In addition, the County has designated an SEA over the Kentucky Springs area (SEA #61) a few miles upstream from the study area. These features and other SEAs in the area are shown in **Figure 7**, *Open Space Reserves*.

### Surrounding Vegetation and Habitats

Due to the existence of State Route 14 native vegetation is limited to the immediate north of the study area. Across the highway and immediately to the west, east, and south there are vast blocks of diverse native vegetation, including many alliances of alluvial fan sage scrub, coastal sage scrub, chaparral, riparian woodland, and oak woodland which form a mosaic across the surrounding landscape. These vegetation types, in turn, provide habitats valuable for a wide range of fish and wildlife. The connectivity of the vegetation in the study area with that in surrounding areas also provides for the dispersal and foraging of wildlife.

### Relationship with Surrounding Biotic Mosaic

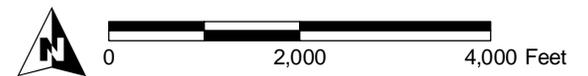
The surrounding vacant open space provides vastly more and often better representations of the same vegetation and habitats that are found in the study area. They are also more diverse in terms of their composition and relative abundance. However, the unique location of the study area at the confluence two major drainage system (Bee and Soledad canyons), as well as its connection to the Santa Clara River which extends for many miles downstream would indicate that its plant, fish, and wildlife populations interact highly with surrounding populations. As discussed earlier, these populations potentially include several State and/or federally-listed threatened and endangered and a number of State species of concern. The site also factors in to the hydrological and geo-morphological processes that influence the river downstream. That is, the river bottom locale represented by the study area factors in to the long-term sustainability of the river system, its water quality, and habitat functions and values.

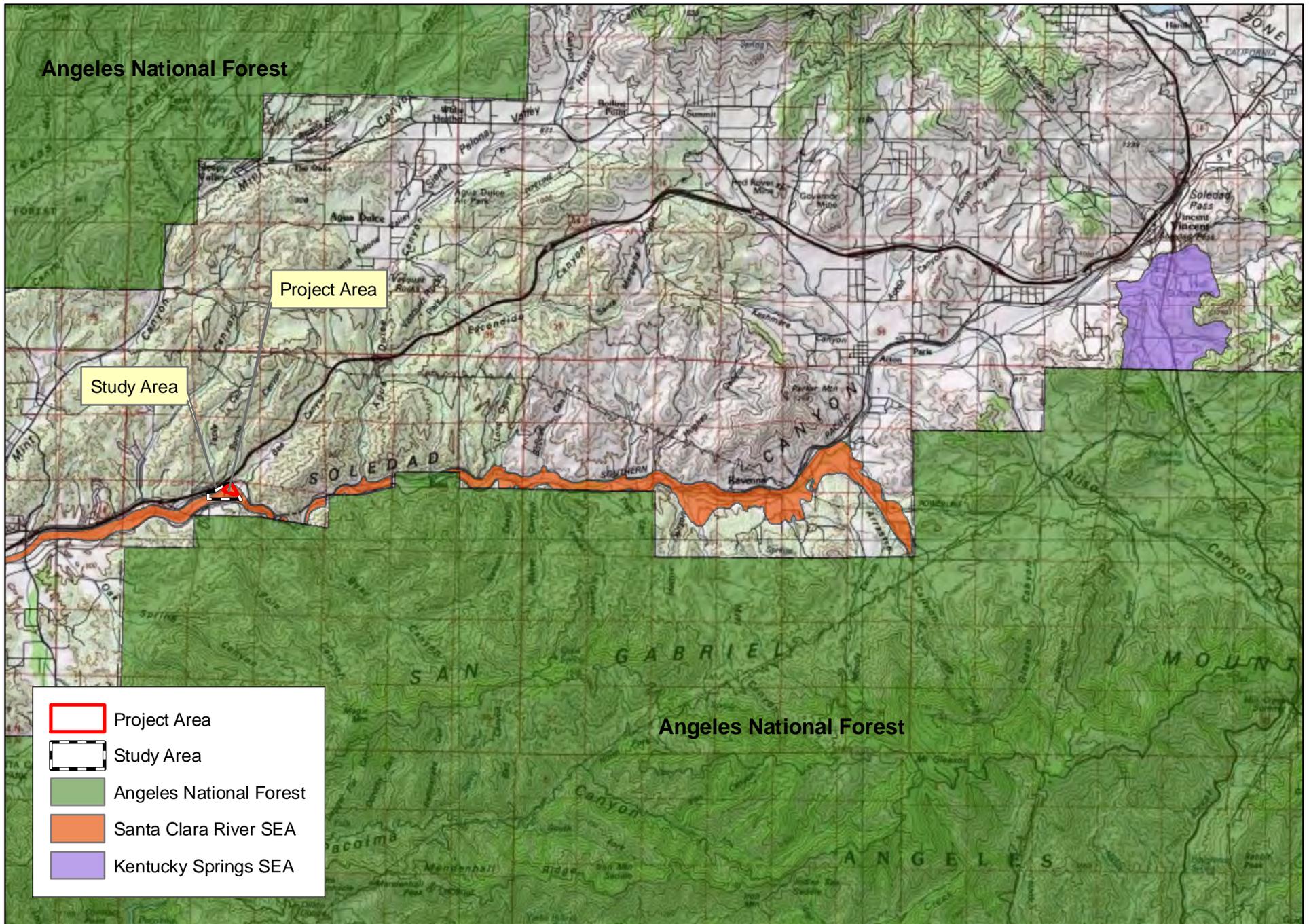
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**Figure 6** | **Surrounding Land Uses**  
Action Paintball Park

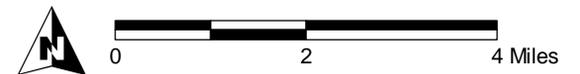
Source: ESRI, 2009.





**Figure 7** | **Open Space Reserves**  
Action Paintball Park

Source: L.A. County, 2000; USGS Topographic Series (Mint Canyon, Agua Dulce, CA).



## Overall Species Population Sizes of Flora and Fauna in the Region

Plant and wildlife within the region is extremely diverse. This is due to the influence of San Gabriel Mountains to the north, the Antelope Valley to the east, and the inland valleys and foothills to the west. The diversity and abundance of habitats in the region are believed to have high carrying capacities for healthy plant and wildlife populations. In particular, due to the mostly undeveloped character of the region, and the presence of many canyons that provide access to and from the interior of the Angeles National Forest, genetic exchange across the region is likely very high. As a result, with the exception of threatened and endangered species and those species of concern to CDFG, population numbers of plants and wildlife species are expected to be high.

## Overall Biological Value of the Study Area

The overall biological value is considered high for three primary reasons. First, it contains three natural communities that are listed as high priority for inventory due to their normally restricted distribution, the magnitude of their historical loss to development, and/or their high value to indigenous fish and wildlife. These communities are the *Populus fremontia* Forest Alliance, the *Lepidospartum squamatum* Shrubland Alliance, and the *Baccharis salicifolia* Shrubland Alliance.

Second, the study area contains habitat that are known to or could potentially support State and federally-listed threatened and endangered species and CDFG species of concern. As discussed below Table 1, and Table 2, seven State and/or federally-listed plant, fish and wildlife species are either known, are likely, or have the possibility to occur in the study area; another 31 special status species share the potential of occurrence in the study area. In total, these include six plant, two fish, two amphibian, four reptile, 18 bird, and seven mammal species.

Third, the study area is located at the confluence of two major drainage systems that include large watersheds. Consequently, it is believed to be a component part of a major and regionally-significant movement route through which fish and wildlife disperse and travel from north to south and east to west.

Therefore, the study area is considered to have very high biological value.

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### III. GENERAL BIOTA SURVEY

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#### CONSULTANT

With the exception of graphic support, all aspects of the work contributing to the preparation of this constraints analysis were performed by Steven G. Nelson, Consulting Biologist.

#### DATES AND TIME OF FIELD WORK

Field surveys were conducted on April 24, 2009, August 22, 2011, and May 18, 2012. Weather conditions at the time of the April 2009 survey included temperatures ranging from 71 to 73 degrees Fahrenheit, partly cloudy skies, no wind and no precipitation. Weather conditions at the time of the August 2011 survey included temperatures ranging from 85 to 90 degrees Fahrenheit, clear skies, no wind and no precipitation. Weather conditions at the time of the May 2012 visit included temperatures ranging from 90 to 95 degrees Fahrenheit, clear skies, moderate wind, and no precipitation.

#### METHODS

During the site visits, plant and wildlife survey methods consisted of inventorying plant and wildlife species observed by following transects of convenience through representative examples of all habitats and stopping at various data collection waypoints on the property. In general conformance with California Department of Fish and Game (CDFG) guidelines, plant surveys were: conducted during the flowering seasons (March through August) for most special-status plants known from the vicinity; floristic in nature; consistent with conservation ethics; and designed to cover all habitat types on site. During the May 2012 visit, a focused survey was performed for the state and federally-listed slender-horned spineflower (*Dodecahema leptocerus*). A population of this species is known to occur in Bee Canyon just upstream from the project. Prior to the survey a reference site on the Santa Ana River near Redlands was examined to confirm the species was blooming at the time.

All wildlife species observed while on site were recorded. No focused wildlife surveys were conducted; however, the possible presence of special-status wildlife was evaluated in the field based on habitat conditions and the proximity of known locations of such species.

The presence of fish on the property relied on the literature and recorded distribution of common and special-status species in the Santa Clara River system and observations made during the . In addition, incidental observations of fish on site by County staff members during their visit to the property, was taken into consideration.

A delineation of Waters of the U.S. was conducted using aerial photography, topographic maps showing 2-foot contours and field observations of the ordinary high water mark along the drainage features on the property. A determination of the presence of wetlands was also made. The bed, banks, and associated riparian habitat regulated by the California Department of Fish and Game (CDFG) was delineated by Jeff

Humble, Biologist with CDFG. Mr. Humble met with the Applicant and Peter Gonzalez, its Project Planner, and indicated where CDFG jurisdiction occurred on the property.

Vegetation mapping was completed using the aerial photography referenced above, field observations, and the *Manual of California Vegetation*, 2<sup>nd</sup> edition (Sawyer et. al., 2009) classification system. Due to the size of the property and its accessibility, the different vegetation alliances were delineated and mapped directly onto the aerial photograph. This information was then digitized into a GIS layer which permitted acreages to be computed for further analysis.

## Literature Search

A literature review was conducted prior to the initiation of the field work in order to determine the special-status plant and wildlife species that had the potential to occur on the property based on known occurrences within similar habitats in the vicinity. The California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California (CNPS 2001, 2011, and 2012) and CDFG's California Natural Diversity Database (CNDDDB) RareFind3 (CDFG 2011a and 2012) were the sources reviewed. With regard to the CNDDDB review, the USGS 7.5 minute Series Topographic Map where the property is located and the eight surrounding quadrangles were reviewed, including Agua Dulce, Mint Canyon, Green Valley, Sleepy Valley, Ritter Ridge, Acton, Condor Peak, Sunland and San Fernando.

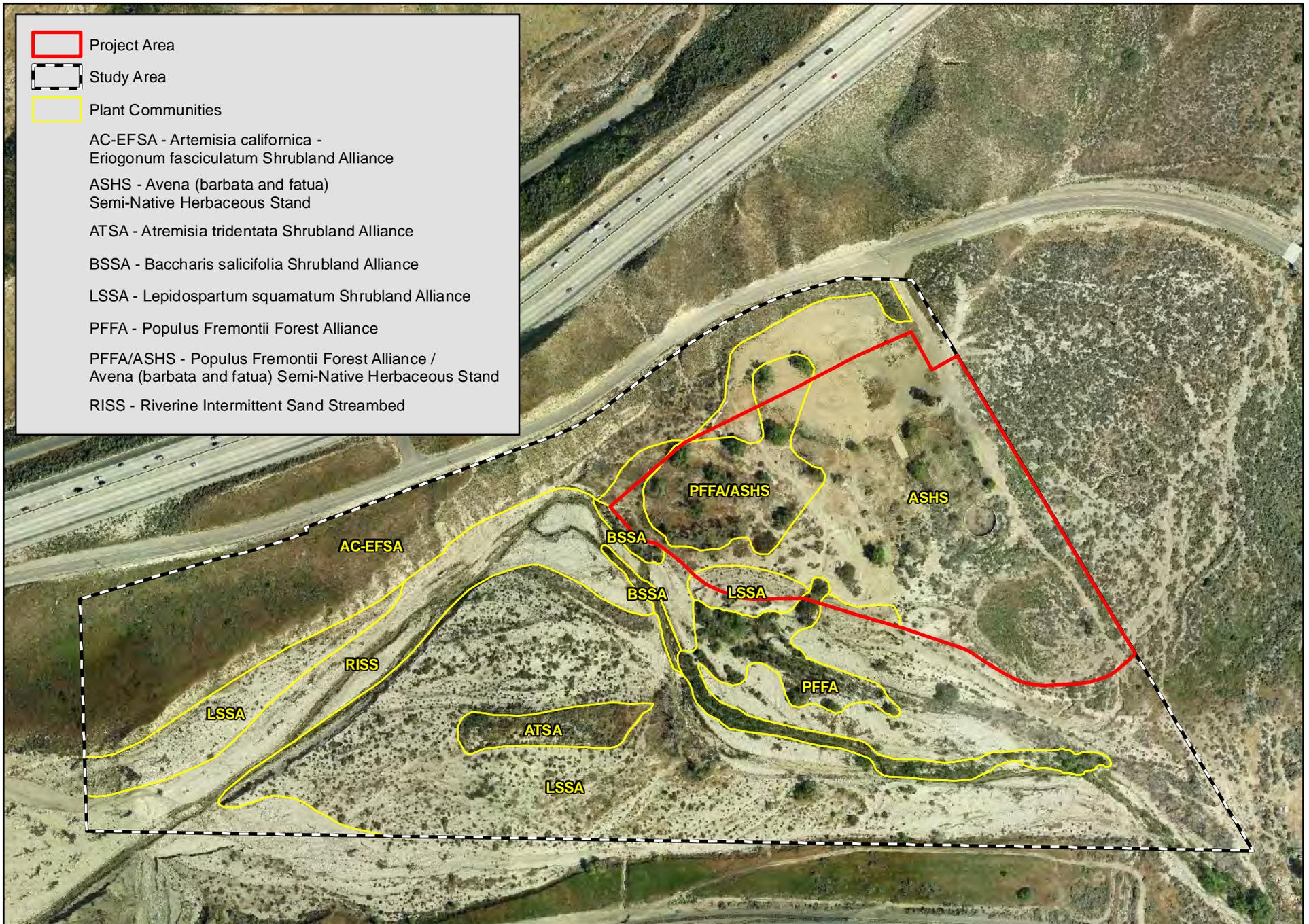
## Plant Communities/Habitats

Three general vegetation types occur within the study area, including Riverine, Palustrine, and Upland. These types include various plant communities, or alliances, which make up the vegetation in the area. Brief descriptions of these are provided below. **Figure 8**, *Vegetation Map*, illustrates their distribution over the study area. **Figure 9A**, *Site Photographs Key*, and **Figures 9B through 9E**, *Site Photographs*, show where photographs were taken and the vegetation in the study area from various perspectives.

Unvegetated Riverine habitat is found along portions of the most active flow lines of the river. This system includes wetlands and waters contained within a channel with the exception of wetlands dominated by trees, shrubs and other persistent emergents. The streambed habitat observed within the study area may further be classified as Riverine Intermittent Sand Streambed. As such, most (and in some years all) of the channels contain flowing water for only part of the year. When flows are absent, surface water may be absent or water may remain in isolated pools only. Approximately 4.9 acres of the study exist in this condition.

Palustrine vegetation types include non-tidal wetlands dominated by trees, shrubs and other persistent emergent plants. Within the study area these consist of the *Populus fremontii* Forest Alliance, *Lepidospartum squamatum* Shrubland Alliance, and *Baccharis salicifolia* Shrubland Alliance.

*Populus fremontii* Forest Alliance (Fremont cottonwood forest) is often associated with floodplains, low-gradient rivers, perennial or intermittent streams, springs, lower canyons of desert mountains, alluvial fans, and valleys with subsurface water. Within the study area, this alliance is found over approximately 4.7 acres along a portion of the most active river channel and as a remnant on the upper terrace where the project site is located. Along the river channel Fremont cottonwood occurs with red willow (*Salix laevigata*) where they together form a dense forest, generally 15 to 20 feet in height with closed canopy. Giant reed (*Arundo*

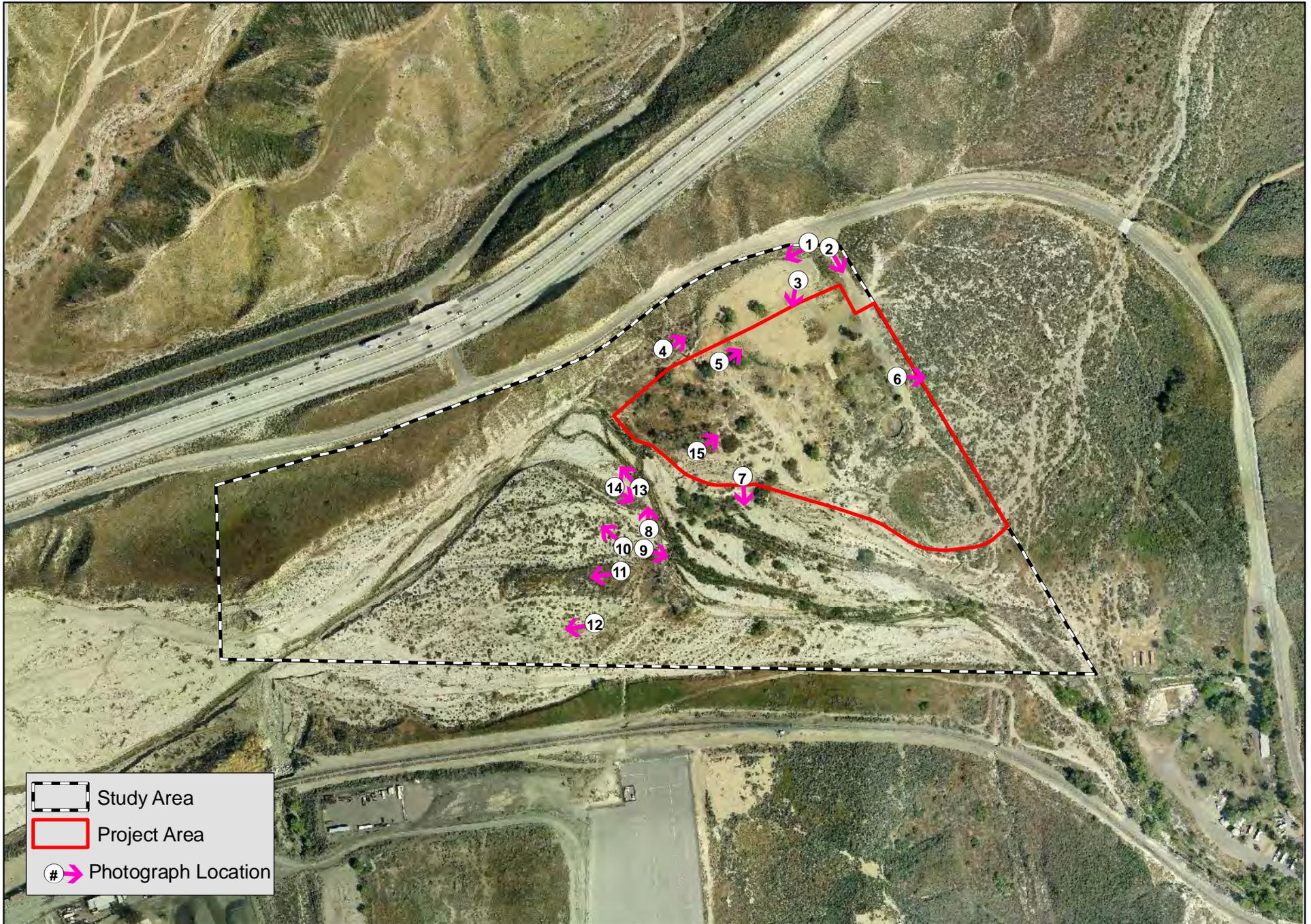


**Figure 8**

**Vegetation Map**  
Action Paintball Park

Source: Google Earth (Aerial), 2008; Los Angeles County, Los Angeles Regional Imagery Acquisition Consortium.

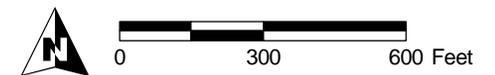




**Figure 9A**

**Site Photographs Key**  
Action Paintball Park

Source: Google Earth (Aerial), 2008; Los Angeles County, Los Angeles Regional Imagery Acquisition Consortium.





Photograph 1: View of project area from entrance.



Photograph 2: View of project site from entrance.



Photograph 3: *Avena sp.* semi-natural herbaceous stands.



Photograph 4: *Artemisia californica* - *Eriogonum fasciculatum* shrubland alliance.

## Figure 9B

### Site Photographs Action Paintball Park



Photograph 5: *Avena sp.* semi-natural herbaceous stands with *Populus fremontii* forest alliance canopy - note seedling cottonwoods.



Photograph 6: *Lepidospartum squamatum* shrubland alliance just off-site.



Photograph 7: *Populus fremontii* forest alliance.



Photograph 8: *Baccharis salicifolia* shrubland alliance.



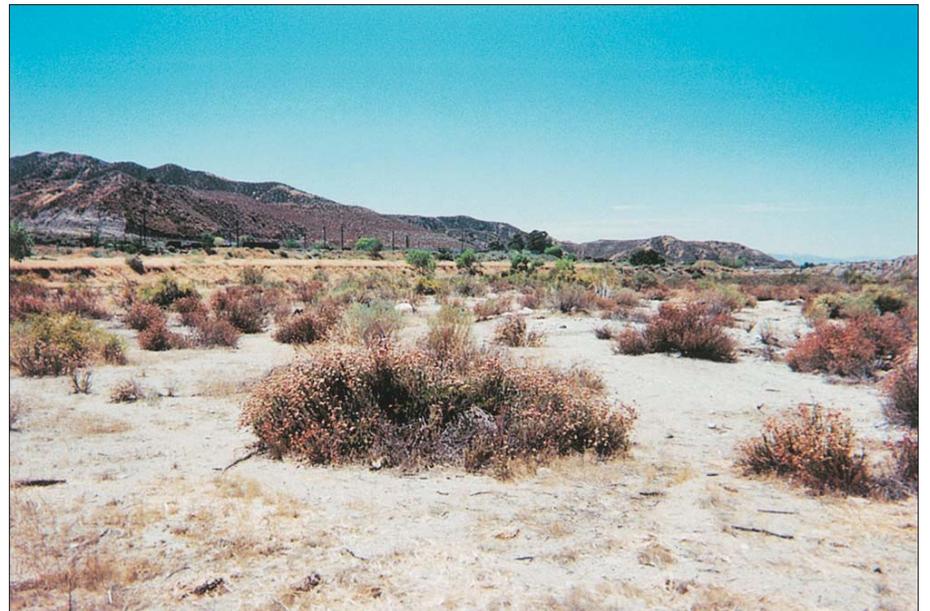
Photograph 9: *Tamarisk* sp.



Photograph 10: *Lepidospartum squamatum* shrubland alliance.



