

## **EXECUTIVE SUMMARY**

The Chino Hills Visitor Center is proposed as a site-specific project under the approved 1999 Chino Hills General Plan. Chino Hills State Park is within an hour's drive of 15 million people and largely undeveloped except for an extensive trail system. The site was chosen because it serves the public at the western end of the park, within Orange County. Other existing and planned facilities serve the eastern portion of the park. The Visitor Center project will construct a 3,000 to 4,000 square foot visitor center with detached restrooms, a new entrance with highway widening, bus and horse trailer parking, accessible parking, and parking for 90 vehicles. There will also be interpretive exhibits, new interpretive trails and trail access, picnic facilities, necessary utility improvements, landscaping and other associated amenities.

The EIR addresses the proposed project and a range of project alternatives that were considered during the planning process in Section 2. The proposed project includes two variations for the location of the entrance road off of Carbon Canyon Road. These variations are a new driveway entrance directly on to State Park Property requiring highway widening to accommodate new turn lanes or utilization of the old entrance to Carbon Canyon Regional Park with an entrance road through a portion of the county park and therefore no need for highway improvements. Selection of the second variation will be dependent on reaching a mutual agreement with Orange County Beaches and Parks. The environmental effects of the proposed project are addressed in Sections 4.1 to 4.4. The Environmental Alternatives Analysis is addressed in Section 4.5 and includes the No Project Alternative and an Environmentally Superior Alternative to the preferred project. A mitigation monitoring program and record will be finalized as part of the project approval after the public review and comment period.

The Chino Hills Visitor Center project may potentially cause significant effects to hydrology/floodplains, biological resources (including sensitive species), water quality, traffic, noise, public utilities and aesthetics. Potential impacts to biological resources, hydrology/floodplain, water quality, noise and traffic will be mitigated below significance. However, the aesthetic effect of the introduction of an urban use into the rural area may not be fully mitigated. A Statement of Overriding Considerations will be made for this impact, if necessary. Potential impacts to cultural resources, air quality, mineral resources, agriculture, public services, land use, planning, and hazards associated with hazardous waste are less than significant and will be managed according accepted protocols, as necessary.



## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>I</b>
<b>LIST OF FIGURES.....</b>	<b>V</b>
<b>LIST OF TABLES.....</b>	<b>V</b>
<b>1 PURPOSE &amp; NEED.....</b>	<b>1</b>
<b>1.1 INTRODUCTION .....</b>	<b>1</b>
<b>1.2 PROJECT BACKGROUND.....</b>	<b>1</b>
<b>1.3 PROJECT NEED .....</b>	<b>2</b>
<b>1.4 IDENTIFIED PUBLIC CONCERNS.....</b>	<b>3</b>
<b>2 PROJECT DESCRIPTION .....</b>	<b>5</b>
<b>2.1 PROPOSED PROJECT (PREFERRED ALTERNATIVE).....</b>	<b>5</b>
<b>2.2 CONSTRUCTION MANAGEMENT .....</b>	<b>7</b>
<b>2.3 PROJECT ALTERNATIVES CONSIDERED.....</b>	<b>8</b>
<b>3 ENVIRONMENTAL SETTING.....</b>	<b>9</b>
<b>3.1 LOCATION AND DESCRIPTION .....</b>	<b>9</b>
<b>3.2 NATURAL RESOURCES .....</b>	<b>10</b>
<b>3.3 FLOODPLAIN &amp; HYDROLOGY .....</b>	<b>23</b>
<b>3.4 HISTORIC BACKGROUND &amp; DESCRIPTION .....</b>	<b>23</b>
<b>3.5 ARCHAEOLOGY.....</b>	<b>25</b>
<b>3.5.1 Ethnographic Background.....</b>	<b>25</b>
<b>3.5.2 Site Specific Archaeological Resources.....</b>	<b>26</b>
<b>4 ENVIRONMENTAL EFFECTS &amp; MITIGATION .....</b>	<b>27</b>
<b>4.1 POTENTIALLY SIGNIFICANT IMPACTS &amp; PROPOSED MITIGATION .....</b>	<b>27</b>
<b>4.1.1 Floodplain &amp; Hydrology .....</b>	<b>27</b>
<b>4.1.2 Natural Resources.....</b>	<b>27</b>
Sensitive Plants.....	30
Sensitive Wildlife .....	30
Habitat Linkages/Movement Corridors .....	33
<b>4.1.3 Aesthetics .....</b>	<b>34</b>
<b>4.1.4 Traffic .....</b>	<b>34</b>
<b>4.1.5 Noise.....</b>	<b>35</b>
<b>4.1.6 Public Utilities .....</b>	<b>35</b>
<b>4.2 IMPACTS THAT ARE LESS THAN SIGNIFICANT &amp; AVOIDANCE OF SIGNIFICANCE.....</b>	<b>36</b>
<b>4.2.1 Historic Resources .....</b>	<b>36</b>
<b>4.2.2 Archaeological Resources .....</b>	<b>36</b>
<b>4.2.3 Air Quality.....</b>	<b>36</b>
<b>4.2.4 Mineral Resources .....</b>	<b>37</b>
<b>4.3 EFFECTS WITH LITTLE OR NO IMPACTS.....</b>	<b>37</b>
<b>4.4 BENEFICIAL EFFECTS.....</b>	<b>37</b>
<b>4.5 ENVIRONMENTAL ALTERNATIVES ANALYSIS .....</b>	<b>37</b>
<b>4.5.1 No Project Alternative.....</b>	<b>37</b>
<b>5 CEQA REQUIRED CONSIDERATIONS .....</b>	<b>39</b>
<b>5.1 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH CANNOT BE         AVOIDED .....</b>	<b>39</b>
<b>5.2 RELATIONSHIP OF LOCAL SHORT-TERM USES AND MAINTENANCE AND         ENHANCEMENT OF LONG-TERM PRODUCTIVITY .....</b>	<b>39</b>
<b>5.3 GROWTH INDUCING IMPACTS .....</b>	<b>39</b>
<b>5.4 CUMULATIVE IMPACTS .....</b>	<b>39</b>

<b>6</b>	<b>REFERENCES.....</b>	<b>41</b>
6.1	LIST OF PREPARERS AND REVIEWERS .....	41
6.2	LITERATURE REFERENCED.....	41
	<b>APPENDIX A NOTICE OF PREPARATION, INITIAL STUDY, &amp; RESPONSES .....</b>	<b>47</b>
	<b>APPENDIX B BIOLOGICAL ASSESSMENT &amp; TABLES .....</b>	<b>48</b>

## LIST OF FIGURES

REGIONAL LOCATION MAP .....	FIGURE 1
VICINITY MAP .....	FIGURE 2
AERIAL PHOTO OF EXISTING SITE .....	FIGURE 3
FLOOD HAZARD AREAS AERIAL PHOTO OF EXISTING SITE .....	FIGURE 4
VEGETATION & SENSITIVE SPECIES W/ ENTRANCE LOCATION A.....	FIGURE 5
VEGETATION & SENSITIVE SPECIES W/ ENTRANCE LOCATION B.....	FIGURE 6
PRELIMINARY SITE PLAN .....	FIGURE 7
PRELIMINARY SITE PLAN LARGER SCALE.....	FIGURE 8
PRELIMINARY SITE SECTION .....	FIGURE 9
PREFERRED ALTERNATIVE ENTRANCE LOCATION A .....	FIGURE 10
PREFERRED ALTERNATIVE ENTRANCE LOCATION B.....	FIGURE 11
VISITOR CENTER CONCEPTUAL PLAN ALTERNATIVE .....	FIGURE 12