Photograph 11: *Artemisia tridentata* shrubland alliance.



Photograph 12: *Lepidospartum squamatum* shrubland alliance.

## Figure 9D

Site Photographs  
Action Paintball Park



Photograph 13: Surface flow in river.



Photograph 14: Surface flow in river.



Photograph 15: Remnant *Populus fremontii* forest alliance.

*donax*), tamarisk (*Tamarix sp.*), two highly invasive species, and mulefat (*Baccharis salicifolia*) are also present as trees and shrubs. Within the upper terrace area, Fremont cottonwoods are scattered over approximately 2.4 acres of 4.7 acres referenced above, are generally 25 to 40 feet in height and do not form a closed canopy. In addition, a shrub understory is absent from the trees on the terrace.

Beneath and between the trees is a dense cover of wild oats (*Avena fatua* and *A. barbata*), short-podded mustard (*Hirschfeldia incana*), and brome grasses (*Bromus madretensis rubens* and *B. diandrus*).

Both Fremont cottonwood and red willow are fast-growing species which produce large quantities of wind dispersed seeds. Seedlings establish successfully in areas where subsurface water is available during the growing season. These species also regenerate from root suckers and vegetative propagules that result from flood-related disturbance. They may also sprout from trees damaged by fire and cutting.

***Lepidospartum squamatum* Shrubland Alliance** (Scale broom scrub) is found over the majority of the study area, encompassing approximately 21.9 acres, owing to the hydro-geomorphologic processes that are associated with the river bed. This alliance is characteristic of the broad wash systems in southern California. It occurs on low-gradient alluvial deposits that are intermittently flooded. Within the study area, this alliance is dominated by scale broom. This is a woody, broom-like shrub that can grow up to 6 feet or higher in height. It can reproduce by seeds and asexually from plant fragments dispersed downstream by intense, scouring floods.

Stands of scale broom scrub typically establish after flood events and are highly variable in their composition. Within the study area, the most common plant species to occur with scale broom are California sagebrush (*Artemisia californica*), yerba santa (*Eriodictyon crassifolium*), and California buckwheat (*Eriogonum fasciculatum*). Formerly, this alliance was classified as Riversidean alluvial fan sage scrub (Holland, 1986).

***Baccharis salicifolia* Shrubland Alliance** (mulefat thickets) makes up the remaining Palustrine vegetation types in the study area. This alliance consists of monotypic stands of mulefat or shrublands co-dominated by mulefat. Within the study area, the stands are generally monotypic. This alliance is characteristically found in canyon bottoms, floodplains, lake margins, stream channels, and even irrigation ditches. In the study area, it occupies approximately 0.4 acre.

Mulefat, the dominant species, is an evergreen shrub with willow-like leaves that grows to a height of 6 feet in dense to open thickets. It is found in both seasonally or intermittently inundated areas. Fluvial processes rather than fire primarily disturb stands of this alliance. Mulefat is adapted to disturbance and readily resprouts.

Upland vegetation types occur over limited portions of the study area. They consist of *Artemisia californica*-*Eriogonum fasciculatum* Shrubland Alliance and *Avena* Semi-Natural Herbaceous Stands. Both are restricted to areas within the study area that are not subject to flooding.

*Artemisia californica* - *Eriogonum fasciculatum* Shrubland Alliance (California sagebrush-California buckwheat scrub) is a vegetation type dominated by California sagebrush and California buckwheat. It is a lower-elevation vegetation type that occurs in elevations ranging from approximately 750 to 2,800 feet and

on slopes that are typically south-facing. Within the study area this alliance occurs over approximately 8.4 acres on the slopes along the northern border between State Route 14 and the riverbed. Common companion plant species within the study area are deerweed (*Lotus scoparius*), laurel sumac (*Malosma laurina*), and white sage (*Salvia apiana*).

Both co-dominant species are semi-woody much-branched plants. The characteristics of this alliance reflect relatively hot and arid conditions of the Peninsular and Transverse mountain ranges. It commonly occurs well inland from the coast where fog is not a factor in soil moisture conditions.

California sagebrush and California buckwheat both sprout relatively well following fire. Unless fires are frequent, this alliance can persist. However, frequent fires can result in the irreversible type conversion to non-native grasslands.

*Artemisia tridentata* Shrubland Alliance (big sagebrush) occupies a very small portion of the study area, being restricted to a relatively small 0.8-acre "island" in the wash where flood levels rarely occur. This is a vegetation type that is dominated by big sagebrush. It typically occupies plains, alluvial fans, lower slopes, valley bottoms, seasonal and perennial stream channels and dry washes. In composition, it shares the plant species commonly found in the surrounding *Lepidospartum squamatum* Shrubland Alliance, including yerba santa and California buckwheat.

Big sagebrush does not sprout after fire, and seeds from surrounding unburned areas establish new shrubs after fire. Other species in this alliance do, however. Over time big sagebrush will retake areas where it was burned.

*Avena (barbata and fatua)* Semi-Natural Herbaceous Stands dominate the upper terrace where the proposed project is located. This vegetation type consists of a dominant or co-dominant herbaceous layer with or without emergent trees and shrubs. In some portions of the study area such emergents are present. In other areas, emergents are absent altogether.

Typically, this alliance occurs in waste places, rangelands and openings in native woodlands and shrublands. As indicated by its classification, the dominant species are non-native wild oats. Other non-natives are also common, including brome grasses and short-podded mustard. In total, this alliance covers approximately 10.9 acres of the study area.

## Flora

All plant species observed in the study area at the time of the field visits were recorded. During the visits, the study area was evaluated to determine its potential to support special-status plant species that are known to occur in the area of the project. Those species observed on site are listed in **Appendix A, Plant and Animal Species Compendium**, along with the relative abundance of each species. Some 75 plant species were observed in the study area during the surveys. All of these species are considered to be relatively common in the region. Of the total, 27 are non-native. Whereas no species of special-status plants were observed, five special-status species have the possibility of occurring in the study area and one is likely to occur in the project area.

## Fauna

All wildlife observed or otherwise detected during the field visits were noted. In addition, the study area, and particularly the project site, was evaluated for their potential to support special-status wildlife species known or expected to occur in the vicinity. Active searches were conducted for amphibians and reptiles by lifting and replacing debris and rocks. Birds were inventoried through visual and auditory recognition. Mammals were identified by identifying diagnostic sign, including scat, tracks, dust bowls, and burrows.

A list of those fish and wildlife species detected in the study area, as well as those expected, is provided in **Appendix A, Plant and Animal Species Compendium**. Thirty-two fish and wildlife species were observed or otherwise detected in the study area and another 133 species were not detected but are possible or expected. In general, wildlife populations are expected to be moderately high in abundance and diversity as compared to other alluvial wash habitats in the region due to the presence of herbaceous, shrubland, and woodland vegetation which provide for structural diversity. However, the relatively low plant cover and diversity of plant species in the *Lepidospartum squamatum* Shrubland Alliance and the level of disturbance on the upper terrace are thought to be most important to foraging and dispersal activities rather than breeding. Following are brief discussions of the various taxonomic groups detected or expected in the study area.

Fish were observed in the channel that had surface flows during the August 2011 field visit. The fish were approximately 2 inches long and although none were captured they were identified as being unarmored threespine stickleback (*Gastrosteus aculeatus williamsoni*), a federally-listed endangered species. Its habitat consists of clear, flowing, well-oxygenated water with pools and eddies and areas of dense vegetation, all of which were present along the channel possessing surface water. It is believed to have been widespread throughout the Los Angeles Basin; however today, it is restricted to locations in the Santa Clara River, San Francisquito Creek, and Soledad Canyon in Los Angeles County, and San Antonio Creek in Santa Barbara County.

Other fish species that have the potential to occur in the study area include the Santa Ana sucker (*Catostomus santaanae*), a federally-listed threatened species. This species prefers small streams with clear, cool water. The species are formerly native to the Los Angeles, San Gabriel, Santa Ana, and Santa Clara river systems. Until recently, however, they were believed to have been extirpated in all but the upper reaches of the Los Angeles and San Gabriel rivers in Los Angeles County and the lower reaches of the Santa Ana River in Orange County. According to the federal final rule to list the Santa Ana sucker as threatened, however, a population of the species was acknowledged as existing in the Santa Clara River system. This population was presumed to be an introduced population. The Santa Clara River population was not included in the proposal to list the species because of its introduced status. For the purpose of this analysis, it is considered to be a listed species.

Localized populations of amphibians are expected in the study area due to the periodic presence of surface water and moist soils associated with the Santa Clara River environs which could serve as breeding areas during the spring season. One amphibian, the Pacific treefrog (*Pseudacris regilla*), was detected the dense habitat along the channel containing surface water. Other amphibian species that are expected include the California western toad (*Bufo boreas halophilus*) and the western spadefoot toad (*Spea hammondi*) which is a species of concern to the CDFG.

In addition, the arroyo toad (*Anaxyrus californicus*), a State and federal-listed endangered species, could occur within the study area. Its habitat consists of rocky stream channels, dominated by mulefat and moderately large willows and cottonwoods with stream substrates consisting of rock, cobble, gravel and sand. According to the U.S. Fish and Wildlife Service (1999) "potential habitat for arroyo toads probably exists in the upper Santa Clara River basin, Los Angeles County."

The arroyo toad is a species that has fairly specialized requirements for breeding habitats. Specifically, it requires shallow, slow-flowing stream habitats, and riparian habitats that are disturbed naturally on a regular basis by flooding. Such conditions are typically found in foothill canyons and intermountain valleys bordered closely by low hills, where riverbed gradients are low, and where stream flows frequently pool or are at least intermittent for a few months of the year. For breeding, adult arroyo toads use open sites such as overflow pools, old flood channels, and pools with shallow margins on streams. Episodic flooding is critical to keep the low stream terraces relatively free of vegetation and the soils friable for burrowing. Outside the breeding season, subadult and adult arroyo toads are known to range widely into surrounding uplands, commonly up to .3 mile and as much as 1.3 miles (or greater) from the stream. The uplands may support sage scrub, chaparral, oak woodland or grassland. Such conditions occur within and surrounding the study area.

Few reptile species were observed on site, however several are expected. Those observed included western side-blotched lizard (*Uta stansburiana elegans*), western fence lizard (*Sceloporus occidentalis*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), San Diego horned lizard (*Phrynosoma blainvelleri*)(a CDFG species of concern), and gopher snake (*Pituophis melanoleucus*). In general, reptile populations in the study area are expected to be moderately high in diversity and abundance due to the presence of open habitats away from development. Expected species include southern alligator lizard (*Elgaria multicarinatus*), silvery legless lizard (*Anniella pulchra pulchra*)(a CDFG species of concern), California whipsnake (*Masticophis lateralis*), and western rattle snake (*Crotalus viridis*).

A number of bird species characteristic of scrub habitats were observed or heard. These were from a wide variety of families, including turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), greater roadrunner (*Geococcyx californianus*), Anna's hummingbird (*Calyppe anna*), common raven (*Corvus corvax*), bushtit (*Psaltriparus minimus*), northern mockingbird (*Mimus polyglottus*), California towhee (*Pipilo crissalis*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*), Bell's sage sparrow (*Amphiza belli belli*)(a CDFG species of concern) and others. This variety is believed to be reflective of the habitat value and functions provided by the herbaceous, scrubland and woodland habitats present in the study area, which provide considerable diversity. It is also possible that the southwestern willow flycatcher (*Empidonax traillii extimus*), a federally-listed endangered species, and least Bell's vireo (*Vireo belli pusillus*), a State and federally-listed endangered species, could occur in the study area.

Observations of individuals or evidence of mammal species were made during the site visits. These included the observation of the desert cottontail (*Sylvilagus audubonii*), and California ground squirrel (*Spermophilus beecheyi*), and the detection of the Botta's pocket gopher (*Thomomys bottae*), and coyote (*Canis latrans*). A number of other mammal species, including several bat species, are expected as well. In general, both the abundance and diversity of mammals in the study area expected to be reflective of the diversity of habitat types present.

All wildlife species observed in the study are at the time of the field visits were recorded. During the visits, the study area was evaluated to determine its potential to support others, including special-status wildlife species that are known to occur in the area of the project. Those wildlife species observed or expected within the study area are listed in **Appendix A, *Plant and Wildlife Species Compendium***, along with the relative abundance of each species. Some 165 wildlife species were observed, are expected, or have the potential to occur in the study area. Of those, 34 are special-status fish or wildlife species

## Wildlife Movement

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated “islands” of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because such conditions preclude the infusion of new individuals and genetic information into isolated populations.

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). Each type of movement may also be represented at a variety of scales from non-migratory movement of amphibians, reptiles, and some birds, on a local level to many square mile home ranges of large mammals moving at a regional level.

Local scale wildlife movement likely occurs within the study and project areas as well as its surrounding vicinity. The project area contains habitat that supports a variety of species of invertebrates, amphibians, reptiles, birds, and mammals. The home range and average dispersal distance of many of these species may be entirely contained within the study area and immediate vicinity. Numerous populations of insects, amphibians, reptiles, small mammals, and some bird species may find all of their resource requirements within the project area and its immediate vicinity. The Santa Clara River and other natural landscape features located in and around the project area can serve as natural guides for wildlife along travel routes. Local movement by small and medium-sized mammals such as California ground squirrel, Botta’s pocket gopher, deer mouse, long-tailed weasel, American marten, and gray fox may occur within the study area only. Occasionally, individuals expanding their home range or dispersing from their natal range will attempt to disperse from the study area. It is also possible for migratory individuals to utilize the study area for cover, food, and water resources.

River systems, such as the Santa Clara River support not only local movement, but are also important to regional movement. With its length, width and many tributaries, the Santa Clara River is thought to be a corridor of regional significance. The study area presently provides diverse habitats and natural open space that support travel up and down the river and connect to many side canyons that wildlife can use to move on a regional basis. As a major river system that is largely devoid of obstacles to wildlife movement, the Santa Clara River and its tributaries is significant to the interaction between wildlife meta-populations. Not only is it important to the regional movement of wildlife upstream and downstream, it is also key the ability of wildlife to move across its course from tributary to tributary.

The study area represents an important component of this system, particularly because it is immediately downstream from Soledad and Bee canyons, both of which are undeveloped and contain significant habitat areas. Wildlife moving north, south, east, and west would move through the study area as a junction of multiple probable wildlife movement routes.

## IV. SENSITIVE SPECIES AND COMMUNITIES

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### REGULATORY SETTING

The following provides an overview of the applicable regulations with regard to the special-status biological resources that may be present within the study area.

The Migratory Bird Treaty Act (MBTA) and Fish and Game Code Section 3503 protect native bird species from destruction or harm. This protection extends to individuals as well as any part, nest, or eggs of any bird listed as migratory.

In practice, Federal permits potentially impacting migratory birds typically have conditions that require pre-disturbance surveys for nesting birds, and, in the event nesting is observed, a buffer area with a specified radius must be established, within which no disturbance or intrusion is allowed until the young have fledged and left the nest or it has been determined that the nest has failed. If not otherwise specified in the permit, the size of the buffer area varies with species and local circumstances (e.g., presence of busy roads, intervening topography, etc), and is based on the professional judgment of a monitoring biologist. (4) State of California Fish and Game Code, Section 1602

Section 1602 of the California Fish and Game Code requires any entity (e.g., person, state or local government agency, or public utility) who proposes a project that will substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake to notify the California Department of Fish and Game (CDFG) of the proposed project. In the course of this notification process, the CDFG will review the proposed project as it affects streambed habitats within the project area. The CDFG may then place conditions on the Section 1602 clearance to avoid, minimize, and mitigate any potentially significant adverse impacts within CDFG jurisdictional limits.

Section 404 of the Clean Water Act (CWA) regulates the discharge of dredged material, placement of fill material, or excavation within “waters of the U.S.” and authorizes the Secretary of the Army, through the Chief of Engineers, to issue permits for such actions. “Waters of the U.S.” are defined by the CWA as “rivers, creeks, streams, and lakes extending to their headwaters and any associated wetlands.” Wetlands are defined by the CWA as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions.” The permit review process entails an assessment of potentially adverse impacts to Army Corps of Engineers (ACOE) jurisdictional “waters of the U.S.” and wetlands. In response to the permit application, the ACOE will also require conditions amounting to mitigation measures. Where a federally-listed species may be affected, they will also require an Endangered Species Act Section 7 consultation with the U.S. Fish and Wildlife (USFWS). Through this process, potentially significant adverse impacts within the federal jurisdictional limits could be mitigated to a level that is less than significant.

The mission of the California Regional Water Quality Control Board (RWQCB) is to develop and enforce water quality objectives and implement plans that will best protect the beneficial uses of the State’s waters, recognizing local differences in climate, topography, geology, and hydrology. Section 401 of the CWA requires that:

*Any applicant for a Federal permit for activities that involve a discharge to waters of the State shall provide the Federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal Clean Water Act.*

Therefore, before the ACOE will issue a Clean Water Act Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the RWQCB. A complete application for 401 Certification will include a detailed Water Quality Management Plan that addresses the key water quality features of the project to ensure the integrity of water quality in the area during and post-construction.

Under separate authorities granted by State law (i.e., the Porter-Cologne Water Quality Control Act), a RWQCB may choose to regulate discharges of dredge or fill materials by issuing or waiving (with or without conditions) Waste Discharge Requirements (WDRs), a type of State discharge permit, instead of taking a water quality certification action. Processing of a WDR is similar to that of a Section 401 certification; however, the RWQCB has slightly more discretion to add conditions to a project under Porter-Cologne than under the Federal CWA.

The California Native Plant Society (CNPS) is a private plant conservation organization dedicated to the monitoring and protection of sensitive plant species in California. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of rare, threatened, or endangered plant species of California (CNPS 2001). The inventory is commonly used by State and federal resource agencies in their review and evaluation of CEQA documentation. CNPS has developed five categories of rarity:

List 1A Presumed extinct in California

List 1B Rare or Endangered in California and elsewhere

List 2 Rare or Endangered in California, more common elsewhere

List 3 Plants about which we need more information before rarity can be determined– Review list

List 4 Plants of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat– Watch list

In addition, the CNPS recently updated their Lists with Threat Codes. There are three new Threat Code extensions that follow the List number as a decimal:

1. Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
2. Fairly endangered in California (20-80% of occurrences threatened)
3. Not very endangered in California (<20% of occurrences threatened or no current threats known)

The California Endangered Species Act (CESA) defines an “endangered” species as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.” The state defines a “threatened” species as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter.

For purposes of this assessment, the following acronyms are used for State status species:

- SE State listed as Endangered
- ST State listed as Threatened
- SR State Rare
- SCE State Candidate for Endangered
- SCT State Candidate for Threatened
- SCD State Candidate for Delisting
- SFP State Fully Protected
- SSC California Species of Special Concern

The Federal Endangered Species Act of 1973 (FESA) defines an “endangered” species as “any species which is in danger of extinction throughout all or a significant portion of its range”. A “threatened” species is defined as “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range”. Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to “take” any listed species. “Take” is defined in Section 3(18) of FESA as to: “...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Further, the USFWS, through regulation, has interpreted the terms “harm” and “harass” to include certain types of habitat modification as forms of “take”. These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a federal agency for an action which could affect a federally-listed plant or animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

Within the last ten years the USFWS instituted changes in the listing status of candidate species abandoning the C1/C2 model. Former C1 candidate species are now considered federal candidate species (FC). Some of the USFWS field offices (e.g., Sacramento) maintain lists of federal Species of Concern (FSC). These species receive no legal protection and the use of the term FSC does not mean that they will eventually be proposed for listing.<sup>1</sup> The Carlsbad Fish and Wildlife Office does not maintain such a list for their jurisdiction, which includes Los Angeles, Orange, Riverside, San Bernardino, Imperial, and San Diego counties. All references to federally-protected species in this report include the most current published status to which each species has been assigned by USFWS.

<sup>1</sup> Sacramento Fish & Wildlife website: [http://sacramento.fws.gov/es/spp\\_concern.htm](http://sacramento.fws.gov/es/spp_concern.htm)

For purposes of this assessment, the following acronyms are used for federal status species:

- FE Federally listed as Endangered
- FT Federally listed as Threatened
- FPE Federally proposed for listing as Endangered
- FPT Federally proposed for listing as Threatened
- FPD Federally proposed for delisting
- FC Federal candidate species (former Category 1 candidates)

### SPECIAL STATUS BIOLOGICAL RESOURCES IN THE STUDY AREA

Three high priority inventory vegetation alliances present within the study area are considered special-status natural communities by CDFG that warrant conservation. These are the *Populus fremontii* Forest Alliance, the *Lepidospartum squamatum* Shrubland Alliance, and the *Bacharis salicifolia* Shrubland Alliance. Each of these alliances is considered of special-status due their being riparian in nature (within the semi-arid environment of southern California), highly restricted in distribution in the region (i.e., found in perennially or intermittently wet areas only), and valuable as wildlife habitat (due to the presence of surface water).

In addition, a number of special status plant and wildlife species were indicated as being reported within the 9 USGS 7.5-minute Series Topographic Maps that were queried by a search of the CNDDDB RareFind3 data base. Several of these have the potential to occur in the study area. Special-status plant species reported in the area are summarized in **Table 1**, *Special-Status Plant Species Reported in the CNDDDB Database*, including an evaluation of their likelihood to occur in the study area. Special-status wildlife species reported in the area are summarized in **Table 2**, *Special-Status Fish and Wildlife Species Reported in the CNDDDB Database* (and other sources). Those special-status plant and wildlife species that possibly could or are likely to occur in the study area are discussed further below.

The study area also includes waters and riparian habitats that are regulated by the CDFG and U.S. Corps of Engineers (Corps). All areas of the combined jurisdictions of these agencies are delineated in **Figure 7**, *Regulated Waters and Riparian Habitat*. CDFG jurisdiction includes all areas of the wash from the top of bank of the upper terrace or dripline of associated riparian vegetation to the top of bank on the opposite side, as verified by Jeff Humble of CDFG.

As is usually the case, Corps jurisdiction includes the area between the ordinary high water marks (OHW) which are characteristically identifiable by deposits of debris and/or evidence of hydrology. As such, Corps jurisdiction would include braided channels within CDFG's jurisdiction and were not illustrated separately. In total, approximately 28.3 acres of CDFG and Corps jurisdictional areas were delineated in the study area.

Table 1

## Special-Status Plant Species Reported in the CNDDDB DATABASE

VASCULAR PLANTS								
Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Distribution	Occurrence In Study Area
<b>ANGIOSPERMS (DICOTYLEDONS)</b>								
<b>Asteraceae</b>	<b>Sunflower Family</b>							
<i>Aster (=Symphyotrichum) greatae</i>	Greata's aster	Jun-Oct	NONE	NONE	1B.3	Broad-leafed upland forest, chaparral, cismontane woodland, and riparian woodland.	Central and northern Los Angeles and Ventura counties, at elevations from 1,000-6,500 ft (300-2,010 m).	U
<b>Comments:</b> Not observed in study area and unlikely due to the presence of marginal woodland habitat within an alluvial wash system where scouring occurs periodically.								
<i>Centromadia parryi ssp. australis</i>	southern tarplant	May-Nov	NONE	NONE	1B.1	Marshes and swamps, valley foothill grassland, and vernal pools.	Los Angeles and Ventura counties between 900 and 2,500 ft (280-760 m) elevation.	U
<b>Comments:</b> Suitable habitat not found on site; therefore unlikely.								
<i>Stylocline masonii</i>	Mason's neststraw	Mar-May	NONE	NONE	1B.1	Chenopod scrub and pinyon juniper woodland.	Scattered locations throughout the western Mojave desert and lower Central Valley.	U
<b>Comments:</b> Suitable habitat not found in study area. Nearest known occurrence is approximately 5 miles to the southwest of the study area.								
<b>Berberidaceae</b>	<b>Barberry Family</b>							
<i>Berberis nevini</i>	Nevin's barberry	Mar-Apr	FE	SE	1B.1	Evergreen shrub found in riparian scrub, coastal scrub, chaparral, and cismontane woodland on sandy to gravelly soils.	Los Angeles County to sw. San Bernardino, w. Riverside, and inland San Diego counties between 965 and 2,705 ft (295-825 m) elevation.	U
<b>Comments:</b> Not observed within the study area and unlikely to occur due to its detectable perennial life form.								

Table 1 (Continued)

## Special-Status Plant Species Reported in the CNDDB

VASCULAR PLANTS								
Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Distribution	Occurrence In Study Area
<b>Boraginaceae</b>		<b>Borage Family</b>						
<i>Harpagonella palmeri</i>	Palmer's grappling hook	Mar-May	FSC	NONE	4.2	Chaparral, coastal scrub, valley and foothill grassland, clay soils.	In California, Los Angeles, Orange, Riverside, and San Diego counties, and on Santa Catalina Island between 65 and 2,725 ft (20–830 m).	P
<b>Comments:</b> Not observed but suitable habitat is found on site.								
<b>Cactaceae</b>		<b>Cactus Family</b>						
<i>Opuntia basilaris</i> var. <i>brachyclada</i>	short-jointed beavertail cactus	Apr-Jun	NONE	NONE	1B.2	Chaparral, Joshua tree woodland, Mojave Desert scrub, pinyon-juniper woodland.	Los Angeles and San Bernardino counties between 1,400 and 5,900 ft (425–1,800 m).	U
<b>Comments:</b> Not observed within study area and unlikely to occur due to its detectable perennial life form.								
<b>Convolvulaceae</b>		<b>Morning-glory Family</b>						
<i>Calystegia peirsonii</i>	Peirson's morning-glory	May-Jun	FSC	NONE	4.2	Sage scrub, saltbush scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest.	Los Angeles County between 100 and 4,950 ft (30–1,500 m).	P
<b>Comments:</b> Not observed but suitable habitat is found in study area.								
<b>Lamiaceae</b>		<b>Mint Family</b>						
<i>Lepechinia rossii</i>	Ross' pitcher sage	May-Sep	NONE	NONE	1B.2	Chaparral.	A few scattered locations in northwestern Los Angeles County and central Ventura	U
<b>Comments:</b> Suitable habitat not found on site; therefore unlikely.								

Table 1 (Continued)

## Special-Status Plant Species Reported in the CNDDB

VASCULAR PLANTS								
Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Distribution	Occurrence In Study Area
<b>Malvaceae</b>								
<b>Mallow Family</b>								
<i>Malacothamnus davidsonii</i>	Davidson's bush mallow	Jun-Jan	NONE	NONE	1B.2	Deciduous shrub found in chaparral, cismontane woodland, coastal scrub, and riparian woodland.	California endemic found in Los Angeles, Monterey and San Luis Obispo counties between 600 and 2,800 ft (185–855 m).	U
<b>Comments:</b> Not observed in study area and unlikely due to its detectable life form, but suitable habitat is found in study area. Nearest known occurrence is approximately 7 miles to the south of study area.								
<b>Polemoniaceae</b>								
<b>Phlox Family</b>								
<i>Navarretia fossalis</i>	spreading navarretia, or, Moran's nosegay	Apr-Jun	FT	NONE	1B.1	Vernal pools, saltbush scrub, shallow freshwater marshes.	North of Baja California, scattered locations in San Luis Obispo, Los Angeles, Riverside, and San Diego counties from 100–2,000 ft (30–600 m).	U
<b>Comments:</b> Suitable habitat not found on site; therefore unlikely.								
<i>Navarretia setiloba</i>	Piute Mountains navarretia	Apr-Jul	NONE	NONE	1B.1	Cismontane woodland, pinyon juniper woodland, foothill and valley grassland.	Throughout central Kern County and into Tulare County; one record in Los Angeles County near Tejon.	U
<b>Comments:</b> Suitable habitat not found on site; site is also south of the species known range; therefore unlikely.								

Table 1 (Continued)

## Special-Status Plant Species Reported in the CNDDB

VASCULAR PLANTS								
Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Distribution	Occurrence In Study Area
<b>Polygonaceae</b>	<b>Buckwheat Family</b>							
<i>Chorizanthe parryi</i> var. <i>fernandina</i>	San Fernando Valley spineflower	Apr-Jun	FC	SE	1B.1	Sandy soil in openings between shrubs associated with coastal sage scrub habitat.	Two recently discovered sites, the Grapevine Mesa/Newhall Ranch area of the Santa Clarita Valley in western Los Angeles County and the Laskey Mesa/Ahmanson Ranch area in southeastern Ventura County. Prior to its rediscovery in 1999, thought to be long extinct.	U
<b>Comments:</b> Suitable habitat is disturbed in the study area and the species is not known to occur nearby; therefore unlikely.								
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	Apr-Jun	FSC	NONE	3.2	Openings and clearings in coastal sage scrub, chaparral, dry slopes and flat ground; sandy soils.	San Diego, western Riverside, and isolated sites in Los Angeles counties between 130 and 5,600 ft (40–1,705m).	L
<b>Comments:</b> Historically known from near Lancaster and study area is outside known range; therefore unlikely.								
<i>Dodecahema leptoceras</i>	slender-horned spineflower	Apr-Jun	FE	SE	1B.1	Grows exclusively in sandy-gravelly soil within alluvial floodplains of broad seasonally flooded washes.	Isolated populations in Los Angeles, western Riverside, and southwestern San Bernardino counties between 650 and 2,500 ft (200–760 m).	L
<b>Comments:</b> Not observed, but a population is known from Bee Canyon just immediately upstream from the study area; therefore likely even if not persistent due to periodic flooding and scouring.								

Table 1 (Continued)

## Special-Status Plant Species Reported in the CNDDB

VASCULAR PLANTS								
Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Distribution	Occurrence In Study Area
<b>Scrophulariaceae</b>		<b>Figwort Family</b>						
<i>Castilleja gleasonii</i>	Mt. Gleason paintbrush	May-Jun	NONE	SR	1B.2	Lower montane coniferous forest, broad-leaved upland forest, lower montane coniferous forest, and open chaparral..	San Gabriel Mountains at upper elevations..	U
<b>Comments:</b> Suitable habitat not found in study area; therefore unlikely.								
ANGIOSPERMS (MONOCOTYLEDONS)								
<i>Calochortus clavatus</i> var. <i>gracilis</i>	slender mariposa lily	Mar-Jun	FSC	NONE	1B.2	Openings within coastal sage scrub and chaparral, especially in foothill canyons, on clay soils with gravel, stones, or rocks, generally in shade.	San Gabriel Mountains in Los Angeles County between 1,180 and 3,280 ft (360–1,000 m). Prior to the current survey only nine occurrences were known (but see below).	P
<b>Comments:</b> Not observed but suitable habitat is found in study area; therefore possible.								
<i>Calochortus plummerae</i>	Plummer's mariposa lily	May-Jul	FSC	NONE	1B.2	Sage scrub, valley and foothill grassland, yellow pine forest; dry, rocky or sandy sites, granitic or alluvial soils.	Ventura, Los Angeles, Orange, and western San Bernardino and Riverside counties between 330 and 5,600 ft (100–1,700 m).	P
<b>Comments:</b> Not observed but suitable habitat is found in study area; therefore possible.								

Table 1 (Continued)

Special-Status Plant Species Reported in the CNDDB

VASCULAR PLANTS								
Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Distribution	Occurrence In Study Area
<b>Poaceae</b>	<b>Grass Family</b>							
<i>Orcuttia californica</i>	California Orcutt grass	Apr-Aug	FE	SE	1B.1	Vernal pools.	North of Baja California, Ventura, Los Angeles, Riverside, and San Diego counties between 50 and 2,150 ft (15–660 m). Known from fewer than 20 occurrences.	U
<b>Comments:</b> Suitable habitat not found in study area; therefore unlikely.								
<i>Imperata brevifolia</i>	California satintail	Sep-May	U NONE	NONE	NONE	Mojavean desert scrub, chaparral, alkali seeps	Many locations throughout desert and Central Valley regions of California	U
<b>Comments:</b> Suitable habitat not found on site.								
<b>Key to Species Listing Status Codes</b>								
FE	<i>Federally Listed as Endangered</i>	SE	<i>State Listed as Endangered</i>	SFP	<i>State Fully Protected</i>			
FT	<i>Federally Listed as Threatened</i>	ST	<i>State Listed as Threatened</i>	CSC	<i>California Special Concern Species</i>			
FPE	<i>Federally Proposed as Endangered</i>	SCE	<i>State Candidate for Endangered</i>					
FPT	<i>Federally Proposed as Threatened</i>	SCT	<i>State Candidate for Threatened</i>					
FSC	<i>Former Federal Species of Concern</i>	SR	<i>State Rare</i>					
<p><i>California Native Plant Society (CNPS)</i></p> <p><i>List 1A: Presumed extinct in California.</i></p> <p><i>List 1B: Rare, threatened, or endangered throughout their range.</i></p> <p><i>List 2: Rare, threatened, or endangered in California, but more common in other states.</i></p> <p><i>List 3: Plant species for which additional information is needed before rarity can be determined.</i></p> <p><i>List 4: Species of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat.</i></p>								

Table 1 (Continued)

## Special-Status Plant Species Reported in the CNDDB

*CNPS Threat Codes*

- .1 *Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)*
- .2 *Fairly endangered in California (20-80% occurrences threatened)*
- . 3 *Not very endangered in California (<20% of occurrences threatened or no current threats known)*

<sup>a</sup> *Federal species of concern is an informal term that refers to those species that the USFWS believes might be declining and may be in need of concentrated conservation actions to prevent decline. These species receive no legal protection and the use of the term does not mean that they will eventually be proposed for listing or that they have been designated as candidate for listing. The Federal Species of Concern has not been maintained on a statewide basis, so this designation has been removed from CDFG's "special plants" list. Species formerly with this designation are listed as "former federal species of concern."*

Occurrence in study area: Obs = observed; L = Likely due to presence of suitable habitat and nearby records; P = Possible due to presence of marginal habitat and/or suitable habitat in surrounding area; U = Unlikely due to absence of marginal or suitable habitat and/or absence of suitable habitat in surrounding area.

Table 2

## Special-Status Fish and Wildlife Species Reported in the CNDDB

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence In Study Area
<b>FISH</b>						
<b>Cyprinidae</b>	<b>Minnows and Carp</b>					
<i>Rhinichthys osculus</i> ssp.3	Santa Ana speckled dace	NONE	CSC	Shallow cobble and gravel riffles within permanently	Headwaters of the Santa Ana and San Gabriel Rivers.	U
<b>Comments:</b> Not known to exist in the Santa Clara River; therefore unlikely.						
<b>Catostromidae</b>	<b>Suckers</b>					
<i>Catostomus santaanae</i>	Santa Ana sucker	FT	CSC	Small, shallow streams that are subject to periodic, severe flooding.	Currently known from three populations; Big Tujunga Creek, the San Gabriel River, and the Santa Ana River.	P
<b>Comments:</b> Believed to be extant in Santa Clara River system; therefore possible when surface flow is present.						
<b>Gasterosteidae</b>	<b>Sticklebacks</b>					
<i>Gasterosteus aculeatus williamsoni</i>	unarmored threespine stickleback	FT	CSC, SFP	Slow-moving portions of coastal streams that lack turbidity.	Currently restricted to the upper Santa Clara River drainage in Los Angeles and Ventura counties, San Antonio Creek on Vandenburg Air Force Base, San Luis Obispo County, and an isolated population in San Felipe Creek in San Diego County.	OBS
<b>Comments:</b> Observed in the study area.						
<i>Gila Orcutti</i>	arroyo chub	NONE	CSC	Warm Water Streams	Known only from the Los Angeles, San Gabriel, San Luis Rey, Santa Ana, Santa Margarita rivers and Malibu and San Juan creeks	U
<b>Comments:</b> Not known from the Santa Clara River; therefore unlikely.						

Table 2 (Continued)

Special-Status Fish and Wildlife Species Reported in the CNDDB

<b>VERTEBRATES</b>						
<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal</b>	<b>State</b>	<b>Preferred Habitat</b>	<b>Distribution</b>	<b>Occurrence In Study Area</b>
<b>AMPHIBIANS</b>						
<b>Bufonidae</b>	<b>True Toads</b>					
<i>Anaxyrus californicus</i>	arroyo toad	FE	CSC	Restricted to open riparian woodlands and alluvial habitats, where it breeds in shallow, gravelly, slow moving streams and pools. It is a habitat specialist, requiring exposed shallow, gravel- or sand-based pools with low current velocity and little marginal vegetation in streams free of predatory fishes.	Foothill regions in southern California from San Luis Obispo County to Baja California. It historically occurred along the length of drainages, including coastal areas, but now survives generally in the headwaters as small isolated populations. The nearest known extant population is along the Santa Clara River east of Bee Canyon.	L
<b>Comments:</b> Is known from river system; breeding and overwintering habitat found in the study area; therefore likely due to upstream population.						
<b>Pelobatidae</b>	<b>Spadefoot Toad Family</b>					
<i>Spea hammondi</i>	western spadefoot	FSC	CSC	Arid and semi-arid regions in the lowlands and foothills (below 4,500 feet) in washes, river floodplains, alluvial fans, playas, and alkali flats.	Primarily in Central Valley and adjacent foothills, and in the Coast Ranges from Redding to northwestern Baja California. Now believed to be extirpated from most of southern California.	L
<b>Comments:</b> Breeding and overwintering habitat found in the study area; therefore likely.						

Table 2 (Continued)

## Special-Status Fish and Wildlife Species Reported in the CNDDB

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence In Study Area
<b>Ranidae</b>	<b>True Frog Family</b>					
<i>Rana draytonii</i>	California red-legged frog	FT	CSC	Quiet pools of streams, marshes, and occasionally ponds.	West of the Sierra Nevada from Shasta County (formerly?) to San Diego County, though now nearly extirpated from southern California south of Ventura County.	U
<b>Comments:</b> Not known from vicinity; suitable habitat not found in study area; therefore unlikely.						
<i>Rana muscosa</i>	Sierra Madre yellow legged frog	FE	CSC	Montane lakes, streams and marshes	Largely extirpated from the mountain ranges of southern California; now only in the western Sierra Nevada	U
<b>Comments:</b> Not known from vicinity; suitable habitat not found in study area; therefore unlikely.						
<i>Taricha torosa</i>	Coast Range newt	NONE	CSC	Moist woodlands	Primarily California Coast ranges and Sierra Nevada foothills	U
<b>Comments:</b> Suitable habitat not found on site.						
REPTILES						
<b>Iguanidae</b>	<b>Iguanid Lizards</b>					
<i>Phrynosoma blainvillei</i>	coast horned lizard	FSC	CSC	Generally occurs in sage scrub and chaparral, but can also be found in coniferous forest and broadleaf woodland. It is usually found in sandy areas, especially where harvester ants are found.	West of the Sierra Nevada, Coast, and Peninsula ranges in California from Butte County south to the Mexican border; also throughout most of Baja California.	OBS
<b>Comments:</b> Observed in the study area.						

Table 2 (Continued)

## Special-Status Fish and Wildlife Species Reported in the CNDDB

<b>VERTEBRATES</b>						
<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal</b>	<b>State</b>	<b>Preferred Habitat</b>	<b>Distribution</b>	<b>Occurrence In Study Area</b>
<b>Teiidae</b>						
<b>Whiptails and Relatives</b>						
<i>Anaxyrus tigris stejnegeri</i>	coastal whiptail	FSC	NONE	Arid and semi-arid scrub to open woodland, where vegetation is relatively sparse.	Los Angeles, Orange, and San Diego counties south to central Baja California.	OBS
<b>Comments:</b> Suitable habitat present; observed.						
<b>Anniellidae</b>						
<b>Legless Lizard Family</b>						
<i>Anniella pulchra pulchra</i>	silvery legless lizard	FSC	CSC	Sparsely vegetated loose soil (for burrowing), leaf litter; on sand dunes, in washes, oak woodland, chaparral, open woodland.	Coastal slope of southern California from San Francisco Bay to n. Baja California.	L
<b>Comments:</b> Suitable habitat present in the study area; therefore likely.						
<b>Boidae</b>						
<b>Boas</b>						
<i>Charina trivirgata</i>	rosy boa	FSC	NONE	Rocky shrublands west of the desert, usually near water.	Los Angeles County (away from the coast) south through w. Riverside, Orange, and San Diego counties to n. Baja California.	P
<b>Comments:</b> Marginal habitat found in study area; therefore possible.						
<i>Thamnophis hammondi</i>	two-striped garter snake	FSC	CSC	Perennial and intermittent streams having rocky beds and bordered by willow thickets or other dense vegetation. May also inhabit shallow rivers and stockponds bordered by thick riparian vegetation.	Coastal slope from Monterey County to northern Baja California and up to 4,500 feet elevation.	L
<b>Comments:</b> Suitable habitat not found on site; therefore unlikely.						

Table 2 (Continued)

Special-Status Fish and Wildlife Species Reported in the CNDDB

<b>VERTEBRATES</b>						
<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal</b>	<b>State</b>	<b>Preferred Habitat</b>	<b>Distribution</b>	<b>Occurrence In Study Area</b>
<b>Emydidae</b>						
<b>Turtles</b>						
<i>Emmys marmorata pallida</i>	Southwestern pond turtle	NONE	CSC	Ponds and slow moving streams	North of San Francisco to Northern Baja, west of Desert regions	U
<b>Comments:</b> Suitable habitat not found in study area.						
<b>BIRDS</b>						
<b>Accipitridae</b>						
<b>Hawks</b>						
<i>Accipiter cooperii</i>	Cooper's hawk	NONE	NONE	(nesting) woodland, chiefly of open, interrupted or marginal. An uncommon year-round resident in so. California. Prefers woodland habitats but can also be found in virtually any habitat during migration. Typical breeding habitat in so. California consists of riparian and oak woodlands, but also nests in ornamental woodlands provided by parks.	Southern Canada to northern Mexico.	L
<b>Comments:</b> Suitable cotton wood forest in study area; likely.						
<i>Aquila chrysaetos</i>	Golden Eagle	B/GEA		(Nesting & wintering) rolling foothills mountains, sage-juniper flats, desert. Uncommon year-round resident in so. California. Typically nests on rocky cliff ledges or trees, but also rarely on the ground.	Mountain and plain regions of northern hemisphere.	L
<b>Comments:</b> Wide ranging species known from the region; likely uses study area to forage.						

Table 2 (Continued)

Special-Status Fish and Wildlife Species Reported in the CNDDB

<b>VERTEBRATES</b>						
<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal</b>	<b>State</b>	<b>Preferred Habitat</b>	<b>Distribution</b>	<b>Occurrence In Study Area</b>
<i>Buteo regalis</i>	ferruginous hawk	NONE	NONE	(Wintering) open grassland, sagebrush flats, desert scrub, low foothills and fringes of PJW. Occurs as a winter resident in California. Occupies open, dry habitats such as grasslands, shrublands, rangelands,, and, in winter, plowed agricultural fields.	Breeds mainly in Pacific northwest; winters mainly in southwest.	L
<b>Comments:</b> Suitable cottonwood forest in study area; likely during winter months.						
<i>Buteo swainsoni</i>	Swainson’s hawk	NONE	NONE	(Nesting) breeds in stands with few trees in juniper-sage flats, riparian areas and in oak savannah.	Northwest U.S. to northern Mexico; mainly winters in South America.	L
<b>Comments:</b> Suitable cottonwood forest in study area; likely during winter months.						
<i>Circus cyaneus</i>	northern harrier	NONE	NONE	(Nesting) coastal salt & freshwater marsh. Nest & forage in grassland from saltgrass in desert sink ot mountain cienegas. Fairly common winter resident in so. California, but a very scarce and local breeder. Nest on the ground in a variety of wetland and upland habitats.	Alaska and Canada to southern U.S., northern Eurasia; winters from southern British Columbia south.	L
<b>Comments:</b> Suitable foraging habitat found in study area; therefore likely.						
<b>Falconidae</b>	<b>Falcon</b>					
<i>Falco columbarius</i>	merlin	NONE	NONE	(Wintering) seacoast, tidal estuaries, open woodlands, savannahs, edges of grassland and deserts, farms and ranches. Uncommon fall migrant and rare winter resident in sou. California. It prefers open to semi-open habitat for breeding and foraging.	Northern parts of Northern Hemisphere; winters south to northern South America.	L
<b>Comments:</b> Suitable foraging habitat found in study area; therefore likely.						

Table 2 (Continued)

Special-Status Fish and Wildlife Species Reported in the CNDDB

<b>VERTEBRATES</b>						
<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal</b>	<b>State</b>	<b>Preferred Habitat</b>	<b>Distribution</b>	<b>Occurrence In Study Area</b>
<i>Falco mexicanus</i>	prairie falcon	NONE	CSC	Desert mountains and arid mountains and hills west of the desert, rarely to the coast. Ranges over a broader area in winter, but generally not migratory.	Throughout the western U. S. and California except for the humid northwest.	L
<b>Comments:</b> Forages within the region.						
<i>Falco sparverius</i>	American kestrel	NONE	NONE	Occurs in borders of woodlands, farmland, open fields, pastures, with scattered trees, marshes, suburban areas, grassland, arid plains, deserts with giant cacti, wooded canyons, and forest opening to 4400 meters in elevation. Breeds in open habitats with scattered trees, also in cultivated and urban areas. Nests at 12 to 80 feet in trees or on cliff.	Most of North and South America.	L
<b>Comments:</b> Suitable habitat for breeding and foraging found in study area; therefore likely.						
<b>Strigidae</b>		<b>True Owl Family</b>				
<i>Athene cunicularia hypugia</i>	western burrowing owl	FSC	CSC	Inhabits relatively flat and open areas such as grasslands, coastal dunes and agricultural areas; requires the presence of burrows for nesting and roosting activities.	An uncommon to locally common resident in southern California.	P
<b>Comments:</b> Not detected within the study area; may potentially occur on the site as a wintering species.						
<i>Asio flammeus</i>	Short-eared owl	NONE	NONE	(Nesting) found in swamplands, both fresh and salt; lowland meadows, irrigated alfalfa fields	In North America breeds from Arctic coast to southern California (rarely).	L
<b>Comments:</b> Suitable foraging habitat found in study area; therefore possible during winter months.						