## LIST OF TABLES

NOISE .....	TABLE A
NOISE .....	TABLE B



# **1 PURPOSE & NEED**

## **1.1 INTRODUCTION**

This Draft Environmental Impact Report (DEIR), SCH #2003120071, has been prepared by the California Department of Parks and Recreation (DPR) to evaluate the potential environmental effects of the proposed Visitor Center Project at Chino Hills State Park, in Orange County, California. The purpose of the DEIR is to assist decision makers and the public to make an informed evaluation of the project based on its environmental consequences and to recommend actions to avoid, reduce or minimize those consequences. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 *et seq.*, and the State CEQA Guidelines, California Code of Regulations (CCR) §15000 *et seq.*

An Initial Study was prepared by DPR to determine if the Chino Hills State Park Visitor Center project would have a significant effect on the environment [CEQA Guidelines §15063(a)]. This Initial Study is attached in Appendix A and was submitted for public review with the Notice of Preparation. There is substantial evidence that this project may have a significant effect on the environment, therefore an Environmental Impact Report (EIR) must be prepared, in accordance with CEQA Guidelines §15064(a). Mitigation measures have also been incorporated into the project to reduce or minimize potentially significant impacts.

Because the project proposes changes within an U.S. Army Corp. of Engineers (USACE) flowage easement and State Highway 142, the USACE and the California Department of Transportation are Responsible Agencies. Further, because several of the proposed actions may either permanently or temporarily affect the floodplain, water quality, and species listed as threatened or endangered, additional permits or approvals may be needed from the following agencies:

United States Army Corp of Engineers  
United States Fish and Wildlife Service  
California Department of Fish and Game  
California Regional Water Quality Control Board, Santa Ana Region

## **1.2 PROJECT BACKGROUND**

Chino Hills State Park is located at the junction of Orange, Riverside and San Bernardino counties in southern California (Please see Figures 1 & 2). It is located adjacent to densely populated urban communities and 15 million people are located within an hour's drive. Despite the close proximity of urban uses, the park preserves its natural landscape features, biological diversity and opportunities for solitude. The park is currently used primarily for mountain biking, hiking, bird watching, equestrian trail riding and limited camping. The

Department seeks to make the park more accessible to a greater number of people through an increase in the availability and variety of improved site amenities and camping facilities.

On February 23, 1999, the California State Park Recreation Commission adopted the Chino Hills State Park General Plan. Incorporated within the General Plan was a Master EIR that identified the Visitor Center site as a center of activity within the park. Subsequent to approval of the General Plan and EIR, the California Department of Parks and Recreation has prepared the Chino Hills Visitor Center capital outlay budget package and received budget approval to proceed with the construction of the Chino Hills Visitor Center. The California Department of Parks and Recreation (Department) is the Lead Agency for this project.

The General Plan identifies several possible locations for a visitor center through the Recreation and Operations Zone. The Recreation and Operations Zone allowed for development of a visitor center either within the park's northeastern interior or at the western edge of the park at the Lemon Grove Area. The majority of the park was designated as Natural Open Space Zone or Core Habitat Zone therefore all other sites were excluded. Property purchased subsequent to the adoption of the General Plan in Coal Canyon was designated for a biocorridor. The Coal Canyon biocorridor was identified in the General Plan as a linkage important to the biological survival of the flora and fauna in Chino Hills State Park. The Lemon Grove Area was chosen as the preferred site because it is the only suitable location that allows access to the park's interior from the western end of the park. Incorporating the visitor center in this location will allow the park to serve the Orange County populations more directly while the Riverside and San Bernardino County population will access the park from the northeast to utilize planned camping and day-use facilities at the Rolling M Ranch.

### **1.3 PROJECT NEED**

Orange County has the second highest population density in the state. The adjacent Inland Empire (San Bernardino and Riverside Counties) is the second fastest region for population growth in the state. These large urban populations indicate a strong need for visitor services at Chino Hills State Park. A 2003 survey by Decision Research indicated that voters in nearby communities are very supportive of retaining open space for a variety of reasons. The use of California's park and recreation areas is heavy and continues to increase.

In the study on "Public Opinions and Attitudes on Outdoor Recreation in California 1997", 98 percent of the respondents indicated that just being in the outdoors is an important part of the enjoyment of their most favorite activities. More than 80 percent of the respondents indicated that outdoor recreation is *important* or *very important* to their quality of life. The study identified public demand for a variety of outdoor activities. The proposed project will provide six of the top fifteen outdoor activities to the public. These activities, in order of demand are recreational walking, visiting museums/historic site, picnicking in developed sites, trail hiking, attending outdoor cultural events, nature and wildlife study. Additionally, mountain biking and equestrian riding are very popular in the immediate area surrounding the visitor center site.

The project will address a three-fold need within the park while allowing for future expansion. First, the visitor center facilities will afford the public an important link to interpretive materials that will aid in the knowledge of natural and cultural resources within the Chino Hills State Park and its environs. Second, it will help entice visitors to the park, by allowing an entrance, restroom facilities, and a parking area at a point that provides better access to more people of the nearby communities. Third, within the context of safety, visitors will no longer need to park along the edge of the highway (often in conflict with posted “no parking” signs) to enter the park from the west. The lack of adequate parking and safe access to the park trailheads are concerns the Department is attempting to resolve. Fourth, the visitor center will serve the local community as well as the greater population for a meeting site and complement the uses at the adjacent Carbon Canyon Regional Park. Finally, this project provides a logical first step in development of western access and service at this very large park.

Appendix D of the Chino Hills State Park General Plan identifies a worst-case public use scenario. This scenario was estimated for the purposes of evaluating the potential environmental impacts of park development and represented one of a range of possibilities. This scenario assumed a visitor center at Upper Aliso/Bane Canyon with up to 120 vehicles and day-use parking at the Lemon Grove Area with 40 vehicles. However, the Visitor Center will be built at the Lemon Grove and require additional spaces over and above the amount estimated in this scenario. Park Operations has noted that up to 90 vehicles park on Carbon Canyon Road at peak use times. Therefore, given the site constraints, approximately 90 vehicles would be accommodated in the parking lot. The total amount of parking for the park would not increase because there would be fewer parking spaces needed in the park interior.

#### **1.4 IDENTIFIED PUBLIC CONCERNS**

A public information meeting was held on December 8, 2003. Attendance at the meeting was low but there were concerns expressed regarding potential accessibility, aesthetic effects, floodplain impacts, water quality issues, horse droppings, an undercrossing of Carbon Canyon Road, parking, equestrian parking, and traffic. Issues identified with receipt of the Notice of Preparation responses include: requirements for the Caltrans encroachment permit process, potential impacts to mineral resources, property ownership, conservation of fish, wildlife, plants and habitat, water quality, permits, aesthetics, hydrology, air quality, noise, public services & utilities, traffic, compatibility with existing Metropolitan Water District operations and utility easements, and alternative site locations. The NOP responses are located in Appendix A of this EIR.



## **2 PROJECT DESCRIPTION**

The Department of Parks and Recreation’s mission includes the protection of natural and cultural resources; therefore an appropriate combination of resource avoidance, mitigation, and monitoring will be employed throughout the project design, construction, and operations. Approximately 9 acres will be affected by the project implementation.

### **2.1 PROPOSED PROJECT (PREFERRED ALTERNATIVE)**

The proposed project places a Visitor Center and associated support elements within a site the public currently uses to access the western end of the Chino Hills State Park Trailhead System. Neighboring Carbon Canyon Regional Park has also influenced the popular use of the site. The Visitor Center’s support elements include interpretive exhibits, restrooms, a trash/recycle enclosure, bicycle parking, a horse corral, picnic area, outdoor gathering area, viewing platform and “nature path” with native plant landscaping. Please see Figure 8. A provision of safe access to the Visitor Center will be constructed by way of an at grade intersection with deceleration and acceleration lanes requiring road widening. An entrance road with monument sign, turnaround with entrance gates, entrance kiosk and parking area with bus/horse-trailer turnaround are also parts of the proposed project. Depending on project funding, some of the project elements may be constructed at a later time.