Table 2 (Continued)

Special-Status Fish and Wildlife Species Reported in the CNDDB

<b>VERTEBRATES</b>						
<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal</b>	<b>State</b>	<b>Preferred Habitat</b>	<b>Distribution</b>	<b>Occurrence In Study Area</b>
<i>Asio otus</i>	Long-eared owl	NONE	NONE	(Nesting) Riparian bottomlands grown to tall willows and cottonwoods also, belts of oak paralleling stream courses. Uncommon resident in the deserts, and is quite rare coastally. Declined throughout California, but the most pronounced reductions have occurred in the southwestern part of the state with a minimum 55 percent decline.	In the west breeds from central British Columbia to southern California, southern Arizona, New Mexico, and west Texas.	P
<b>Comments:</b> Suitable breeding and foraging habitat found in study area; therefore possible.						
<b>Troglodytidae</b>	<b>Wre</b>					
<b>Tyrannidae</b>	<b>Tyrant</b>					
<i>Empidonax traillii extimus</i>	southwestern willow flycatcher	FE	SE	Dense riparian vegetation approximately 4–7 meters (m) (13–23 feet) tall, often with a high percentage of canopy cover. Historically nested primarily in willows, with a scattered overstory of cottonwood.	Southwestern US from coastal California east to Western Texas.	P
<b>Comments:</b> Suitable habitat found on site.						
<b>Alaudidae</b>	<b>Lar</b>					
<i>Eremophila alpestris actia</i>	California horned lark	NONE	CSC	Requires open fields and grasslands for breeding.	A year-round resident that generally occurs in the coastal region of California, from Sonoma County south to Baja	P
<b>Comments:</b> Suitable habitat for foraging present; therefore possible.						

Table 2 (Continued)

Special-Status Fish and Wildlife Species Reported in the CNDDB

<b>VERTEBRATES</b>						
<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal</b>	<b>State</b>	<b>Preferred Habitat</b>	<b>Distribution</b>	<b>Occurrence In Study Area</b>
<b>Syl</b>		<b>Old World Warblers, Gnatcatchers</b>				
<i>Polioptila californica californica</i>	coastal California gnatcatcher	FT	CSC	Principally, the various associations of coastal sage scrub (Venturan, Riversidian, Diegan, Maritime, etc.), but also nests in chamise chaparral, especially where it occurs in association with sage scrub, and occasionally utilizes other habitats outside the breeding season.	Ventura County (locally), Los Angeles County (locally, primarily in the southern portion), extreme southwestern San Bernardino County, western Riverside County, Orange County, and San Diego County west of the mountains. Also found throughout much of Baja California.	P
<b>Comments:</b> Marginal habitat found on site; study area could provide for dispersal; therefore possible.						
<b>Laniidae</b>		<b>Shrike Family</b>				
<i>Lanius ludovicianus</i>	loggerhead shrike	FSC	CSC	Generally occupy open habitats with scattered large shrubs, trees, or fencelines.	An uncommon, though widespread, resident throughout southern California.	P
<b>Comments:</b> Suitable habitat found in study area; therefore likely.						
<b>Vireonidae</b>		<b>Vir</b>				
<i>Vireo bellii pusillus</i>	least Bell's vireo	FE	SE	Riparian scrub and riparian woodland along river and stream courses, preferring dense willow thickets for nesting.	Summer season resident of central and southern California and Baja CA.	P
<b>Comments:</b> Suitable breeding habitat found in study area; therefore possible.						
<b>Emberizidae</b>		<b>Emberizids</b>				
<i>Agelaius tricolor</i>	tri-colored blackbird (breeding)	NONE	CSC	Freshwater marshes and riparian Scrub.	Coastal areas from northern California to Upper Baja.	U
<b>Comments:</b> Suitable habitat for breeding not found on site.						

Table 2 (Continued)

Special-Status Fish and Wildlife Species Reported in the CNDDB

<b>VERTEBRATES</b>						
<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal</b>	<b>State</b>	<b>Preferred Habitat</b>	<b>Distribution</b>	<b>Occurrence In Study Area</b>
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	FSC	CSC	Most foothill slopes and ridges with low-growing shrub cover, typically coastal sage scrub and non-arborescent types of chaparral. Inhabits rocky slopes, often intermixed with grassy areas.	Occurs west of the deserts from Ventura County south into Baja California.	L
<b>Comments:</b> Suitable habitat found in study area.						
<i>Amphispiza belli belli</i>	Bell's sage sparrow	FSC	CSC	Arid and semi-arid foothill slopes and ridges with low-growing shrub cover, typically coastal sage scrub and non-arborescent types of chaparral.	Found west of the mountains from Trinity County, California south to northwestern Baja California.	L
<b>Comments:</b> Suitable habitat found in study area.						
<b>Cuculidae</b>	<b>Cuckoos &amp; Roadrunners</b>					
<i>Coccyzus americanus occidentalis</i>	Western yellow billed cuckoo	FPE	SE	Riverine woodlands and thickets	Rare throughout the western United States; general absent in California south of the Kern River.	L
<b>Comments:</b> Present range is well north of study area.						
<b>Mimidae</b>	<b>Thrashers</b>					
<i>Toxostoma lecontei</i>	LeConte's thrasher	NONE	CSC	Open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub	Deserts of southwestern U.S. and northwestern Mexico	U
<b>Comments:</b> Suitable habitat not found on site.						

Table 2 (Continued)

Special-Status Fish and Wildlife Species Reported in the CNDDB

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence In Study Area
<b>MAMMALS</b>						
<b>Vespertilionidae</b>	<b>Evening Bats</b>					
<i>Antrozous pallidus</i>	pallid bat	NONE	CSC	Scrubland, woodland, and grassland at low elevations; uses rocky areas for roosting.	Throughout much of the West, including all of California except for the Sierra Nevada and the Pacific Northwest.	P
<b>Comments:</b> Suitable roosting habitat does not occur on site, but it may use the study area for foraging.						
<i>Corynorhinus (=Plecotus) townsendii pallescens</i>	pale big-eared bat	NONE	CSC	Found in a wide variety of habitats from grasslands to conifer woodlands. Roosting sites include limestone caves, mine tunnels, buildings, and other man-made structures.	All of California west of the deserts.	P
<b>Comments:</b> Suitable roosting habitat does not occur on site, but it may use the study area for foraging.						
<i>Euderma maculatum</i>	spotted bat	NONE	NONE	Occupies a wide variety of habitats from arid deserts and grassland through mixed conifer forests. Feeds over water and along washes. Needs rock crevices in cliffs or caves for roosting.	Southwest U.S and northern Mexico north to Idaho and eastern Oregon.	P
<b>Comments:</b> Suitable roosting habitat does not occur on site, but it may use the study area for foraging.						
<i>Lasiurus cinereus</i>	hoary bat	NONE	NONE	Primarily wooded areas where it mainly roosts in trees	Widespread in North America.	P
<b>Comments:</b> Suitable roosting habitat occurs in study area; and may use the study area for foraging.						

Table 2 (Continued)

## Special-Status Fish and Wildlife Species Reported in the CNDDB

<b>VERTEBRATES</b>						
<b>Scientific Name</b>	<b>Common Name</b>	<b>Feder</b>	<b>State</b>	<b>Preferred Habitat</b>	<b>Distribution</b>	<b>Occurrence In Study Area</b>
<b>Molossidae</b>	<b>Free-tailed Bats</b>					
<i>Eumops perotis</i>	western mastiff bat	NONE	CSC	Favors rugged, rocky areas at low elevations in the coastal basins where suitable crevices for roosting are found. This species has very specific roosting structure needs, such as crevices that open downward and are at least 5 cm wide and 30 cm deep. They must also be high, as the bat needs 2-3 m of drop space to launch itself into flight. It feeds extensively on bees and wasps and has a large foraging range, which may extend up to 9.3 km from its daytime roost.	Butte County south through the Southern California coastal mountains and portions of the southeastern desert region.	P
<b>Comments:</b> Suitable roosting habitat does not occur on site; however, it may use the study area for foraging.						
<b>Leporidae</b>	<b>Hares and Rabbits</b>					
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	FSC	CSC	Prefers open areas, typically occurring in alluvial sage scrub and open sage scrub.	Occurs in coastal southern California from approximately Santa Barbara County south into Baja California.	P
<b>Comments:</b> Not observed on site but potentially present in study area.						
<b>Muri</b>	<b>Mice, Rats, and Voles</b>					
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	FSC	CSC	Open coastal sage scrub, mixed chaparral, and riparian areas.	Throughout southern California except coastal areas north of Orange County.	P
<b>Comments:</b> Uncommon outside desert habitats and the Central Valley, but potentially present.						

Table 2 (Continued)

Special-Status Fish and Wildlife Species Reported in the CNDDB

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence In Study Area
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	FSC	CSC	Found in a variety of arid and semi-arid habitats from sea level to 8,500 ft in elevation.	Occurs along the coast from northwest Baja California to San Luis Obispo County.	P
<b>Comments:</b> Not detected on site. Though this species occurs in a variety of habitats, the study area is at the edge of this subspecies' range.						
<b>Key to Species Listing Status Codes</b>						
FE	<i>Federally Listed as Endangered</i>	SE	<i>State Listed as Endangered</i>			
FT	<i>Federally Listed as Threatened</i>	ST	<i>State Listed as Threatened</i>			
FSC <sup>a</sup>	<i>Former Federal Special Concern Species</i>	SCE	<i>State Candidate for Endangered</i>			
FPE	<i>Federally Proposed as Endangered</i>	SCT	<i>State Candidate for Threatened</i>			
FPT	<i>Federally Proposed as Threatened</i>	SFP	<i>State Fully Protected</i>			
FPD	<i>Federally Proposed for Delisting</i>	CSC	<i>California Special Concern Species</i>			
B/GEA	<i>Bald Eagle and Golden Eagle Act</i>					
<sup>a</sup> Federal species of concern is an informal term that refers to those species that the USFWS believes might be declining and might be in need of concentrated conservation actions to prevent decline. These species receive no legal protection and the use of the term does not mean that they will eventually be proposed for listing or that they have been designated as candidates for listing. The Federal Species of Concern has not been maintained on a statewide basis, so this designation has been removed from CDFG's "special animals" list. Species formerly with this designation are listed as "former federal species of concern."						
Occurrence in study area: Obs = observed; L = Likely due to presence of suitable habitat and nearby records; P = Possible due to presence of marginal habitat and/or suitable habitat in surrounding area; U = Unlikely due to absence of marginal or suitable habitat and/or absence of suitable habitat in surrounding area.						

## V. IMPACT ANALYSIS

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### SUMMARY OF CONSTRAINTS ANALYSIS

Three natural communities of high priority to inventory are found in the study area. These are:

- *Populus fremontii* Forest Alliance;
- *Lepidospartum squamatum* Shrubland Alliance; and
- *Baccharis salicifolia* Shrubland Alliance.

One endangered species, the unarmored threespine stickleback, was observed to occur in the study area. In addition, six other State and/or federally-listed species have at least the possibility to occur in the study area. These are:

- Slender-horned spineflower
- Santa Ana sucker
- Arroyo toad
- Southwestern willow flycatcher
- Coastal California gnatcatcher
- Least Bell's vireo

Two wildlife species of concern to CDFG were observed in the study area. These were the coast horned lizard and coast whiptail. In addition, 29 other species of concern to CDFG, USFWS CNPS and the County of Los Angeles have a likelihood or possibility to occur in the study area,

In a regional context, the study area is also important to fish and wildlife movement in as much as it is located at the junction of three major corridors that can facilitate movement and dispersal in north-south and east-west directions.

Finally, approximately 28.3 acres of the study area fall under the regulatory jurisdiction of CDFG and/or the Corps, as shown in **Figure 10**, *Regulated Waters and Riparian Habitats*.

The presence of sensitive natural communities, habitats that support listed and otherwise sensitive species, and areas regulated by State and federal resource agencies are constraints to the footprint of the proposed paintball park. These are shown in **Figure 11**, *Revised Project Footprint and Constraints Map*. In total, there are 36.8 acres in the study area that are constrained by sensitive and/or regulated biological resources. The Applicant's representative, Peter Gonzalez, consulted with the CDFG, Regional Water Quality Control Board (RWQCB), Corps, and the USFWS regarding regulatory constraints to the proposed project. Mr. Humble of CDFG indicated his concerns as being limited to CDFG jurisdiction including the bed, banks and riparian habitat in the study area as shown in **Figure 7**, *Regulated Waters and Riparian Habitat*. In an e-mail dated April 2, 2012 to Mr. Gonzalez from Mr. Ejigu Solomon, Unit Chief of the Los Angeles RWQCB, it was stated that "it does not appear that you would need a construction permit from us for the proposed project since no

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land disturbing activity will take place.” In a letter dated March 9, 2012 to Mr. Gonzalez from Mr. Aaron Allen, Chief of the Coast North Branch, it was stated that “we have determined your project is not subject to our jurisdiction under Section 404 of the Clean Water Act and a Section 404 permit would not be required from our office if the activity is performed in the manner described.” In a letter dated June 1, 2012 to Mr. Gonzalez from Mr. Jeff Phillips, Deputy Assistant Field Supervisor of the USFWS Ventura Fish and Wildlife Office, it was stated that “we concur with your determination (Mr. Gonzalez’s) that the project is not likely to result in the take of federally listed species.” However, the letter also states “Our concurrence is based on the above protective measures and the characteristics of the site”. The referenced correspondences are provided in **Appendix B**, *Agency Correspondence*.

## THRESHOLDS OF SIGNIFICANCE

Based on Appendix G and Section 15065(a) of the California Environmental Quality Act (CEQA) Guidelines, a project may have a significant impact on biological resources if it would:

- **Threshold 1:** Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (refer to Impact Statement 1 below).
- **Threshold 2:** Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (refer to Impact Statement 2 below).
- **Threshold 3:** 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 (refer to Impact Statement 3 below).
- **Threshold 4:** 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 (refer to Impact Statement 4 below).
- **Threshold 5:** Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (refer to Impact Statement 5 below).
- **Threshold 6:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (refer to Impact Statement 6 below).

## APPROACH

Project-related impacts to biological resources take three forms: direct, indirect, and cumulative. Direct impacts are considered to be those that involve the loss, modification or disturbance of natural habitats (i.e., vegetation or plant communities), which in turn, directly affect plant and wildlife species dependent on that habitat. Direct impacts also include the destruction of individual plants or wildlife, which is typically the case

in species of low mobility (i.e., plants, amphibians, reptiles, and small mammals). The collective loss of individuals in these manners may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and, hence, population stability.

Indirect impacts are considered to be those that involve effects that are reasonably foreseeable in the future as a result of the project. These are such effects as those to result from increases in ambient levels of sensory stimuli (e.g., noise, light), unnatural predators (e.g., domestic cats and other non-native animals), and competitors (e.g., exotic plants, non-native animals). Indirect impacts may be associated with the construction and/or eventual habitation/operation of a project; therefore, these impacts may be both short-term and long-term in their duration. These impacts are commonly referred to as “edge effects” and may result in changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to project sites. Such impacts include increased pollutant discharges to receiving water bodies such as wetlands or marine environments, harassment by humans and/or their pets, light and glare, or increased ambient noise levels. Impacts that are speculative cannot be considered under CEQA if they are not reasonably foreseeable.

Cumulative impacts are those, that when project impacts are added to past, approved, and foreseeable projects, are determined to cumulatively considerable. That is, such as the cumulative effects of a project, when considered with others “trigger” the breaking point of a watershed, lead to the reduction in population numbers of a species to levels that cannot sustain themselves, or result in losses in biological diversity that cannot be recovered (as examples).

#### Conservation Elements Included in the Project

As discussed under the Project Description above, the proposed project includes several elements that are intended to avoid and minimize impacts on biological resources. These are:

- All facilities and activities associated with the paintball park shall be located outside of California Department of Fish and Game (CDFG) and U.S. Army Corps of Engineers regulated waters and associated riparian vegetation (i.e., on the upper terrace, outside the active wash area, and away from sensitive habitats.)
- The clearing or thinning of all but the non-native herbaceous plant species, giant reed (*Arundo donax*), and tamarisk (*Tamarix* sp.) shall not occur.
- The location of the septic system/leach field shall be at least 100 linear outside of the top of bank of the active wash (i.e., no closer than CDFG jurisdiction). (See **Appendix C**, *Onsite Wastewater Treatment System*)
- No night-lighting within and around the park shall be incorporated and no nighttime use of the facility shall be permitted.
- Four physical barriers shall be placed between the playing fields and riverbed: (1) an inner fence around the immediate individual fields; (2) specially-designed protective netting similar to golf driving range netting with a six inch space between the bottom of the net and ground surface to intercept wayward shots and allow small animals to move through the area; (3) sterile straw waddles for erosion control placed several feet away from the netting in areas where runoff could enter the river and which will be replaced annually; and (4) plastic mesh fencing (silt fencing) during

the rainy season between the straw waddles and the riverbed to provide further protection from erosion). Ample signage shall also be attached to the inner fence and protective netting which states access to areas beyond the play area is prohibited.

- The parking area shall have perimeter barriers to prevent run-off from carrying petroleum products (primarily oil from vehicles) from reaching the river.
- Any ornamental and decorative landscape plantings shall be limited to the play area and shall be derived, in the form of seeds, from native species indigenous to the area. Further, the area immediately surrounding the main administration buildings, if landscaped, shall emphasize plant palettes that require minimal irrigation so as to control and/or limit the ability of invasive plants and animals (such as the Argentine ant) to establish themselves on site. An appropriate and recommended source for plant palettes for this purpose would be the Drought-Tolerant Perennial Plants Native to Los Angeles County & Surrounding Areas, Approved for Use in Landscaping and Revegetation, Master List maintained by the Los Angeles County Department of Regional Planning.
- At no time shall alterations be made to the natural flow of water across the site other than the placement of erosion control materials.
- An annual program to remove giant reed and tamarisk from the riverbed shall be implemented to enhance the riparian habitat in the riverbed.
- Education materials such as brochures and leaflets that inform players about sensitive resources associated with the river habitats shall be distributed to all visitors.
- At the end of all days during which paintball play occurs the facility shall be thoroughly policed to collect and dispose of expended and unexpended paintballs.

## ANALYSIS OF PROJECT IMPACTS

In light of these project conservation elements, the following discussion analyzes the potential impacts to plant and wildlife resources that may occur as a result of implementation of the proposed project.

### (1) Sensitive Plant and Wildlife Species

*Project implementation would not significantly impact listed or otherwise special status species, either directly, indirectly, or cumulatively. Impacts to sensitive species would be avoided, minimized or reduced to a less than significant level with implementation of the project's conservation features.*

No slender-horned spineflower were observed on-site; therefore impacts to this species are not expected. By design, the project's conservation elements will avoid or minimize potential direct impacts to sensitive plant and animal species. The proposed facilities will be primarily located in areas already cleared and disturbed and will not encroach into riparian and wash habitats or other areas of native vegetation where these species do and could occur. There will be no clearing, grubbing, or grading activities associated with the project. Paintball players will be restricted from accessing the riverbed and wash and riparian habitat located there by installing barriers between the play area and the riverbed. The operation of the facility will not entail the use of night-lighting and nighttime use of the facility will not occur. Therefore, direct impacts will be less than significant.

The primary potential indirect impacts of the project on sensitive species are noise generated by visitors to the facility, runoff carrying sediments draining into the Santa Clara River, and the possible toxicity of used and wayward paintballs. Noise is not expected to rise to levels that will affect wildlife using nearby habitats. There is likely to be noise levels generated that are similar to an active playground; however, distances between play areas and key habitats in the nearby riverbed are generally on the order of at least 100 to 150 feet; and human vocalizations are expected to dissipate substantially before it reaches these habitat areas. In addition, paintball guns are operated by compressed air and do not emit loud blasts such as rifles, shot guns and hand guns.

According to Hydrology calculations made for the project, the pre- and post runoff will remain relatively constant (**Appendix D, Hydrology Calculations**). This is based on the project not altering landforms and not resulting in the addition of impervious surfaces, as proposed.

As to potential toxins contained in the paintballs themselves, research on the subject resulted in similar findings across several articles found on line which can be summed up in the following quoted statements from two such articles. First, "Paintballs are completely non-toxic, non-caustic, biodegradable, and water-soluble." Originally, paintballs were filled with oil-based paint; but, not today. Second, everything used in a paintball "has little to no environmental impact. The paintballs themselves are glycol, sorbitol, and food coloring inside a gelatin capsule." What is known is that paintballs have been shown to be toxic to domestic dogs after ingesting tens of the items, according to the AAPCA and veterinarians. Black bears, however, showed no adverse reaction to paintballs after ingesting an equal amount. However, no findings of research on a range of fish and wildlife appear to be available. In any case, the project incorporates a protective net to intercept wayward shots, user education, daily policing, and erosion control measures to minimize paintballs from reaching the riverbed and causing any unknown adverse impacts on fish and wildlife. Considering the above, therefore, potentially significant indirect impacts are not expected.

On a cumulative basis, the project would make only a *di minimis* contribution to impacts to special status species. No impacts to listed species would result from the project, as determined by State and federal wildlife agencies (see **Appendix B, Agency Correspondence**). Other special status species certainly use the study area, and may use the project area; thereby, the project could result in incremental losses to regional populations of such species. However, any losses to these species are expected to be few and far between in that the construction and use of the paintball facility does not entail grading, the use of fire arms, or other activities that could result in the loss of individual fish or wildlife. Therefore, the project's contribution to cumulative impacts would not be considerably cumulative.

## **(2) Sensitive Habitats**

*Direct indirect, and cumulative impacts to sensitive habitats would be avoided or minimized, therefore reduced to less than a significant level with implementation of and adherence to the project design guidelines.*

By the facilities being setback and/or not encroaching into sensitive habitats associated with the riverbed, no potentially significant direct, adverse or cumulative impacts are expected to sensitive habitats. Moreover, erosion and pollutant controls are incorporated into the proposed project which will avoid and minimize adverse effects from the project on downstream resources.

### **(3) Federally Protected Wetlands**

*Direct impacts to federally protected wetlands would be avoided, and, therefore, no impacts to federally protected wetlands would result from the project.*

The project, as designed, will avoid all regulated waters, wetlands, and riparian vegetation as defined by the CDFG Fish and Game Code and Clean Water Act Section 404. Therefore, no impacts to these resources will occur as a result of the proposed project.

### **(4) Wildlife Corridors**

*Direct, indirect, and cumulative impacts to wildlife movement corridors would be avoided or minimized, and, therefore, reduced to a less than significant level.*

Due to historic disturbances within the majority of areas that could be affected by the proposed project, etc), direct impacts to native vegetation contributing to wildlife movement would be minimal. These new impact areas would only occur on the upper terrace above the wash and outside the active wash area. In addition, no night-lighting or nighttime play would be permitted; therefore, no interruption of wildlife movement (which usually occurs during crepuscular and nighttime hours are expected. Thus, the interruption of wildlife movement would be minimal. As a result, direct and indirect impacts to wildlife movement corridors would be less than significant as a result of project design features.

### **(5) Local Policies or Ordinances**

*Project implementation would not conflict or have any adverse impacts on local policies or ordinances.*

The project is within an SEA designated by the Los Angeles County SEA General Plan overlay. The project's compatibility with the SEA is discussed below.

### **(6) Conservation Plans**

*Project implementation would not conflict with or otherwise impact any adopted Habitat Conservation Plans. Thus, no impact would result from Project implementation.*

At this time there are no adopted or on-going region-wide habitat conservation plans in the area that would be affected by implementation of the proposed project. Thus, no impact would occur in this regard.