Visitor Center – The Visitor Center, an approximately 3,000 - 4,000 square foot, single story building, will be set upon a pier type foundation, in order to be elevated above the 100-year Floodplain. It will contain an information desk with work area, a private office, interpretive exhibit space, a meeting room (35 person capacity) equipped with audio visual presentation capabilities, a storage closet and a counter area with sink to facilitate interpretive demonstrations.

Restrooms – The Restrooms will have separate access, independent from the Visitor Center and will have a use period that coincides with the parking area’s hours of operation. The restrooms will have ADA compliant facilities. Their waste lines will tie into the adjacent sewer line at Carbon Canyon Road.

Trash/Recycle Enclosure – A trash/recycle enclosure will be provided near the entrance road, adjacent to Carbon Canyon Road in order to minimize the distance of travel onto the site by waste disposal management crews. The structure will securely house and visually shield the waste receptacles from view and animal intrusion.

Bicycle Parking – A designated bicycle parking area will be provided adjacent to the Visitor Center for the cycling enthusiasts who currently utilize the parks trails.

Horse Corral – A horse corral with trough and water supply will be provided adjacent to the bus/horse-trailer turnaround.

Picnic Area –An accessible picnic area with shade Ramada will be provided near the parking area and Visitor Center. Currently there are no picnic areas or shade structures on the site.

Outdoor Gathering Area –Located on the South side of the Visitor Center, facing towards the riparian edge, this area will serve as a meeting or staging area for small school groups and other organizations who want to take advantage of the interpretive aspects of the site, even when the Visitor Center is closed.

Viewing Platform and “Nature Path” with Native Plant Landscape – The viewing platform and “nature path” with native plant landscape will be ADA compliant and enable physically challenged individuals as well as others to experience the riparian edge while offering interpretive opportunities on a “micro-scale”.

Intersection (Non-Signaled) - A new, 3-way intersection with Carbon Canyon Road will be constructed to provide access to the new visitor center parking lot. The west leg will consist of a single westbound through lane, a single eastbound through lane and a single eastbound right-turn lane. The east leg will consist of a single eastbound through lane, a single westbound through lane and a single westbound left-turn lane. A decision based on traffic analysis will be made to determine whether or not signalization of the intersection is required. The same intersection configuration will be used with or without signalization. The new entrance road will be aligned to intersect Carbon Canyon Road at a right angle and will provide adequate decision sight distance as suggested in Exhibit 3-3 of the American Association of State Highway and Transportation Officials’ Policy on Geometric Design of Highways and Streets using a 45 mile per hour design speed and Avoidance Maneuver A. A stop sign and stop line will be placed on the new access road pavement to control traffic exiting the park. Pavement markings on Carbon Canyon Road will be placed to delineate the two turn pockets. The intersection will be designed and constructed in compliance with California Department of Transportation (Caltrans) standards and will require an encroachment permit. Two variations for the location of the entrance are being considered. Entrance Location A is immediately adjacent to the proposed parking lot, approximately 100 feet east of the western park boundary as shown in Figure 10. Entrance Location B, approximately 500 feet to the west, would utilize the existing, but currently closed, second entrance into Carbon Canyon Regional Park, which already includes turn lanes and necessary road width. This second location would be dependent on entering into an agreement with Orange County Beaches and Parks and would necessitate construction of an entrance road connecting an existing parking area in Carbon Canyon Regional Park and this project’s proposed parking area. The new entrance road would be constructed in a grove of exotic trees.

Road Widening with Turn Lanes - – Assuming Entrance Location A is chosen, State Route 142 will be widened 12 feet for approximately 350’ to the west of the new entrance and approximately 520’ to the east of the new entrance. The widening will accommodate the approach taper and storage length requirements for right-turn channelization for eastbound traffic and the approach taper, deceleration and storage length requirements for left turn channelization for westbound traffic. The widening will be placed partly on new fill, which

will be imported from off site, and placed on existing ground. The surface will be asphalt. The widening will be designed and constructed in compliance with Caltrans standards and permit requirements. If Entrance Location B is chosen, improvements to the highway would only be done if required by Caltrans standards and signal warrants.

Entrance Road with Monument Sign – The entrance road will serve as the link between Carbon Canyon Road and the Visitor Center day use parking area. The monument sign will act as the address and identifying device for the Visitor Center, it will be located adjacent to the entrance road and will not obstruct any lines of sight for motorists entering and exiting the turn lanes at Carbon Canyon Road.

Turnaround with Entrance Gates – A turnaround at the entrance with lockable gates will enable park staff to secure the parking area while permitting the public to exit the site safely when the park is closed.

Kiosk - A kiosk will be constructed within the new entrance road approximately 150' from its intersection with State Route 142 (Carbon Canyon Road) edge of pavement (Entrance Location A). The purpose of the kiosk is to facilitate the management of vehicles attempting to enter the parking area. The kiosk attendant will provide direction and assistance for park visitors, emergency vehicles, operations related vehicles including delivery of supplies and visitors needing ADA accommodation. The Kiosk is oriented to manage both inbound and outbound traffic. The kiosk will be ADA accessible, located in close proximity to water and will be provided with electrical service.

Parking – Standard and ADA compliant parking (approximately 90 spaces total) with accessible paths of travel to the Visitor Center and recreational/interpretive exhibits will be provided. The parking area will be available to the public when the visitor center is closed, however it is intended to be a Day Use Parking Facility.

Bus/Horse-trailer Turnaround – The bus parking/horse-trailer turnaround is an intended “shared use”. School buses (by appointment) would have access to that portion of the parking area typically during the weekdays and horse-trailers are intended to utilize that area during the weekends and holidays. The turnaround will be constructed approximately 80 feet from the entrance road intersection (Entrance Location A) with Carbon Canyon Road. The turnaround radius is approximately 23 feet with approximately 22 feet of traveled way to accommodate the inner wheel track of passenger vehicles. Larger trucks, buses and motor homes will be provided with a turnaround area at the opposite end of the parking area. This configuration efficiently supports the majority of vehicles likely to enter the area from Carbon Canyon Road. The surface of the turnaround will be constructed of stabilized, decomposed granite and include a concrete curb at the outside edge of the traveled way.

## **2.2 CONSTRUCTION MANAGEMENT**

The most effective and appropriate combination of resource avoidance and monitoring will be employed by the Department during all phases of project construction. Construction timeframe windows will be placed on the project to prevent disturbance of nesting birds and

reduce potential impacts to users of Carbon Canyon Regional Park and the Chino Hills State Park trail systems.

Best Management Practices (BMPs) will be used to protect the resources on site and nearby for all phases of work activity. Environmentally Sensitive Areas will be fenced and avoided. Sediment control during construction will be implemented through a variety of erosion control features or construction BMPs identified as part of the comprehensive *Storm Water Pollution Prevention Plan* which will prevent or minimize the potential of sediment leaving the construction site. The major principles that will be incorporated into the erosion control and grading plans include: 1) minimizing the extent of the disturbed area and duration of exposure, 2) stabilizing and protecting the disturbed area as soon as possible, 3) keeping runoff velocities low, 4) protecting disturbed areas from contact with runoff, and 5) retaining sediment within the construction area. The construction BMPs that will be applied to the project may include: 1) temporary desilting basins, 2) silt fences, 3) gravel bag barriers, 4) temporary soil stabilization through mattress or mulching, 5) temporary drainage inlet protection, and 6) diversion dikes and interceptor swales.