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## VI. MITIGATION MEASURES

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The following mitigation measure addresses the potentially significant impacts to biological resources from the proposed project.

### **(1) Sensitive Plant and Wildlife Species**

In the absence of any potentially significant adverse impacts to sensitive plant and animal species, no mitigation measures are warranted.

### **(2) Sensitive Habitats**

In the absence of any potentially significant adverse impacts to sensitive habitats, and in consideration of the annual giant reed and tamarisk program, no mitigation measures are warranted.

### **(3) Federally Protected Wetlands**

In the absence of any potentially significant adverse impacts to federally protected wetlands, no mitigation measures are warranted.

### **(4) Wildlife Corridors**

In the absence of any potentially significant adverse impacts to wildlife corridors, no mitigation measures are warranted.

### **(5) Local Policies or Ordinances**

In the absence of any potentially significant adverse impacts to local policies or ordinances, no mitigation measures are warranted.

### **(6) Conservation Plans**

In the absence of any potentially significant adverse impacts to conservation plans, no mitigation measures are warranted.

With the incorporation of conservation elements to the project, all potentially significant impacts would be reduced to a less than significant level.

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## VII. SEA DESIGN COMPATIBILITY CRITERIA

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Pursuant to *Los Angeles County Zoning Code Section 22.56.215*, the applicant shall substantiate compliance with the following, SEA compatibility criteria.

***(1) That the requested development is designed to be highly compatible with the biotic resources present, including the setting aside of appropriate and sufficient undisturbed areas.***

The proposed project will affect 11.8 acres of the 50.5 acres (23%) comprising the entire properties. Moreover, the effects are considered to be temporary, in that, no permanent alteration of landforms and native natural communities will occur. The project does not propose setting aside undisturbed areas in perpetuity as the project will reflect a leasehold use. However, in the interim of a permanent project on the property, 38.7 acres (77%) will be restricted from use by the project. Therefore, the project is compatible with this criterion,

***(2) That the requested development is designed to maintain water bodies, watercourses, and their tributaries in a natural state.***

The project is designed to avoid any use and alteration of water bodies, watercourses, and their tributaries. This is reflected in the design of the project to avoid CDFG jurisdictional areas (which encompass RWQCB and Corps jurisdiction. Only the control of sheet flow carrying sediments from the project area will be implemented. Therefore, the project is compatible with this criterion.

***(3) That the requested development is designed so that wildlife movement corridors (migratory paths) are left in an undisturbed and natural state.***

At the point where the project is proposed to be located the riverbed and adjacent native and naturalized habitats are between approximately 600 and 800 feet wide from one bank of the riverbed to the other. The project will not constrict these distances and will not result in the trespass of indirect effects that may otherwise narrow the corridor. Therefore, the project is compatible with this criterion

***(4) That the requested development retains sufficient natural vegetative cover and/or open space to buffer critical resource areas from said requested development.***

The project will maintain 38.7 acres (77% of the site as open space). Because the property will be a leasehold, the open space cannot be considered to be preserved in perpetuity. The project, including the amount of acreage not affected in combination with temporal and physical barriers will buffer critical resource areas from the proposed use.

***(5) That where necessary, fences or walls are provided to buffer important habitat areas from development.***

The project incorporates four barriers to buffer important habitat areas. These include: an inner fence around the immediate individual fields; specially-designed protective netting similar to golf driving range netting with a six inch space between the bottom of the net and ground surface to intercept wayward shots and allow small animals to move through the area; sterile straw waddles for erosion control placed several

feet away from the netting in areas where runoff could enter the river and which will be replaced annually; and plastic mesh fencing (silt fencing) during the rainy season between the straw waddles and the riverbed to provide further protection from erosion). Ample signage shall also be attached to the inner fence and protective netting which states access to areas beyond the play area is prohibited. Therefore, the project is compatible with this criterion.

***(6) That roads and utilities serving the proposed development are located and designed so as to not conflict with critical resources, habitat areas, or migratory paths.***

No improved roads or utilities are proposed for the project and improvements to support the project will be contained within the 11.8 acre project area itself. Therefore, the project is compatible with this criterion.

## **VIII. MONITORING PROGRAM**

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Insofar, as there are no mitigation measures that are warranted, and project design measures that conserve biological resources will be made conditions of approval, a monitoring program is not needed.



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# Appendix A – Plant and Animal Species Compendium

## ANGIOSPERMS (DICOTYLEDONS)

SCIENTIFIC NAME	COMMON NAME	HABITAT	ESTIMATED ABUNDANCE ON-SITE
<b>Amaranthaceae</b>			
<b>Amaranth Family</b>			
* <i>Amaranthus albus</i>	tumbling pigweed	ASHS	U
* <i>Amaranthus deflexus</i>	low amaranth	ASHS	U
<b>Anacardiaceae</b>			
<b>Sumac or Cashew Family</b>			
<i>Malosma laurina</i>	laurel sumac	AE-EFSA	C
* <i>Schinus molle</i>	Peruvian pepper tree	ASHS	S
<b>Apiaceae</b>			
<b>Carrot Family</b>			
* <i>Foeniculum vulgare</i>	fennel	ASHS	S
<b>Asteraceae</b>			
<b>Sunflower Family</b>			
<i>Achillea millefolium</i>	yarrow	AC-EFSA	S
<i>Ambrosia psilostachya</i>	western ragweed (sandbur)	PFFA	S
<i>Artemisia californica</i>	California sagebrush	AC-EFSA	C
<i>Artemisia douglasiana</i>	mugwort	PFFA	S
<i>Artemisia tridentata</i>	basin sagebrush	LSSA	C
<i>Baccharis salicifolia</i>	mule fat	BSSA	C
<i>Brickellia californica</i>	California brickellbush	AC-EFSA	S
* <i>Centaurea melitensis</i>	totalote	ASHS	U
* <i>Conyza canadensis</i>	horseweed	ASHA	U
<i>Encelia farinosa</i>	brittlebush	AC-EFSA	U
<i>Ericameria pinifolia</i>	pinebush	LSSA	C
<i>Gnaphalium californicum</i>	California everlasting	AC-EFSA	U
<i>Hazardia squarrosa</i>	saw-toothed goldenbush	LSSA	U
<i>Hemizonia fasciculata</i>	fascicled tarweed	ASHS	U
<i>Heterotheca grandiflora</i>	telegraph weed	ASHS	U
<i>Lepidospartum squamatum</i>	scale-broom	LSSA	C
* <i>Senecio vulgaris</i>	common groundsel	ASHS	S
* <i>Silybum marianum</i>	milk thistle	ASHS	S
<i>Solidago californica</i>	California goldenrod	ASHS	S
<i>Stephanomeria virgata</i>	twiggy wreathplant	ASHS	S
* <i>Taraxacum officinale</i>	common dandelion	ASHS	S

Key to codes: Alliance (Holland, 1986 comparable community)

PFFA = *Populus fremontii* forest alliance (southern cottonwood-willow woodland)

LSSA = *Lepidospartum squamatum* shrubland alliance (alluvial fan sage scrub)

AC-EFSA = *Artemisia californica-Eriogonum fasciculatum* shrubland alliance (coastal sage scrub)

BASA = *Baccharis salicifolia* shrubland alliance (mulefat scrub)

RISS = Riverine intermittent sand streambed

ASHS = *Avena* Semi-natural Herbaceous stand (non-native grassland)

ATSA = *Artemisia tridentata* shrubland alliance (Great Basin scrub)

\*Estimates of abundance included for observed species only.

C = common

U = uncommon

S = scarce

\* = non-native

## ANGIOSPERMS (DICOTYLEDONS)

SCIENTIFIC NAME	COMMON NAME	HABITAT	ESTIMATED ABUNDANCE ON-SITE
<b>Boraginaceae</b>	<b>Borage Family</b>		
<i>Amsinckia menziesii</i>	common fiddleneck	AC-EFSA	U
<i>Cryptantha intermedia</i>	common forget-me-not	AC-EFSA	U
<i>Plagiobothrys sp.</i>	popcorn flower	ASHS	U
<b>Brassicaceae</b>	<b>Mustard Family</b>		
* <i>Hirshfeldia incana</i>	short-podded mustard	ASHS	C
<i>Rorippa nasturtium-aquaticum</i>	water-cress	RISS	C
* <i>Sisymbrium irio</i>	London rocket		
<b>Cactaceae</b>	<b>Cactus Family</b>		
<i>Opuntia basilaris</i>	beavertail cactus	LSSA	S
<b>Chenopodiaceae</b>	<b>Goosefoot Family</b>		
* <i>Atriplex semibaccata</i>	Australian saltbush	ASHS	U
* <i>Salsola tragus</i>	Russian thistle	ASHS	C
<b>Convolvulaceae</b>	<b>Morning-Glory Family</b>		
<i>Calystegia macrostegia</i>	western bindweed	AC-EFSA	S
<b>Cucurbitaceae</b>	<b>Gourd Family</b>		
<i>Marah macrocarpus</i>	wild cucumber	PFFA	S
<b>Cuscutaceae</b>	<b>Dodder Family</b>		
<i>Cuscuta sp.</i>	dodder	AC-EFSA	U
<b>Euphorbiaceae</b>	<b>Spurge Family</b>		
<i>Eremocarpus setigerus</i>	dove weed	ASHS	C
* <i>Ricinus communis</i>	castor bean	ASHS	S
<b>Fabaceae</b>	<b>Legume Family</b>		
<i>Lotus scoparius</i>	deerweed	LSSA	C
* <i>Medicago polymorpha</i>	California bur clover	ASHS	U
<b>Geraniaceae</b>	<b>Geranium Family</b>		
* <i>Erodium cicutarium</i>	red-stemmed filaree	ASHS	C
<b>Hydrophyllaceae</b>	<b>Waterleaf Family</b>		
<i>Eriodictyon crassifolium</i>	thick-leaved yerba santa	LSSA	C
<i>Phacelia sp.</i>	phacelia	AC-EFSA	S

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## ANGIOSPERMS (DICOTYLEDONS)

SCIENTIFIC NAME	COMMON NAME	HABITAT	ESTIMATED ABUNDANCE ON-SITE
<b>Lamiaceae</b>	<b>Mint Family</b>		
* <i>Marrubium vulgare</i>	horehound	ASHS	U
<i>Salvia apiana</i>	white sage	AC-EFSA	S
<i>Salvia columbariae</i>	chia	LSSA	U
<i>Salvia mellifera</i>	black sage	AC-EFSA	S
<b>Malvaceae</b>	<b>Mallow Family</b>		
* <i>Malva parviflora</i>	cheeseweed	ASHS	U
<b>Myrtaceae</b>	<b>Myrtle Family</b>		
* <i>Eucalyptus sp</i>	Gum tree	ASHS	S
<b>Polygonaceae</b>	<b>Buckwheat Family</b>		
<i>Eriogonum fasciculatum</i>	California buckwheat	AC-EFSA	C
<b>Rosaceae</b>	<b>Rose Family</b>		
<i>Adenostoma fasciculatum</i>	chamise	AC-EFSA	S
<b>Salicaceae</b>	<b>Willow Family</b>		
<i>Populus fremontii</i>	Fremont's cottonwood	PFFA	C
<i>Salix exigua</i>	narrow-leaved willow	PFFA	S
<i>Salix laevigata</i>	red willow	PFFA	C
<i>Salix lasiolepis</i>	arroyo willow	PFFA	S
<b>Scrophulariaceae</b>	<b>Figwort Family</b>		
<i>Mimulus aurantiacus</i>	orange bush monkey flower	AC-EFSA	S
<b>Solanaceae</b>	<b>Nightshade Family</b>		
<i>Datura stramonium</i>	jimson weed	ASHS	S
<i>Solanum xanti</i>	chaparral nightshade	LSSA	S
<b>Tamaricaceae</b>	<b>Tamarisk Family</b>		
* <i>Tamarix sp.</i>	tamarisk	PFFA	C

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## ANGIOSPERMS (MONOCOTYLEDONS)

SCIENTIFIC NAME	COMMON NAME	HABITAT	ESTIMATED ABUNDANCE ON-SITE
<b>Areaceae</b>	<b>Palm Family</b>		
* <i>Washingtonia robusta</i>	Mexican fan palm	ASHS	S
<b>Iridaceae</b>	<b>Iris Family</b>		
<i>Sisyrinchium bellum</i>	blue-eyed-grass	AC-EFSA	S
<b>Liliaceae</b>	<b>Lily Family</b>		
<i>Yucca whipplei</i>	Our Lord's candle	LSSA	U
<b>Poaceae</b>	<b>Grass Family</b>		
* <i>Arundo donax</i>	giant reed	PFFA	U
* <i>Avena barbata</i>	slender wild oat	ASHS	C
* <i>Avena fatua</i>	wild oat	ASHS	C
* <i>Bromus diandrus</i>	ripgut grass	ASHS	C
* <i>Bromus hordeaceus</i>	soft chess	ASHS	C
* <i>Bromus madritensis ssp. rubens</i>	foxtail chess	ASHS	C

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## FISH

SCIENTIFIC NAME	COMMON NAME	ESTIMATED ABUNDANCE ON-SITE
<b>Gasterosteidae Family</b>	<b>Stickleback Family</b>	
<i>Gasterosteus aculeatus williamsoni</i>	unarmored three-spine stickleback	S
<b>Castostomidae Family</b>	<b>Sucker Family</b>	
<i>Catostomus santaanae</i>	Santa Ana sucker	

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## AMPHIBIANS

SCIENTIFIC NAME	COMMON NAME	ESTIMATED ABUNDANCE ON-SITE
<b>Plethodontidae</b> <i>Batrachoseps pacificus</i>	<b>Lungless Salamanders</b> Pacific slender salamander	
<b>Pelobatidae</b> <i>Scaphiopus hammondii</i>	<b>Spadefoot Toads</b> western spadefoot	
<b>Bufo</b> <i>Bufo boreas halophilus</i> <i>Anaxyrus californicus</i>	<b>True Toads</b> California toad arroyo toad	
<b>Hylidae</b> <i>Pseudacris regilla</i>	<b>Tree Frogs</b> Pacific treefrog	U

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## REPTILES

SCIENTIFIC NAME	COMMON NAME	ESTIMATED ABUNDANCE ON-SITE
<b>Phrynosomatidae</b>	<b>Zebra-Tailed, Earless, Horned, Spiny, Fringe-Toed Lizards</b>	
<i>Phrynosoma blainvillei</i>	San Diego horned lizard	S
<i>Sceloporus occidentalis biseriatus</i>	Great Basin fence lizard	C
<i>Uta stansburiana elegans</i>	western side-blotched lizard	C
<b>Scincidae</b>	<b>Skinks</b>	
<i>Eumeces skiltonianus</i>	western skink	
<b>Teiidae</b>	<b>Whiptail Lizards</b>	
<i>Aspidozelis tigris</i>	coastal whiptail	U
<b>Anguillidae</b>	<b>Alligator Lizards</b>	
<i>Elgaria multicarinatus</i>	southern alligator lizard	
<b>Anniellidae</b>	<b>California Legless Lizards</b>	
<i>Anniella pulchra pulchra</i>	silvery legless lizard	
<b>Leptotyphlopidae</b>	<b>Slender Blind Snakes</b>	
<i>Leptotyphlops humilis</i>	western blind snake	
<b>Boidae</b>	<b>Boas</b>	
<i>Lichanura trivirgata roseofusca</i>	rosy boa	
<b>Colubridae</b>	<b>Colubrid Snakes</b>	
<i>Arizona elegans occidentalis</i>	California glossy snake	
<i>Masticophis flagellum piceus</i>	red coachwhip	
<i>Coluber lateralis lateralis</i>	chaparral whipsnake	
<i>Canteniferifer annectens annectens</i>	gopher snake	S
<i>Salvadora hexalepis virgulata</i>	coast patch-nosed snake	
<b>Viperidae</b>	<b>Vipers</b>	
<i>Crotalus oreganus helleri</i>	southern pacific rattlesnake	

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## BIRDS

SCIENTIFIC NAME	COMMON NAME	ESTIMATED ABUNDANCE ON-SITE
<b>Cathartidae</b>	<b>New World Vultures</b>	
<i>Cathartes aura</i>	turkey vulture	C
<b>Accipitridae</b>	<b>Hawks</b>	
<i>Accipiter cooperii</i>	Cooper's hawk	
<i>Accipiter striatus</i>	sharp-shinned hawk	
<i>Aquila chrysaetos</i>	golden eagle	
<i>Buteo jamaicensis</i>	red-tailed hawk	C
<i>Buteo lagopus</i>	rough-legged hawk	
<i>Buteo lineatus</i>	red-shouldered hawk	
<i>Buteo regalis</i>	ferruginous hawk	
<i>Buteo swainsoni</i>	Swainson's hawk	
<i>Circus cyaneus</i>	northern harrier	
<i>Elanus leucurus</i>	white-tailed kite	
<b>Falconidae</b>	<b>Falcons</b>	
<i>Falco sparverius</i>	American kestrel	
<i>Falco columbarius</i>	merlin	
<i>Falco mexicanus</i>	prairie falcon	
<b>Odotophoridae</b>	<b>Quails</b>	
<i>Callipepla californica</i>	California quail	C
<i>Oreortyx pictus</i>	mountain quail	
<b>Charadriidae</b>	<b>Plovers</b>	
<i>Charadrius vociferus</i>	killdeer	
<b>Columbidae</b>	<b>Pigeons and Doves</b>	
<i>Columba fasciata</i>	band-tailed pigeon	
* <i>Columba livia</i>	rock dove	U
<i>Zenaida macroura</i>	mourning dove	C
* <i>Streptopelia chinensis</i>	spotted dove	
<b>Cuculidae</b>	<b>Cuckoos and Roadrunners</b>	
<i>Geococcyx californianus</i>	greater roadrunner	C
<b>Tytonidae</b>	<b>Barn Owls</b>	
<i>Tyto alba</i>	barn owl	

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## BIRDS

SCIENTIFIC NAME	COMMON NAME	ESTIMATED ABUNDANCE ON-SITE
<b>Strigidae</b>	<b>True Owls</b>	
<i>Asio flammeus</i>	short-eared owl	
<i>Asio otus</i>	long-eared owl	
<i>Athene cunicularia hypugea</i>	burrowing owl	
<i>Bubo virginianus</i>	great horned owl	
<b>Caprimulgidae</b>	<b>Goatsuckers</b>	
<i>Chordeiles acutipennis</i>	lesser nighthawk	
<b>Apodidae</b>	<b>Swifts</b>	
<i>Aeronautes saxatalis</i>	white-throated swift	
<i>Chaetura vauxi</i>	Vaux's swift	
<b>Trochilidae</b>	<b>Hummingbirds</b>	
<i>Archilochus alexandri</i>	black-chinned hummingbird	
<i>Calypte costae</i>	Costa's hummingbird	
<i>Calypte anna</i>	Anna's hummingbird	C
<i>Selasphorus rufus</i>	rufous hummingbird	
<i>Selasphorus sasin</i>	Allen's hummingbird	
<b>Picidae</b>	<b>Woodpeckers</b>	
<i>Colaptes auratus</i>	northern flicker	
<i>Picoides nuttallii</i>	Nuttall's woodpecker	
<b>Tyrannidae</b>	<b>Tyrant Flycatchers</b>	
<i>Myiarchus cinerascens</i>	ash-throated flycatcher	
<i>Sayornis nigricans</i>	black phoebe	
<i>Sayornis saya</i>	Say's phoebe	
<i>Tyrannus verticalis</i>	western kingbird	
<i>Tyrannus vociferans</i>	Cassin's kingbird	
<b>Laniidae</b>	<b>Shrikes</b>	
<i>Lanius ludovicianus</i>	loggerhead shrike	
<b>Vireonidae</b>	<b>Vireos</b>	
<i>Vireo bellii pusillus</i>	least Bell's vireo	
<i>Vireo vicinior</i>	gray vireo	
<i>Vireo gilvus</i>	warbling vireo	

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## BIRDS

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<b>Corvidae</b>	<b>Jays and Crows</b>	
<i>Aphelocoma californica</i>	western scrub-jay	C
<i>Corvus brachyrhynchos</i>	American crow	
<i>Corvus corax</i>	common raven	C
<b>Alaudidae</b>	<b>Larks</b>	
<i>Eremophila alpestris</i>	horned lark	
<b>Hirundinidae</b>	<b>Swallows</b>	
<i>Tachycineta thalassina</i>	violet-green swallow	
<i>Progne subis</i>	purple martin	
<i>Petrochelidon pyrrhonota</i>	cliff swallow	
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow	
<i>Hirundo rustica</i>	barn swallow	
<b>Muscicapidae</b>	<b>Wrentits</b>	
<i>Chamaea fasciata</i>	wrentit	C
<b>Paridae</b>	<b>Titmice</b>	
<i>Baeolophus inornatus</i>	oak titmouse	
<b>Aegithalidae</b>	<b>Bushtits</b>	
<i>Psaltriparus minimus</i>	bushtit	C
<b>Troglodytidae</b>	<b>Wrens</b>	
<i>Thryomanes bewickii</i>	Bewick's wren	U
<i>Troglodytes aedon</i>	house wren	
<b>Regulidae</b>	<b>Kinglets</b>	
<i>Regulus calendula</i>	ruby-crowned kinglet	
<b>Sylviidae</b>	<b>Old World Warblers, Gnatcatchers</b>	
<i>Polioptila californica californica</i>	coastal California gnatcatcher	
<i>Polioptila caerulea</i>	blue-gray gnatcatcher	
<b>Turdidae</b>	<b>Thrushes</b>	
<i>Sialia mexicana</i>	western bluebird	
<i>Sialia currucoides</i>	mountain bluebird	
<i>Turdus migratorius</i>	American robin	

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## BIRDS

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<b>Mimidae</b>	<b>Thrashers</b>	
<i>Mimus polyglottos</i>	northern mockingbird	C
<i>Toxostoma redivivum</i>	California thrasher	
<b>Sturnidae</b>	<b>Starlings</b>	
* <i>Sturnus vulgaris</i>	European starling	
<b>Bombycillidae</b>	<b>Waxwings</b>	
<i>Bombycilla cedrorum</i>	cedar waxing	
<b>Ptilonotidae</b>	<b>Silky Flycatchers</b>	
<i>Phainopepla nitens</i>	phainopepla	
<b>Parulidae</b>	<b>Wood Warblers</b>	
<i>Vermivora celata</i>	orange-crowned warbler	
<i>Vermivora virginiae</i>	Virginia's warbler	
<i>Dendroica coronata</i>	yellow-rumped warbler	C
<i>Wilsonia pusilla</i>	Wilson's warbler	
<i>Geothlypis trichas</i>	common yellowthroat	
<i>Icteria virens</i>	yellow-breasted chat	
<b>Thraupidae</b>	<b>Tanagers</b>	
<i>Piranga ludoviciana</i>	western tanager	
<b>Emberizidae</b>	<b>Emberizids</b>	
<i>Aimophila ruficeps canescens</i>	Southern California rufous-crowned	
<i>Amphispiza belli belli</i>	Bell's sage sparrow	U
<i>Amphispiza bilineata</i>	black-throated sparrow	
<i>Chondestes grammacus</i>	lark sparrow	
<i>Junco hyemalis</i>	dark-eyed junco	
<i>Passerculus sandwichensis</i>	savannah sparrow	
<i>Pipilo crissalis</i>	California towhee	C
<i>Pipilo maculatus</i>	spotted towhee	
<i>Poocetes gramineus</i>	vesper sparrow	
<i>Spizella atrogularis</i>	black-chinned sparrow	
<i>Spizella breweri</i>	Brewer's sparrow	
<i>Zonotrichia atricopilla</i>	golden-crowned sparrow	
<i>Zonotrichia leucophrys</i>	white-crowned sparrow	

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## BIRDS

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<b>Cardinalidae</b>		
<i>Pheucticus melanocephalus</i>	black-headed grosbeak	
<i>Guiraca caerulea</i>	blue grosbeak	
<i>Passerina amoena</i>	lazuli bunting	
<b>Icteridae</b>		
<i>Icterus bullockii</i>	Bullock's oriole	S
<i>Molothrus ater</i>	brown-headed cowbird	
<i>Sturnella neglecta</i>	western meadowlark	
<b>Fringillidae</b>		
<i>Carpodacus purpureus</i>	purple finch	
<i>Carpodacus cassinii</i>	Cassin's finch	
<i>Carpodacus mexicanus</i>	house finch	C
<i>Carduelis psaltria</i>	lesser goldfinch	C
<i>Carduelis tristis</i>	American goldfinch	
<i>Carduelis lawrencei</i>	Lawrence's goldfinch	

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## MAMMALS

SCIENTIFIC NAME	COMMON NAME	ESTIMATED ABUNDANCE ON-SITE
<b>Didelphidae</b>		
* <i>Didelphis virginiana</i>	<b>New World Opossums</b> Virginia opossum	
<b>Phyllostomidae</b>		
<i>Choeronycteris mexicana</i>	<b>Leaf-Nosed Bats</b> Mexican long-tongued bat	
<i>Macrotus californicus</i>	California leaf-nosed bat	
<b>Vespertilionidae</b>		
<i>Antrozous pallidus</i>	<b>Evening Bats</b> pallid bat	
<i>Corynorhinus (=Plecotus) townsendii</i>	pale big-eared bat	
<i>Myotis californicus californicus</i>	California myotis	
<i>Myotis ciliolabrum</i>	small-footed myotis	
<i>Myotis evotis</i>	long-eared myotis	
<i>Myotis lucifugus</i>	little brown myotis	
<i>Myotis yumanensis</i>	Yuma myotis	
<i>Lasiurus cinereus</i>	hoary bat	
<i>Pipistrellus hesperus</i>	western pipistrelle	
<i>Eptesicus fuscus</i>	big brown bat	
<i>Euderma maculatum</i>	spotted bat	
<b>Molossidae</b>		
<i>Nyctinomops (=Tadarida)</i>	<b>Free-Tailed Bats</b> pocketed free-tailed bat	
<i>Nyctinomops (=Tadarida) macrotis</i>	big free-tailed bat	
<i>Eumops perotis californicus</i>	western mastiff bat	
<b>Leporidae</b>		
<i>Lepus californicus bennettii</i>	<b>Hares and Rabbits</b> San Diego black-tailed jackrabbit	
<i>Sylvilagus audubonii</i>	desert cottontail	C
<b>Sciuridae</b>		
<i>Spermophilus beecheyi</i>	<b>Squirrels</b> California ground squirrel	C
<b>Geomyidae</b>		
<i>Thomomys bottae</i>	<b>Pocket Gophers</b> Botta's pocket gopher	C
<b>Heteromyidae</b>		
<i>Dipodomys agilis</i>	<b>Pocket Mice and Kangaroo Rats</b> Pacific kangaroo rat	
<i>Perognathus longimembris</i>	little pocket mouse	

Key to codes: Alliance (Holland, 1986 comparable community)

PFFA = *Populus fremontii* forest alliance (southern cottonwood-willow woodland) C = common

LSSA = *Lepidospartum squamatum* shrubland alliance (alluvial fan sage scrub) U = uncommon

AC-EFSA = *Artemisia californica-Eriogonum fasciculatum* shrubland alliance (coastal sage scrub) S = scarce

BASA = *Baccharis salicifolia* shrubland alliance (mulefat scrub)

RISS = Riverine intermittent sand streambed \* = non-native

ASHS = *Avena* Semi-natural Herbaceous stand (non-native grassland)

ATSA = *Artemisia tridentata* shrubland alliance (Great Basin scrub)

\*Estimates of abundance included for observed species only.

## MAMMALS

SCIENTIFIC NAME	COMMON NAME	ESTIMATED ABUNDANCE ON-SITE
<b>Muridae</b>	<b>Mice, Rats, and Voles</b>	
<i>Neotoma lepida</i>	desert woodrat	
<i>Onychomys torridus ramonia</i>	southern grasshopper mouse	
<i>Peromyscus boylii</i>	brush mouse	
<i>Peromyscus maniculatus</i>	deer mouse	
<i>Reithrodontomys megalotis</i>	western harvest mouse	
<b>Canidae</b>	<b>Wolves and Foxes</b>	
<i>Canis latrans</i>	coyote	U
<i>Urocyon cinereoargenteus</i>	gray fox	
<b>Procyonidae</b>	<b>Raccoons</b>	
<i>Bassariscus astutus</i>	ringtail	
<i>Procyon lotor</i>	raccoon	
<b>Mustelidae</b>	<b>Weasels, Skunks, and Otters</b>	
<i>Mephitis mephitis</i>	striped skunk	
<i>Mustela frenata</i>	long-tailed weasel	
<i>Spilogale gracilis</i>	western spotted skunk	
<i>Taxidea taxus</i>	American badger	
<b>Felidae</b>	<b>Cats</b>	
<i>Lynx rufus</i>	bobcat	
<i>Puma concolor</i>	mountain lion	
<b>Cervidae</b>	<b>Deer</b>	
<i>Odocoileus hemionus</i>	mule deer	

Key to codes: Alliance (Holland, 1986 comparable community)

PFFA = *Populus fremontii* forest alliance (southern cottonwood-willow woodland) C = common

LSSA = *Lepidospartum squamatum* shrubland alliance (alluvial fan sage scrub) U = uncommon

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ASHS = *Avena* Semi-natural Herbaceous stand (non-native grassland)

ATSA = *Artemisia tridentate* shrubland alliance (Great Basin scrub)

\*Estimates of abundance included for observed species only.

## **Appendix B - Agency Correspondence**

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## Steve Nelson

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**From:** smlcnelson@aol.com  
**Sent:** Tuesday, June 05, 2012 5:08 PM  
**To:** Steve Nelson  
**Subject:** Fwd: Action Paintball - 14500 Soledad Canyon Road

-----Original Message-----

**From:** Peter Gonzalez <pgonzalez@scplanners.com>  
**To:** Steve Nelson <smlcnelson@aol.com>  
**Sent:** Tue, Jun 5, 2012 2:49 pm  
**Subject:** FW: FW: Action Paintball - 14500 Soledad Canyon Road

Peter Gonzalez  
Principal

*SC Planners*  
619 S. Fremont Ave., Suite C  
Alhambra, CA 91803  
office - 310.591.8198  
cell - 818.632.1111  
fax - 866.504.4012

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---

**From:** Ejigu Solomon [<mailto:ESOLOMON@waterboards.ca.gov>]  
**Sent:** Monday, April 02, 2012 11:39 AM  
**To:** Peter Gonzalez  
**Subject:** RE: FW: Action Paintball - 14500 Soledad Canyon Road

Mr. Gonzalez:

Based on our conversation this morning, it does not appear that you would need a construction permit from us for the proposed project since no land disturbing activity will take place. Let me know if you have additional questions.

Ejigu Solomon , Unit Chief  
Storm Water Compliance & Enforcement Unit  
Los Angeles Regional Water Quality Control Board  
(213) 620-2237  
fax (213) 576-5777

Note new email address: [esolomon@waterboards.ca.gov](mailto:esolomon@waterboards.ca.gov)

---

\*\*\*

>>> Peter Gonzalez <[pgonzalez@scplanners.com](mailto:pgonzalez@scplanners.com)> 4/2/2012 10:57 AM >>>

Thank you so much. I will be in contact with Mr. Solomon.

Peter Gonzalez  
Principal

*SC Planners*  
619 S. Fremont Ave., Suite C  
Alhambra, CA 91803  
office - 310.591.8198  
cell - 818.632.1111  
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---

**From:** Ivar Ridgeway [<mailto:iridgeway@waterboards.ca.gov>]  
**Sent:** Monday, April 02, 2012 8:34 AM  
**To:** Peter Gonzalez  
**Cc:** Ejigu Solomon; LB Nye  
**Subject:** Re: FW: Action Paintball - 14500 Soledad Canyon Road

Hi Mr. Gonzalez,

I am copying Mr. Ejigu Solomon who's unit oversees the General Construction Permit to assist you.

Take care,  
Ivar

Ivar K. Ridgeway  
Senior Environmental Scientist  
California Environmental Protection Agency  
California Regional Water Quality Control Board  
Los Angeles Region  
Storm Water Permitting  
(213) 620-2150  
[iridgeway@waterboards.ca.gov](mailto:iridgeway@waterboards.ca.gov)

>>> Peter Gonzalez <[pgonzalez@scplanners.com](mailto:pgonzalez@scplanners.com)> 3/30/2012 4:04 PM >>>

Hello Mr. Ridgeway,

I was referred to you by Dr. LB Lyne regarding our proposed paintball facility in the Acton area, off of Soledad Canyon, adjacent to the Santa Clara River. The project recently received clearance from The Army Corp of Engineers. It was determined that a Section 404 permit will not be required. Please see attached the clearance letter from the US Army Corp of Engineers. Dr. Lyne recommended I speak to you regarding a Storm Water Construction Permit. While we are NOT proposing ANY construction, grading or permanent structures; LA County (the lead agency) has requested we get a clearance from the Water Quality Control Board. Please note we have also received clearances from CA Fish & Game and US Fish & Game.

I do not know what is the process in order to obtain a clearance and or a permit if no construction, grading or permanent structures are proposed. Furthermore, please note No discharge or debris will be placed in the river.

I appreciate any assistance regarding this matter.

Thank you.

Peter Gonzalez  
Principal

*SC Planners*  
619 S. Fremont Ave., Suite C  
Alhambra, CA 91803  
office - 310.591.8198  
cell - 818.632.1111  
fax - 866.504.4012

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**From:** Peter Gonzalez [<mailto:pgonzalez@scplanners.com>]  
**Sent:** Tuesday, March 27, 2012 6:20 PM  
**To:** 'lyne@waterboards.ca.gov'  
**Subject:** Action Paintball - 14500 Soledad Canyon Road

Hello Dr. Lnye,

We spoke a few months back about a proposed paintball facility out in the Acton area, off of Soledad Canyon, adjacent to the Santa Clara River. Per our conversation you indicated that I would need to provide you with a "No Permit Required" letter from Army Corp of Engineers. Please find attached a letter prepared by Dr. Aaron O. Allen - Chief, North Coast Branch of the Regulatory Division for the Army Corp of Engineers. The Army Corp of Engineer has determined that the proposed project it not subject to their jurisdiction under Section 404 of the Clean Water Act and a Section 404 permit will not be required.

We respectfully request a similar clearance from the Water Quality Control Board. Please feel free to contact me with any additional information you may need.

Dr. Aaron Allen was also kind enough to offer his assistance if you were to have any questions. You may contact him directly at the office of the Army Corp at (805)585-2148 or email [aaron.o.allen@usace.army.mil](mailto:aaron.o.allen@usace.army.mil)

Thank you for your help with this matter.

Peter Gonzalez  
Principal

*SC Planners*  
619 S. Fremont Ave., Suite C  
Alhambra, CA 91803  
office - 310.591.8198  
cell - 818.632.1111  
fax - 866.504.4012

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# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Ventura Fish and Wildlife Office  
2493 Portola Road, Suite B  
Ventura, California 93003

IN REPLY REFER TO:  
81440-2011-TA-0316

June 1, 2011

Peter Gonzalez, Principal  
SC Planners  
619 S. Fremont Avenue, Ste. C  
Alhambra, California 91803

Subject: No Take Concurrence Request for Action Paintball Park, Los Angeles County,  
California

Dear Mr. Gonzalez:

We are responding to your request, dated March 30, 2011, and received in our office on April 4, 2011, for our concurrence with your determination that the proposed Action Paintball Park (Project) will not result in the take of federally listed animal species. According to SC Planners, the project is located at 14500 Soledad Canyon Road, Acton, California.

Action Paintball Park, LLC (Company) seeks to establish a recreational facility (Facility) that includes paintball playing fields, snack and pro shops, restrooms, picnic and staging areas, and a parking lot with 208 spaces. The site is located between Soledad Canyon Road and the Santa Clara River in Los Angeles County. The proposed site has been previously disturbed. No further grading, earth movement or paving is proposed for the project. Physical barriers between the facility and river will be constructed but there will be no proposed manipulation or disturbance of the river or riverbed. A water tank, water well and a generator will provide electrical services while six mobile containers will house the snack and pro shops.

The U.S. Fish and Wildlife Service's (Service) responsibilities include administering the Endangered Species Act of 1973, as amended (Act), including sections 7, 9, and 10. Section 9 of the Act and its implementing regulations prohibit the take of listed fish and wildlife species without special exemption. Section 3(19) of the Act defines take to mean to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Service regulations (50 CFR 17.3) define harm to include significant habitat modification or degradation which actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. Harassment is defined by the Service as an intentional or negligent action that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. The Act provides for civil and criminal penalties for the unlawful taking of listed species. Exemptions to the prohibitions against take may be obtained through coordination with the Service through interagency

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consultation for projects with Federal involvement pursuant to section 7 or through the issuance of an incidental take permit under section 10(a)(1)(B) of the Act.

The following federally listed animal species have the potential to occur at or near the project site: the federally endangered arroyo toad (*Bufo californicus*), unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), least Bell's vireo (*Vireo bellii pusillus*), slender-horned spineflower (*Dodecahema leptoceras*), the federally threatened California coastal gnatcatcher (*Polioptila californica californica*), and the candidate species San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*).

The company proposes to implement numerous general protective measures to reduce ecological impacts as well as reduce impacts from erosion. Specifically, Action Paintball Park has proposed to implement the following measures to avoid take of federally listed animal species:

1. Four physical barriers are to be placed between the playing fields and riverbed:
  - a. Inner fencing will be placed around the immediate play fields;
  - b. Specially-designed protective netting similar to golf driving range netting will be placed with a 6 inch space between the net and ground surface;
  - c. Straw waddles for erosion control will be established several feet away from the netting in areas where runoff may enter the river. These will be replaced annually;
  - d. Plastic fencing will be constructed during the rainy season between straw waddles and the riverbed to further control erosion;
2. Education materials such as brochures that inform readers of sensitive riverbed habitat will be posted near the staging area;
3. Signs restricting entrance and activity in the riverbed will be posted between the field area and riverbed;
4. Only native plants will be planted at the site;
5. The facility will attempt to remove non-native *Arundo* annually in order to ensure conservation of native plant life.

If federally listed species are found within the project site, we would be consulted to recommend measures to protect the species. Strict measures to avoid or minimize impacts to these species would be implemented as described in this letter. If federally listed species are present within the project site, a qualified biologist would monitor project activities as directed by us and conduct an educational program on how to avoid impacts to these species for all personnel prior to proposed activities.

We concur with your determination that the project is not likely to result in the take of federally listed species. Our concurrence is based on the above protective measures and the characteristics of the site, specifically as described below:

1. According to your request, the proposed project is in an area that has been historically disturbed. Much of the native habitat for the above named listed species is absent from the site. This was confirmed by Chris Dellith and Jenny Marek, U.S. Fish and Wildlife biologists, when they conducted a site visit on January 14, 2011.
2. The site is adjacent to the Santa Clara River which may provide habitat for the arroyo toad. Even though the site drains to the Santa Clara River, the sediment control measures cited above should keep uncontrolled sediment runoff from entering the river. The activities and operations of the facility will not be conducted in the Santa Clara River channel, only on the disturbed site.
3. There are no documented occurrences of the above named listed species in the vicinity of the proposed site.

As a reminder, this letter does not constitute authorization from us to take federally listed species in any manner. In the event that federally listed species are subsequently encountered at this site, we recommend you suspend activities that could result in take and contact us to assess any potential effects to listed species. If you have any questions regarding this matter, please contact Matt Blazek of our staff at (805) 644-1766, extension 335.

Sincerely,

/s/: Jeff Phillips

Jeff Phillips  
Deputy Assistant Field Supervisor



**DEPARTMENT OF THE ARMY**  
LOS ANGELES DISTRICT, CORPS OF ENGINEERS  
P.O. BOX 532711  
LOS ANGELES, CALIFORNIA 90053-2325

March 9, 2012

REPLY TO  
ATTENTION OF

Regulatory Division

Mr. Peter Gonzales, SC Planners  
619 Fremont Ave, Suite C  
Alhambra, California 91803

**SUBJECT:** Determination regarding requirement for Department of the Army Permit

Dear Mr. Gonzales:

I am responding to your request (File No. SPL-2011-00605-MAS) dated June 22, 2011 for clarification on whether a Department of the Army Permit is required for the Action Paintball Park project located at 14500 Soledad Canyon Road (Latitude 34.43774 °N, Longitude -118.367925°W) in Canyon Country, Los Angeles County, California (as shown on enclosed maps and drawing).

The Corps' evaluation process for determining whether or not a Department of the Army permit is needed involves two tests. The first test determines whether or not the proposed project is located within or contains a water of the United States (i.e., it is within the Corps' geographic jurisdiction). The second test determines whether or not the proposed project includes an activity potentially regulated under Section 10 of the River and Harbor Act or Section 404 of the Clean Water Act. If both tests are met, and the activities in question are located within the Corps' geographic jurisdiction, then a permit would be required. As part of our evaluation process, we have made the determination below.

*Geographic jurisdiction:*

Based on our site visits conducted on August 23, 2011 and March 9, 2012, we have determined the Action Paintball Park project site contains the Santa Clara River, a water of the United States pursuant to 33 C.F.R. §325.9. The Santa Clara River is a Relatively Permanent body of water with a significant nexus to the Pacific Ocean and is jurisdictional under Section 404 of the Clean Water Act, as it is a direct tributary to the Pacific Ocean, a navigable water of the U.S. (SPL-2004-01908-AJS).

*Activity:*

The Action Paintball Park, LLC would construct a recreational facility between Soledad Canyon Road and the Santa Clara River. The facility would include paintball playing fields, parking spaces, a pro shop, restrooms and picnic facilities. Based on the information you have

provided, we have determined the proposed work, were it to occur in waters of the U.S. (see above, "Geographic jurisdiction"), would involve a discharge of dredged or fill material and therefore, would be regulated under Section 404 of the Clean Water Act if the activity is performed in the manner described in your application.

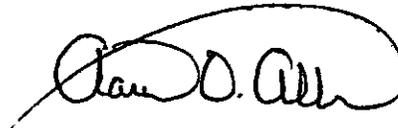
*Requirement for a Department of the Army Permit:*

The proposed paintball park would be constructed within a previously graded area between the Santa Clara River and Soledad Canyon Road. Site visits conducted on August 23, 2011 and March 9, 2012 confirmed the project boundary is outside the Ordinary High Water Mark of the river and any adjacent wetlands (as shown on attached maps and drawings). In addition, physical barriers would be placed between the playing fields and the river to prevent erosion and potential indirect impacts from play. These barriers include fencing, netting and waddles. Based on the above information, construction and use of the proposed paintball park would not constitute fill into waters of the U.S.

Based on the discussion above, we have determined your proposed project is not subject to our jurisdiction under Section 404 of the Clean Water Act and a Section 404 permit would not be required from our office if the activity is performed in the manner described. Notwithstanding our determination above, your proposed project may be regulated under other Federal, State, and local laws.

If you have any questions, please contact me at 805-585-2148 or via e-mail at [Aaron.O.Allen@usace.army.mil](mailto:Aaron.O.Allen@usace.army.mil). Please be advised that you can now comment on your experience with Regulatory Division by accessing the Corps web-based customer survey form at: <http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,

A handwritten signature in black ink, appearing to read "Aaron O. Allen". The signature is written in a cursive style with a large, sweeping loop at the end.

Aaron O. Allen, Ph.D.  
Chief, North Coast Branch  
Regulatory Division

Enclosures

We concur with your determination that the project is not likely to result in the take of federally listed species. Our concurrence is based on the above protective measures and the characteristics of the site, specifically as described below:

1. According to your request, the proposed project is in an area that has been historically disturbed. Much of the native habitat for the above named listed species is absent from the site. This was confirmed by Chris Dellith and Jenny Marek, U.S. Fish and Wildlife biologists, when they conducted a site visit on January 14, 2011.
2. The site is adjacent to the Santa Clara River which may provide habitat for the arroyo toad. Even though the site drains to the Santa Clara River, the sediment control measures cited above should keep uncontrolled sediment runoff from entering the river. The activities and operations of the facility will not be conducted in the Santa Clara River channel, only on the disturbed site.
3. There are no documented occurrences of the above named listed species in the vicinity of the proposed site.

As a reminder, this letter does not constitute authorization from us to take federally listed species in any manner. In the event that federally listed species are subsequently encountered at this site, we recommend you suspend activities that could result in take and contact us to assess any potential effects to listed species. If you have any questions regarding this matter, please contact Matt Blazek of our staff at (805) 644-1766, extension 335.

Sincerely,



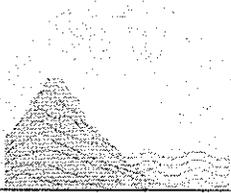
Jeff Phillips  
Deputy Assistant Field Supervisor



## **Appendix C - Onsite Wastewater Treatment System**

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# **GOLD COAST GEOSERVICES, INC.**

*Engineering Geologic and Geotechnical Consultants*

---

April 16, 2012  
File No. GC12-032402

**ACTION PAINTBALL PARK, LLC**  
19450 Business Center Drive  
Northridge, CA 91324

**SUBJECT:** Onsite Wastewater Treatment System Design Report for Proposed Restroom Facility, Action Paintball Game Park, 14500 Soledad Canyon Road, Santa Clarita, County of Los Angeles.