The Stormwater and pollutants will be contained on site and/or evacuated offsite to an appropriate, approved facility. No pollutants or sediment will be allowed to enter Carbon Creek and the adjacent riparian area. Disposal of potential pollutants will be conducted according to accepted protocols. Due to the sensitive nature of the nearby Carbon Canyon Regional Park and natural resources, construction will be coordinated to reduce impacts whenever possible.

Additionally, the final site grading and construction plan must be approved by a qualified state resource ecologist prior to implementation of the project.

### **2.3 PROJECT ALTERNATIVES CONSIDERED**

The project alternatives are limited in scope. A signalized intersection is one project variation but may not be feasible due to the low amount of traffic (about 225 maximum trips per day) utilizing the facility. The need for a signal will be based on Caltrans traffic warrants. Alternative sites were identified in the 1999 Chino Hills State Park General Plan as Recreation and Operations Zones. Please see Section 1.2 for additional detail. Within the Lemon Grove Area, two alternatives were identified. The original visitor center proposal is shown on Figure 12 as the Visitor Center Concept Alternative. After further refinement and site review by park resource ecologists, it was determined that the visitor center building should be moved to reduce potential impacts to natural resources. Additionally, the Alternative placed the building on property currently owned by AERA Energy. California State Parks hopes to acquire this private inholding within the park but, so far, has been unable to complete the transaction. It was determined that the preferred alternative was the least environmentally damaging alternative that met the purpose and need for the project. Two variations for the location of the entrance intersection with Carbon Canyon Road are being carried forward for consideration.

### 3 ENVIRONMENTAL SETTING

#### 3.1 LOCATION AND DESCRIPTION

Chino Hills State Park is within the Puente-Chino Hills, which are at the northern end of the Peninsular Ranges Geomorphic province. The Cleveland National Forest in the Santa Ana Mountains is located south of the park and connected through the recent park acquisition of the Coal Canyon biocorridor. State Route 91 bisects the main part of Chino Hills State Park from the Coal Canyon biocorridor. Because the park was historically used for cattle ranching, it is dominated by non-native annual grassland. However, the park retains important natural resource components of walnut woodlands, coastal sage scrub, coast live oak woodland, chaparral, and riparian vegetation, and supports abundant wildlife, including several rare species.

The center of Chino Hills State Park is ringed by hills with the nearby urban uses remaining largely unseen. However, several power lines bisect the park, reminding visitors of outside development and a series of existing trails and access roads also cross the park. At the Visitor Center site, the park is close to urban areas and directly adjacent to Carbon Canyon Regional Park. State Highway 142 (Carbon Canyon Road), a heavily traveled two-lane roadway, runs along the entire northern boundary of the site. This location is within a canyon with the viewshed primarily of the heavily vegetated riparian area, Carbon Canyon Regional park and hillsides. Close to the highly populated urban portion of the City of Brea, nonetheless the site appears to be in a rural location due to the presence of the parks, riparian area, and vegetated hillsides. The property across the highway is not developed within the viewshed. The nearest homes are located over 300 feet from the site south of the creek. East of the project site, housing along Carbon Canyon Road is primarily rustic/rural with nearby equestrian facilities. Carbon Canyon Road is a heavily traveled highway with Average Daily Traffic (ADT) counts of approximately 16,000 vehicles per day. Peak hour traffic counts are 2,600 vehicles per hour. Because of the close proximity of the roadway, ambient noise levels on the site are high, especially immediately adjacent to the roadway. The year 2025 growth factor for Carbon Canyon Road is 55%.