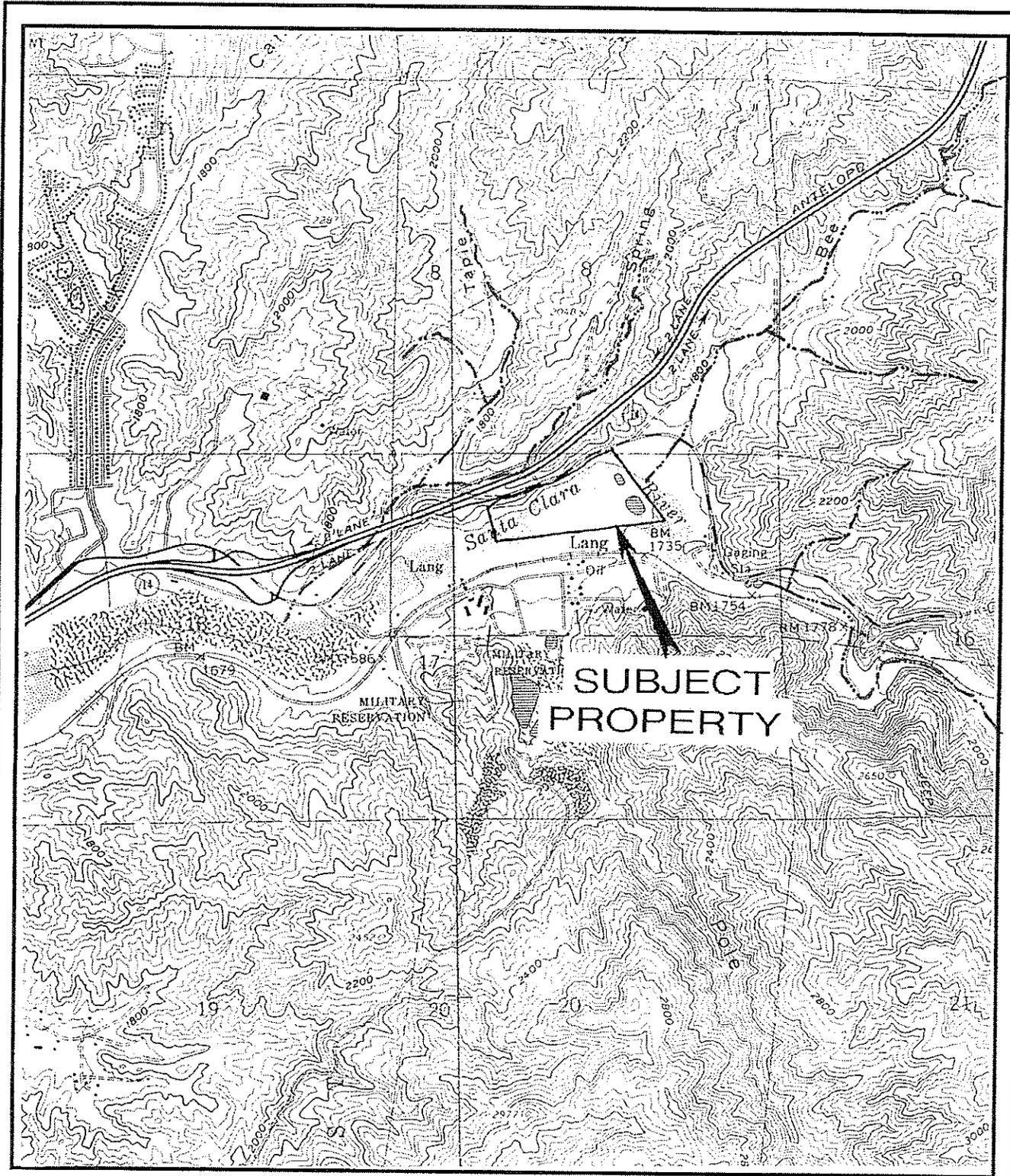
Gentlemen:

In accordance with your request, this report provides findings from soils analysis / percolation testing and design of a septic system for the proposed restroom facility for Action Paintball Game Park at 14500 Soledad Canyon Road in Santa Clarita, County of Los Angeles. The proposed restroom facility will accommodate a maximum of 200 users per day. A septic tank and leach line system is proposed to be constructed for onsite wastewater treatment and wastewater disposal requirements.

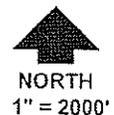
## Site Conditions

Action Paintball Park is located on the east side of Soledad Canyon Road in the northeast Santa Clarita area of Los Angeles County (see Site Location Map, Figure 1). The proposed restroom facility is to be constructed in the north-central part of the property, as shown on the Plot Plans provided with this report.

The property is located within an alluvial fill valley at the confluence of Soledad Canyon to the northeast and Bee Canyon to the north. The proposed septic system will be located more than 100 feet from the "blue-line streams" within both Soledad Canyon and Bee



BASE MAP: USGS 7.5' AGUA DULCE QUADRANGLE AND MINT CANYON QUADRANGLE.



GOLD  
COAST  
GEOSERVICES, INC.

**SITE LOCATION MAP**  
14500 SOLEDAD CANYON ROAD, SANTA CLARITA

DATE: Apr-12  
FILE NO.: GC12-032402  
**FIGURE 1**

**ACTION PAINTBALL PARK  
14500 SOLEDAD CANYON ROAD**

**FILE NO. GC12-032402**

Canyon. The proposed septic system will also be located more than 100 feet from the closest stream bank along the south-southeast side of the property. The leach lines are to be constructed along the southerly side of the proposed restroom, in an area of flat to very gently south sloping terrain.

The site is undeveloped and has not been previously developed. No existing septic systems are known to be located on the property. The site contains the remnants of two abandoned retention basins / storage ponds. One of the two ponds is located at the north side of the proposed restroom facility).

Non-engineered fill material has been placed at various locations on the property. Fill material having a maximum thickness of 36 inches was found to underlie the area of the proposed leach lines. The leach lines shall be constructed into native soil (alluvium) underlying the fill material.

It is noted that a water well is located about 200 feet easterly of the proposed septic tank and leach lines, at the location shown on the Plot Plan. The proposed septic system will be located more than 100 feet from the water well.

**Site Drainage and Groundwater**

Site drainage in the area of the proposed restroom facility and septic system is by sheetflow runoff. No indications of concentrated flows, such as gullies or excessive erosion, were observed in the area of the proposed restroom during our site investigation work.

The high groundwater level for this area fluctuates from 0-30 feet, based upon groundwater data obtained from the California Division of Mines and Geology Seismic Hazards Maps.

**Field Investigation**

It is proposed to construct leach lines for on-site disposal of effluent at the locations shown on the Plot Plans with this report (two plot plans are attached herewith: one overall Site Plan at a scale of one inch equals 80 feet; and a Plot Plan at a scale of one inch equals 40 feet). Test pit PT-1 was excavated to a depth of 17 feet on March 22, 2012, in order to evaluate subsurface soil conditions and high groundwater level. The earth materials encountered in test pit PT-1 are classified as artificial fill to depth of three feet, underlain by gravelly and cobbly sand (alluvium) to the depth of exploration. Description of the earth materials encountered in test pit PT-1 are provided on the attached Test Pit Log for PT-1. No groundwater or indications of past high groundwater level (such as soil mottling, high moisture content, etc.) was encountered in test pit PT-1. Test pit PT-1 was monitored over a period of five days after initial excavation, and no groundwater occurred. On the basis of this finding, the proposed leach lines to a maximum construction depth of 6.5 feet will maintain a minimum setback of 10 feet from potential high groundwater level. The high groundwater level for this area varies from 0-30 feet, based upon data obtained from the California Division of Mines and Geology Seismic Hazards Maps.

On March 22, 2012, percolation test pits PT-2 to PT-7 were excavated to depths of 6.5 feet each at the locations shown on the Plot Plans with this report. The earth materials encountered in test pits PT-2 to PT-7 are classified as artificial fill to depths of 2 - 3 feet, underlain by gravelly and cobbly sand (alluvium) to the depth of exploration. Description of the earth materials encountered in the percolation test pits are provided on the attached Test Pit Logs for PT-2 to PT-7. No groundwater or indications of past high groundwater level (such as soil mottling, high moisture content, etc.) was encountered in any of the percolation test pits.

Percolation testing was performed in accordance with County of Los Angeles Environmental Health Division test procedures, using the Ryon Method. Percolation test worksheets are provided with this report. The percolation test results indicated a "worst case" percolation rate of 10 minutes per inch. The area tested is concluded to be suitable for leach line usage.

**SEPTIC SYSTEM DESIGN**

The proposed restroom facility will require a minimum 2,000 gallon capacity septic tank. Jensen Precast Model No. JP2000 is recommended (see Figure 2). The septic tank shall be provided with a tight line pipe extending to one leach line, as shown on the Plot Plans. The leach line shall be 94 feet long, 3 feet wide, 6.5 feet deep, with 2.5 feet of absorptive depth (i.e., 2.5 feet of rock below the bottom of the perforated distribution pipe, see Figure 3). The leach rock will be covered with filter paper and 4 feet of soil cover.

The proposed locations of the septic tank and leach lines are shown on the Plot Plans. A typical leach line detail is provided herewith (see Figure 3).

An expansion area is required for one "future" leach line, for future use should the primary leach line become inadequate to perform the intended function over time. The recommended location of the expansion leach line is shown on the Plot Plans with this report.

**EXCAVATIONS**

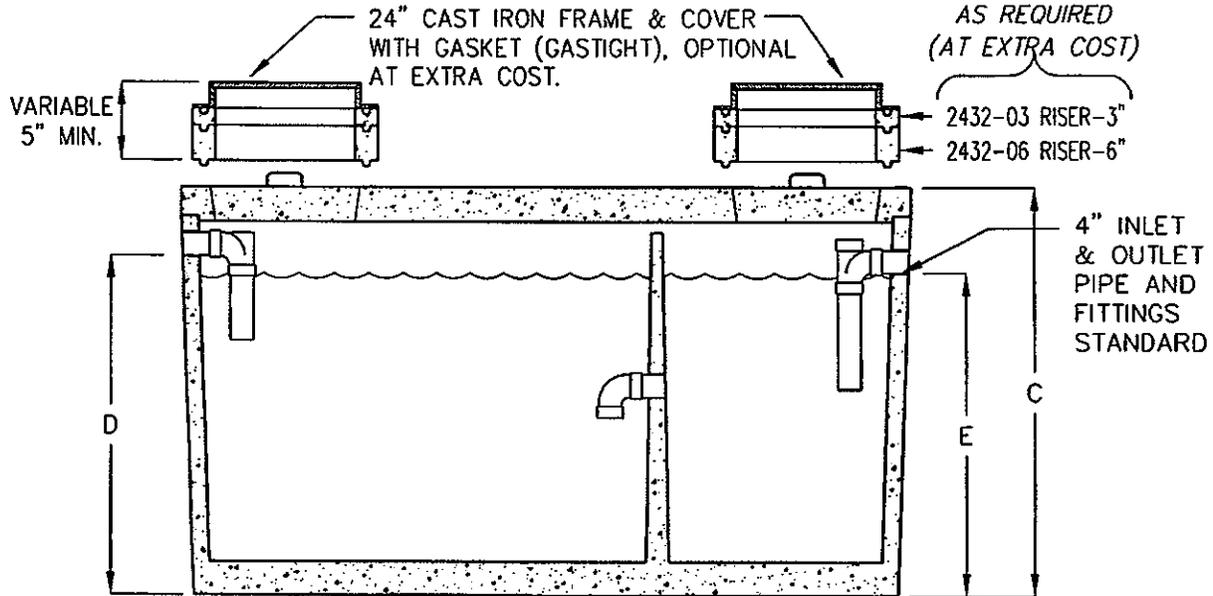
All excavations for leach line construction shall be completed in accordance with Cal OSHA requirements. Excavations shall be sloped at 1.5h:1v slope ratio for that portion of leach trench excavation exceeding four feet. Leach trench excavations shall be observed and approved the engineering geologist, prior to the placement of leach rock.

**MAINTENANCE REQUIREMENTS**

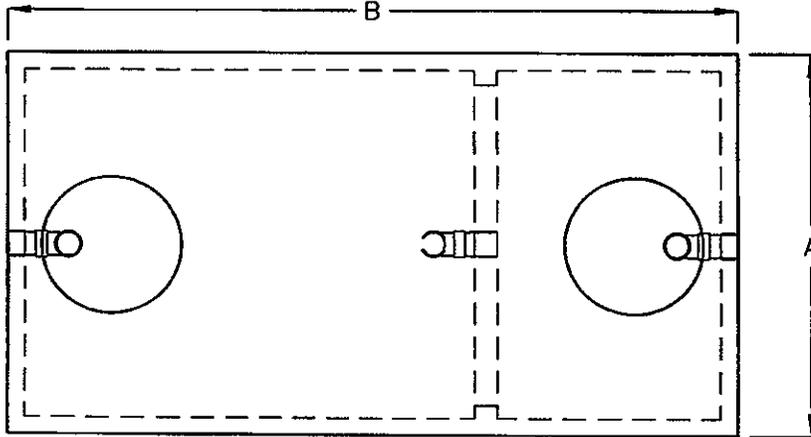
Proper maintenance of the septic system is vital to ensure a long-lasting, trouble-free system. You must follow the recommendations of the manufacturers, suppliers, and installer of the system.

# COMMERCIAL SEPTIC TANKS

TRAFFIC RATED ACCEPTED BY UPC®



**SIDE VIEW  
CUTAWAY**



**TOP VIEW**

(COVERS & RISERS REMOVED)

MODEL NUMBER	LIQUID CAPACITY GALLONS	DIMENSION A	DIMENSION B	DIMENSION C	DIMENSION D	DIMENSION E	MINIMUM EXCAVATION WIDTH	MINIMUM EXCAVATION LENGTH	DEPTH OF BURY
JP-750	750	4'-0"	8'-1"	6'-0"	5'-0"	4'-9"	5'-0"	9'-1"	1' TO 6'
JP-1000	1000	5'-1"	8'-2"	6'-0"	5'-0"	4'-9"	6'-1"	9'-2"	1' TO 6'
JP-1200	1200	5'-9"	8'-6"	6'-0"	5'-0"	4'-9"	6'-9"	9'-6"	1' TO 6'
JP-1500	1500	5'-7"	10'-8"	6'-0"	5'-0"	4'-9"	6'-7"	11'-8"	1' TO 6'
JP-2000	2000	4'-11"	15'-11"	6'-0"	5'-0"	4'-9"	5'-11"	16'-11"	1' TO 6'
JZ-2500	2500	5'-9"	16'-10"	6'-0"	5'-0"	4'-9"	6'-9"	17'-10"	1' TO 5'
JZ-3000	3000	5'-9"	16'-10"	6'-9"	5'-9"	5'-6"	6'-9"	17'-10"	1' TO 5'
JZ-4000	4000	7'-8"	16'-7"	6'-9"	5'-6"	5'-3"	8'-8"	17'-7"	1' TO 5'
JZ-5000	5000	7'-8"	16'-7"	7'-11"	6'-9"	6'-6"	8'-8"	17'-7"	1' TO 4'

DESIGN LOAD: H-20 TRAFFIC

FOR COMPLETE DESIGN AND PRODUCT INFORMATION, CONTACT JENSEN PRECAST.

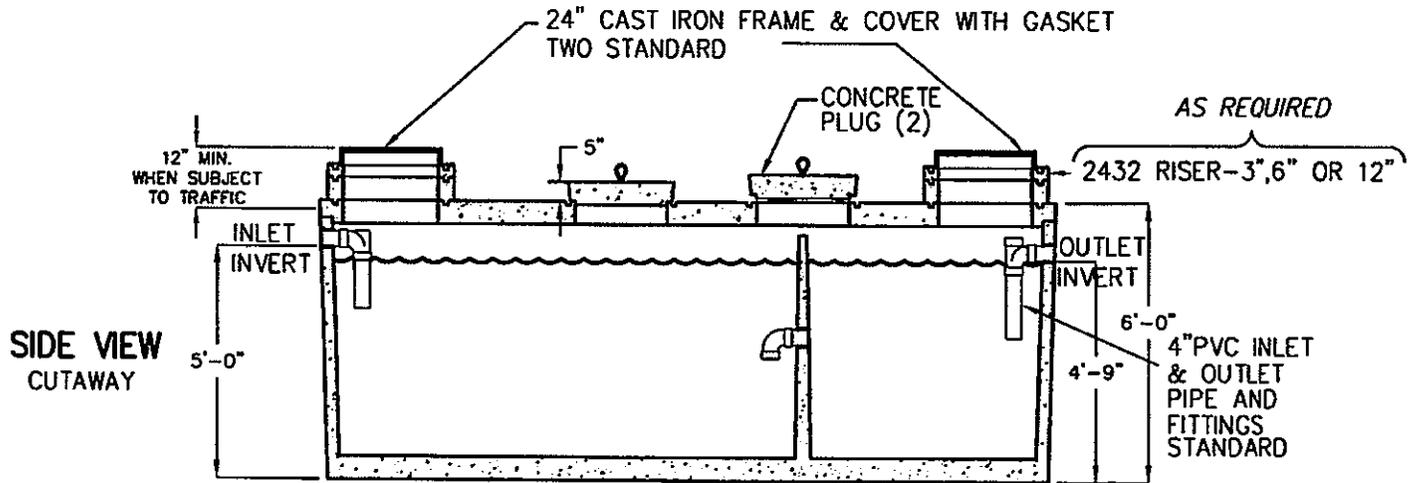
1/12/05  
JP750thruJZ5000.dwg  
© 2003 Jensen Precast

**JENSEN  
PRECAST®**

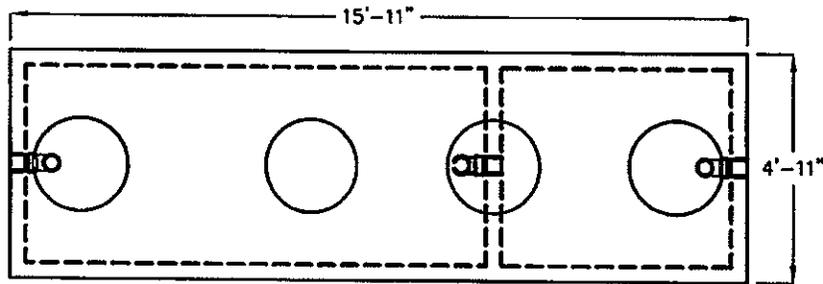
FIGURE 2.1

# 2000 GALLON COMMERCIAL SEPTIC TANK

MODEL JP2000  
TRAFFIC RATED  
ACCEPTED BY UPC



TOP VIEW  
(COVERS REMOVED)



- LIQUID CAPACITY: 2000 GALLONS
- TANK DESIGNED FOR H-20 TRAFFIC WHEEL LOAD WITH DRY SOIL CONDITIONS (WATER TABLE BELOW TANK) EARTH COVER OVER TANK NOT TO EXCEED 6 FT.

- SUITABLE NATIVE OR SUB-BASE SHALL BE PREPARED TO HANDLE ANTICIPATED LOADS. THE EXCAVATION SHALL BE BEDDED WITH SUITABLE GRANULAR MATERIAL AND SHALL BE COMPACTED TO 90% MAXIMUM DRY DENSITY, OR TO REQUIREMENTS OF THE PROJECT GEOTECHNICAL ENGINEER.

- FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT JENSEN PRECAST.

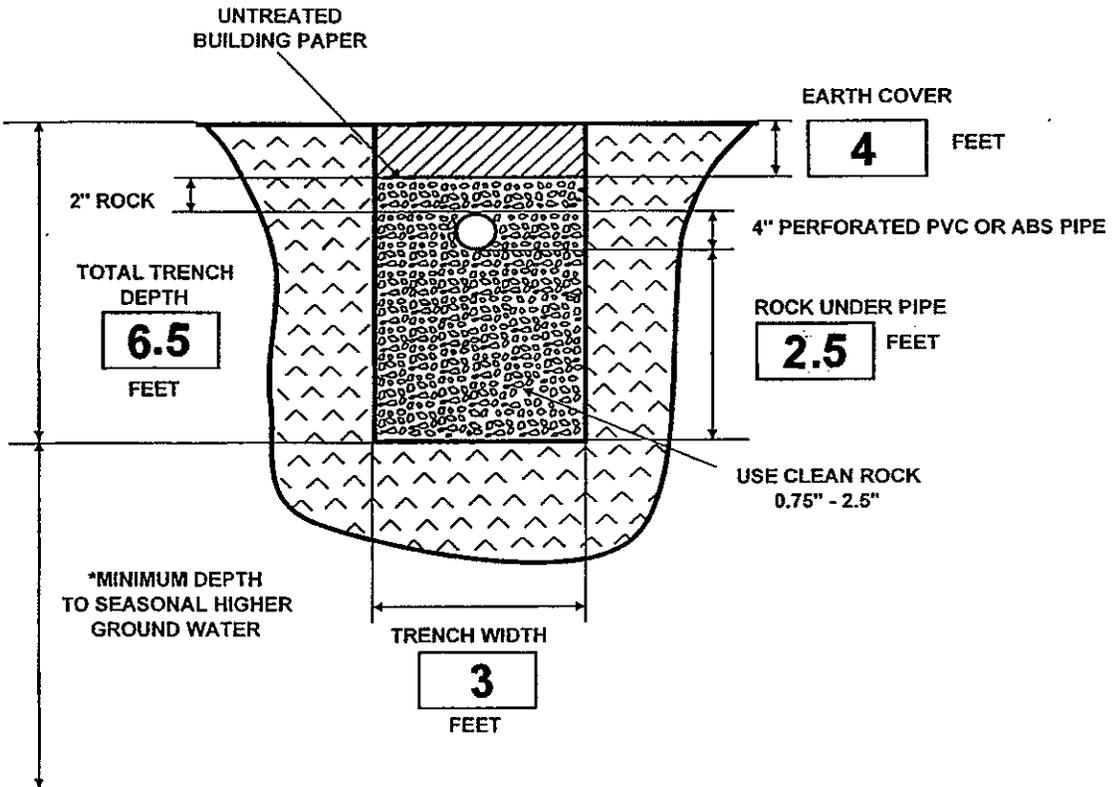
MINIMUM EXCAVATION SIZE:  
5'-11" X 16'-11" X DEPTH REQ'D.

THE DESIGN AND DETAIL OF THIS DRAWING ARE THE PROPERTY OF JENSEN PRECAST AND NOT TO BE USED EXCEPT IN CONNECTION WITH ITS OWN WORK. DESIGN AND INVENTION RIGHTS ARE RESERVED.

**JENSEN**  
PRECAST.

FIGURE 2.2

# CROSS-SECTION OF LEACH LINE



• 5' Minimum - Ventura County  
 Thousand Oaks  
 10' Minimum - Los Angeles County  
 Santa Barbara County

NOT TO SCALE

<p>GOLD          COAST          GEOSERVICES, INC.</p>	<p>LEACH LINE          DETAIL</p>	<p>DATE :          FIGURE <b>3</b></p>
---	---------------------------------------	--

ACTION PAINTBALL PARK  
14500 SOLEDAD CANYON ROAD

FILE NO. GC12-032402

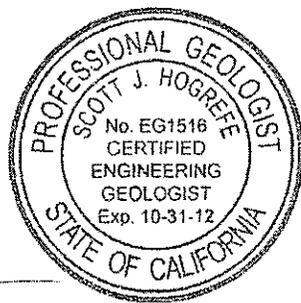
REMARKS

Changes to the number of daily game park users or to the number of plumbing fixture units may affect the septic system design and usage. Any such changes should be reviewed by this office in advance of those changes, to evaluate possible effects on the septic system design presented herein.

The data and conditions presented herein are valid for one year from the date of this report. Reports and system designs older than one year shall be updated to assure compliance with current regulation. Per Los Angeles County Environmental Health Division permitting procedure, you must submit the following for their review: (1) three copies of this report; (2) the floor plan of the proposed restroom facility, and (3) an application for an Onsite Wastewater Treatment System (OWTS), along with County of Los Angeles required application fees.

Please call this office at (805) 484-5070 if you have any questions regarding this report. Thank you for the opportunity to be of professional service.

Respectfully submitted,  
GOLD COAST GEOSERVICES, INC.



  
Scott J. Hogrefe, CEG 1516

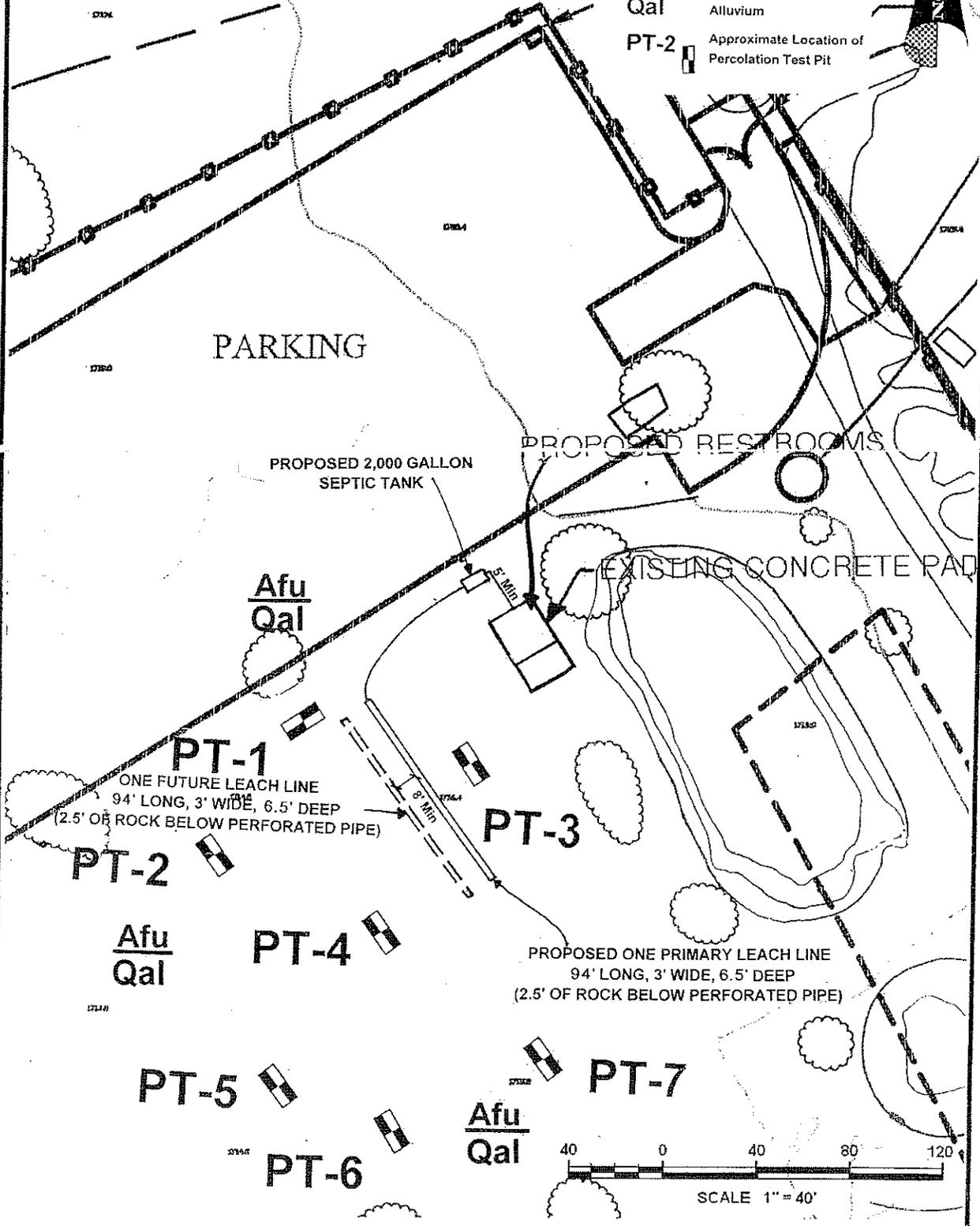
<b>PLOT PLAN / GEOTECHNICAL MAP</b>		
14500 SOLEDAD CANYON ROAD, SANTA CLARITA		
Scale: 1"=40'	FILE NO.:	Drawn by:
Date: 04/17/12	GC12-032402	Rev.:
<b>GOLD COAST GEOSERVICES, INC.</b>		
5217 VERDUGO WAY, SUITE B * CAMARILLO, CA 93012 * (805) 484-5070 * FAX (805) 484-4295		

PLATE 1

FREE STANDING SIGN  
(3' x 4')

**LEGEND**

- Afu Non-Engineered Fill
- Qal Alluvium
- PT-2  Approximate Location of Percolation Test Pit



ONSITE WASTEWATER TREATMENT SYSTEM DESIGN

(Leach Lines)

1. **Planned Usage: Paintball Game Park**
2. **Estimated Waste / Sewage Flow Rate Per UPC Table K-3:**

Classification	Individuals	Unit GPD	Total GPD
Game player/staff	200	5	1,000

Total Daily Flow Rate = 1,000 Gallons

Septic Tank Sizing According to UPC Table K-2: 1,500 gallons

9 Plumbing Fixture Units = 1,000 gallons (min.)

Adjusted Flow Rate = 1,000 x 2 = 2,000 Gallons Per Day

Recommended Septic Tank Capacity: 2,000 gallons

3. **Septic tank capacity = 2,000 gallons**

4. **Leach Trench Sizing Requirements**

$$\text{Ryon Formula: } A = \frac{T + 6.24}{29} \times \frac{C}{2}$$

Where A = Area of Leaching Trenches in Square Feet

T = Time in minutes for the 6<sup>th</sup> inch to drain

C = Capacity of septic tank in gallons

$$A = \frac{10 + 6.24}{29} \times \frac{2000}{2} = 560 \text{ sq.ft.}$$

For leach line trenches using 2.5 feet of rock beneath the pipe, Leaching Area (A) is divided by 6.

$$560 \text{ sq.ft.} / 6 \text{ ft} = \underline{93.3} \text{ foot long leach line}$$

**ACTION PAINTBALL PARK  
14500 SOLEDAD CANYON ROAD**

**FILE NO. GC12-032402**

**PROVIDE ONE 94-FOOT LONG, 3-FOOT WIDE, 6.5 FEET DEEP LEACH  
TRENCH, WITH 2.5 FEET OF ROCK BENEATH THE PIPE.**

5. Proper setback distances must be maintained (see Figure 4 for specific distances between septic components and streams, buildings, etc.).

## LOCATION OF SEWAGE DISPOSAL SYSTEM

MINIMUM HORIZONTAL DISTANCE IN FEET FROM:	BUILDING SEWER	SEPTIC TANK	DISPOSAL FIELD	SEEPAGE PIT
BUILDING OR STRUCTURES [1]	2	5	8	8
PROPERTY LINE ADJOINING PRIVATE PROPERTY	CLEAR [2]	5	5	8
WATER SUPPLY WELL ON SUCTION LINE	50 [3]	50	100	150
STREAMS, LAKES, TIDAL WATERS OR OCEAN WATERS	50	50	50	100
LARGE TREES		10		10
SEEPAGE PITS OR CESSPOOLS		5	5	12
DISPOSAL FIELD		5	4 [4]	5
ON SITE DOMESTIC WATER SERVICE LINE	1 [5]	5	5	5
DISTRIBUTION BOX			5	5
PRESSURE PUBLIC WATER MAIN	10 [6]	10	10	10

**NOTE:** When disposal fields and/or seepage pits are installed in sloping ground, the minimum horizontal distance between any part of the leaching system and ground surface shall be fifteen (15) feet.

- [1] Including porches and steps, whether covered or uncovered, breeze ways, roofed port-covered, roofed patio, carports, covered walks, covered driveway and similar appurtenances.
- [2] See Section 313.3 of the UPC.
- [3] All drainage piping shall clear domestic water supply wells by at least fifty (50) feet. This distance may be reduced to no less than twenty-five (25) feet when the drainage piping is constructed of materials approved for use within a building.
- [4] Plus two (2) feet for each additional (1) foot of depth in excess of one (1) foot below the bottom of the drain line (see Sec. 1-6(i) of the UPC).
- [5] See Sec. 720.0 of the UPC.
- [6] For parallel construction. For crossings, approval by the Health Department shall be required.
- [7] This minimum clear horizontal distance shall also apply between disposal field, seepage pits, and the ocean mean higher high tide line.
- [8] Where special hazards are involved, the distance required shall be increased as may be directed by the Health Office or Administrative Authority.

Reference: Table K-1, LADHS

**GOLD  
COAST  
GEOSERVICES**

**LOS ANGELES COUNTY  
DEPARTMENT OF HEALTH SERVICE  
SEWAGE DISPOSAL SYSTEM SETBACKS**

DATE:

**FIGURE 4**

**ACTION PAINTBALL PARK  
14500 SOLEDAD CANYON ROAD**

**FILE NO. GC12-032402**

**GOLD COAST GEOSERVICES, INC.  
LEACH FIELD PERFORMANCE TEST DATA WORK SHEET**

CLIENT NAME: ACTION PAINTBALL PARK

FILE NO.: GC12-032402

TEST CONDUCTED BY: SJH

EXCAVATION DEPTH OF TRENCH: 6.5'

TEST HOLE DIMENSIONS: 12" x 12" x 12"

TRENCH NO.	PT-2	PT-3	PT-4
DATE OF PRESOAK	03/23/12	03/23/12	03/23/12
DATE OF TEST	03/24/12	03/24/12	03/24/12
HEIGHT OF WATER IN TEST HOLE AFTER PRESOAK (In Inches)	0	0	0
TIME WATER REACHES 5TH INCH	8:23	8:40	8:55
TIME WATER REACHES 6TH INCH	8:33	8:46	9:04
TIME REQUIRED FOR WATER TO DRAIN FROM 5TH TO 6TH INCH	10	6	9

**ACTION PAINTBALL PARK  
14500 SOLEDAD CANYON ROAD**

**FILE NO. GC12-032402**

**CLIENT NAME: ACTION PAINTBALL PARK**

**FILE NO.: GC12-032402**

**TEST CONDUCTED BY: SJH**

**EXCAVATION DEPTH OF TRENCH: 6.5'**

**TEST HOLE DIMENSIONS: 12" x 12" x 12"**

TRENCH NO.	PT-5	PT-6	PT-7
DATE OF PRESOAK	03/23/12	03/23/12	03/23/12
DATE OF TEST	03/24/12	03/24/12	03/24/12
HEIGHT OF WATER IN TEST HOLE AFTER PRESOAK (In Inches)	0	0	0
TIME WATER REACHES 5TH INCH	9:13	9:30	9:45
TIME WATER REACHES 6TH INCH	9:19	9:37	9:54
TIME REQUIRED FOR WATER TO DRAIN FROM 5TH TO 6TH INCH	6	7	9

PROJECT : 14500 SOLEDAD CANYON ROAD, SANTA CLARITA

TRENCH LOG : PT-1

FILE NO : GC12-032402

DATE : 03/23/12

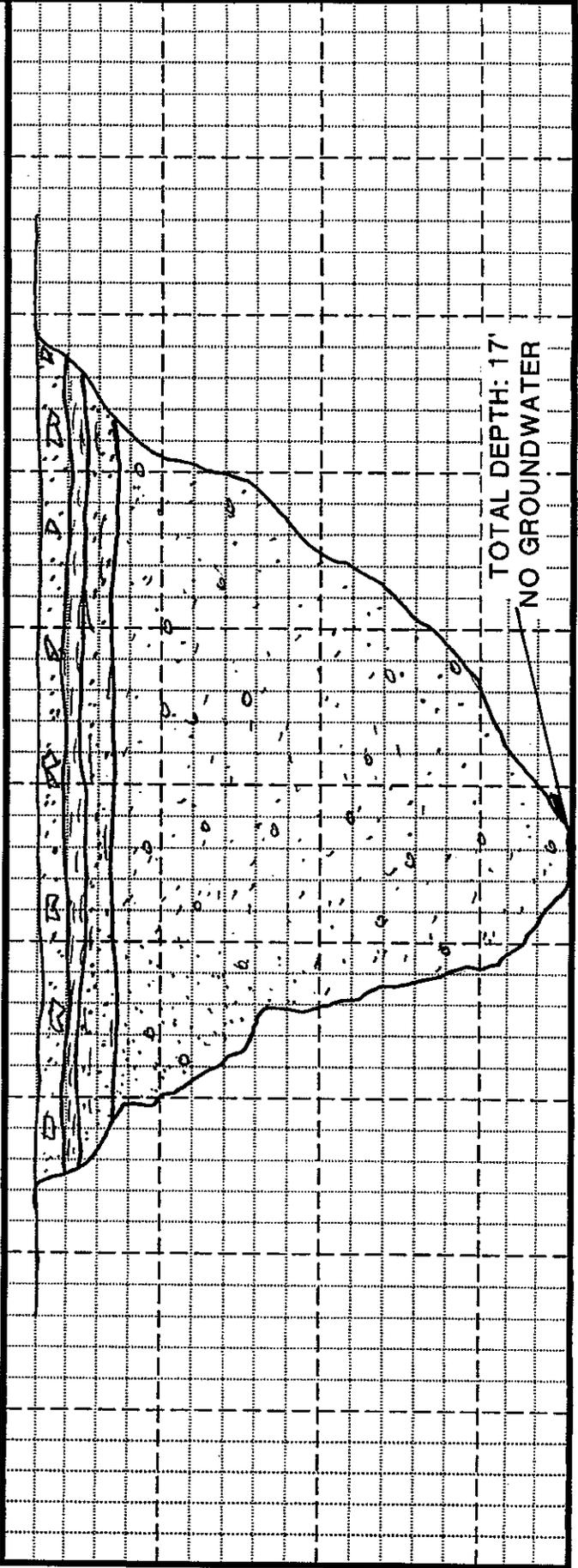
LOCATION : SEE PLOT PLAN, PLATE 1

LOGGED BY : KM

1. UNCERTIFIED ARTIFICIAL FILL - (Afu) - Medium reddish brown fine- to coarse-grained sand containing broken pieces of concrete, moist, medium dense
2. UNCERTIFIED ARTIFICIAL FILL - (Afu) - Woodchips
3. UNCERTIFIED ARTIFICIAL FILL - (Afu) - Light yellowish brown fine- to coarse-grained sand containing woodchips, slightly damp, dense
4. ALLUVIUM - (Qal) - Medium yellowish brown fine- to very coarse-grained sand with gravel and cobble, dry to damp, slightly dense to dense

SCALE 1" : 5'

PT-1



PROJECT : 14500 SOLEDAD CANYON ROAD, SANTA CLARITA

TRENCH LOG : PT-2, PT-3, PT-4

FILE NO : GC12-032402

DATE : 03/23/12

LOCATION : SEE PLOT PLAN, PLATE 1

LOGGED BY : KM

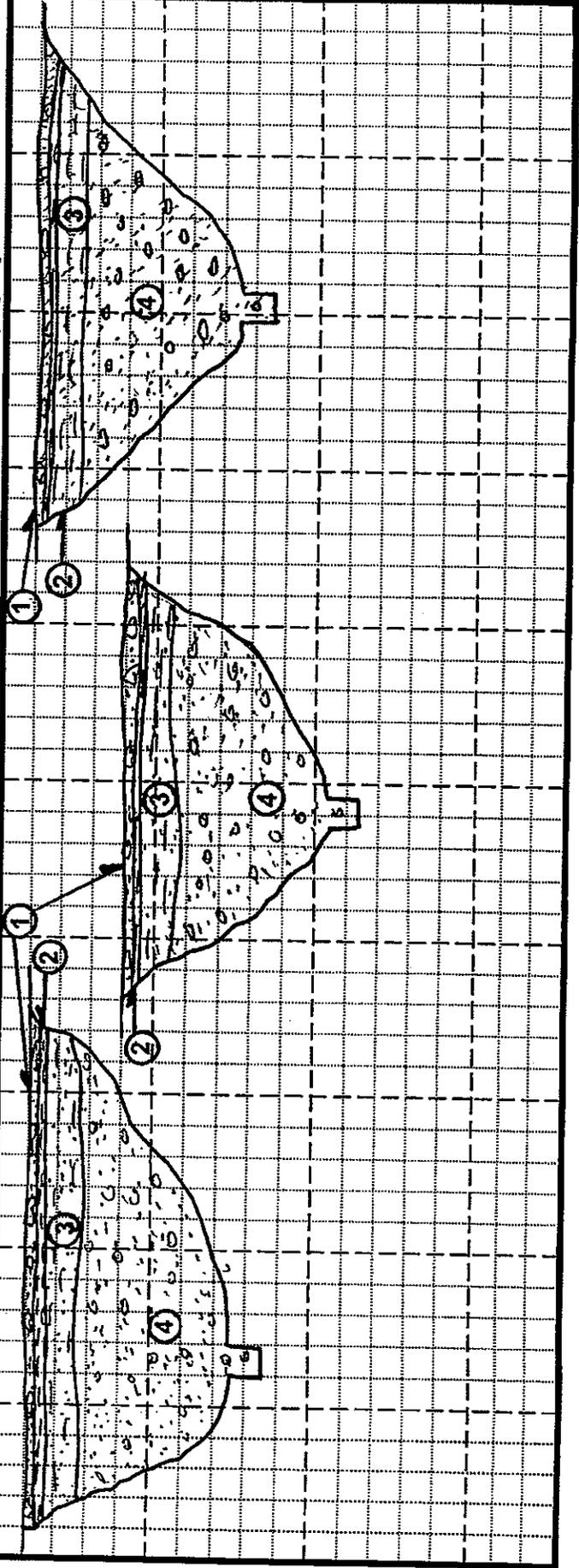
1. UNCERTIFIED ARTIFICIAL FILL - (Afu) - Medium reddish brown fine- to coarse-grained sand containing broken pieces of concrete, moist, medium dense
2. UNCERTIFIED ARTIFICIAL FILL - (Afu) - Woodchips
3. UNCERTIFIED ARTIFICIAL FILL - (Afu) - Light yellowish brown fine- to coarse-grained sand containing woodchips, slightly damp, dense
4. ALLUVIUM - (Qal) - Medium yellowish brown fine- to very coarse-grained sand with gravel and cobble, dry to damp, slightly dense to dense

SCALE 1" : 5'

PT-2

PT-3

PT-4

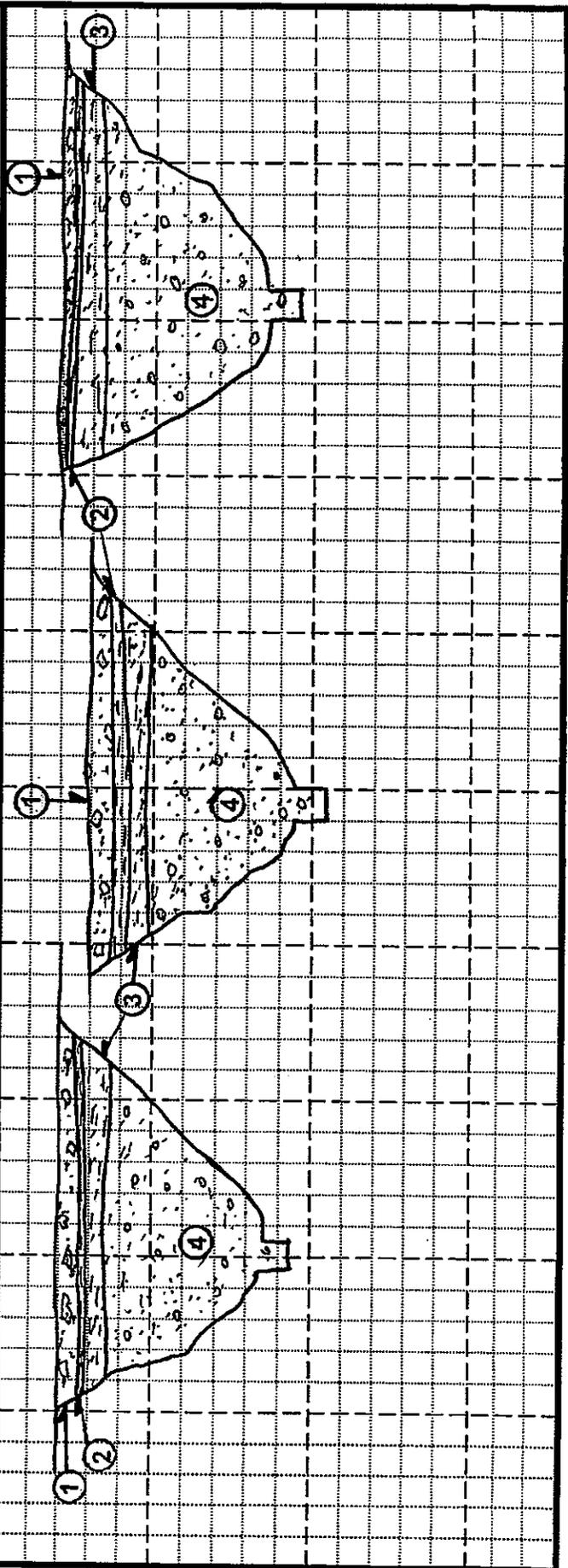


PROJECT : 14500 SOLEDAD CANYON ROAD, SANTA CLARITA TRENCH LOG : PT-5, PT-6, PT-7  
 FILE NO : GC12-032402 DATE : 03/23/12

LOCATION : SEE PLOT PLAN, PLATE 1 LOGGED BY : KM

1. UNCERTIFIED ARTIFICIAL FILL - (Afu) - Medium reddish brown fine- to coarse-grained sand containing broken pieces of concrete, moist, medium dense
2. UNCERTIFIED ARTIFICIAL FILL - (Afu) - Woodchips
3. UNCERTIFIED ARTIFICIAL FILL - (Afu) - Light yellowish brown fine- to coarse-grained sand containing woodchips, slightly damp, dense
4. ALLUVIUM - (Qal) - Medium yellowish brown fine- to very coarse-grained sand with gravel and cobble, dry to damp, slightly dense to dense

SCALE 1" : 5' PT-5 PT-6 PT-7



## Appendix D - Hydrology Calculations

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# HYDROLOGY CALCULATIONS

For Action Paintball Park

on

14500 Soledad Canyon Road

in

Los Angeles County, California

APN 3210-017-043, -054, -055



Prepared by:

Mike Baldi  
241 West 64<sup>th</sup> Place  
Inglewood, California 90302  
March 12, 2012  
Project #3.00

Prepared for:

SC Planners

## **Methodology**

Runoff rates have been completed as part of this analysis. Runoff rates for a 50 year storm event were calculated using the Los Angeles County **Tc Computer Program**. See Appendix A for the Tc Computer Program Input Data, Supporting Information and Output Data. Input Data and Supporting Information was obtained from a topographic survey of the existing conditions, the proposed site plan, the Los Angeles County of Department of Public Works (LACDPW) Hydrology Manual dated December 1991, and the LACDPW Hydrologic Method – Addendum to the 1991 Hydrology / Sedimentation Manual dated June 2002.

Runoff was calculated for the project limits only. Tributary run on from Soledad Canyon Road, neighboring parcels, or other sources was not included.

The project does not propose landform alteration or addition of impervious surfaces. Based on this, it is assumed that the general slope and pervious-ness of the site shall remain relatively constant and the pre and post project runoff shall remain relatively constant.

## **Appendix A**

### **Tc Program Input Data and Output Data**



Project	Subarea	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flow rate (cfs)	Fire Factor	Burned flow rate (cfs)	Volume (acre-ft)
Soledad	A	30	1.17	0.14	0.15	2.14	0.71	5.01	0.51