This portion of Chino Hills State Park is within the City of Brea. According to the 2000 United States Census, Brea is a city of approximately 35,400 people with a median income of \$59,759. Approximately 77% of the population is white, 20% Hispanic, and 9% Asian. Sixty-four of the homes in Brea are owner occupied. Sales prices of existing homes range from \$160,000 to \$500,000 and rentals from \$500 per month to over \$1,000 per month. Brea has a strong commercial and industrial sector that offers employment to over 60,000 people and a strong tax base. The Brea Olinda Unified School District operates six elementary schools, one junior high school and two high schools.

Adjacent to the visitor center site (Please see Figure 3). is the 124 acre Carbon Canyon Regional Park. Sixty acres of the park are developed with facilities for active sports and play, an interpretive center, restrooms, picnic areas, parking lots and trails. The park also contains a 4-acre lake with fishing piers and a 10-acre grove of coastal redwoods located immediately west of the proposed Chino Hills State Park Visitor Center. Vegetation within

Carbon Canyon Regional Park is a mix of both cultivated and non-cultivated exotic and native species. The Carbon Canyon Regional Park entrance was recently moved and a new park office and visitor center constructed.

The project site is primarily located within an abandoned lemon grove. A parcel owned by AERA Energy is located within the area planned for facilities and is shown on Figure 3 as a private inholding. This land was held out of the 1982 property sale from Shell to the California Department of Parks and Recreation but the Department would like to acquire it. The ancillary facilities shown on this parcel of land would not be constructed unless the land was acquired by the Department. AERA Energy has indicated that the land may contain mineral resources that would be subject to extraction. The project site is also crossed by utility easements. The Metropolitan Water District of Southern California (MWD) owns and operates the Diemer Filtration Plant to the south of the project site and the Yorba Linda Feeder to the east of the project site. MWD hauls sludge out of the Diemer Plant settling ponds approximately 60 days of the year with about 25 truck trips on each of those scheduled days, which do not occur on weekends or holidays. Power lines owned by Southern California Edison are located adjacent to Carbon Canyon Road and water and sewer lines owned by the City of Brea are located underground in the same vicinity.

### **3.2 NATURAL RESOURCES**

Information regarding biological resources present in the vicinity of the proposed Visitor's Center was gathered through literature review, examination of available databases, and through field reconnaissance.

To determine if there are sensitive biological resources present on the site several literature sources were reviewed: United States Fish and Wildlife Service (2002), California Department of Fish and Game (Rarefind 1993; 2003 edition), and California Native Plant Society's Inventory of Rare and Endangered Vascular Plants (Skinner and Pavlik 1994).

Recent field surveys of the proposed Project site were conducted by Karen Miner (KM) Darren Smith (DS) and Alissa Ing (AI) during Spring, Summer and Fall 2003. These surveys included examining the entire Project area and within 200 feet of the proposed site. The site has been previously surveyed and studied under several projects including "The Chino Hills General Plan" (Southern Service Center 1999), and Chino Hills Inventory and Monitoring Project (Southern Service Center 2002) and associated technical studies. Native vegetation associations were mapped in the field using 2001 aerial photography. Vegetation in this report is described according to Holland (1986). The vegetation boundaries and locations of sensitive species were compiled using a geographic information system (GIS) (ArcMap 8.2). Vegetation acreages and impacts were estimated calculated using GIS. Jurisdictional wetlands were delineated using a GPS capable of approximately +/- 1-meter accuracy, a recent 1-foot topographic survey, and the 2001 aerial photography. Locations of rare or sensitive plant and wildlife species also were mapped upon the 2001 aerial photography photograph or recorded using a GPS. Survey dates and conditions are detailed in Table 1.

Plant and wildlife species observed or detected during the field survey were identified and recorded (see Attached List). Latin and common names of plants follow the Jepson Manual (Hickman 1993).

**Table 1. Survey Dates, Purpose, and Conditions**

Survey Focus	Date	Duration	Temperature (°F)	Wind (mph)	Cloud Cover (%)	Observer(s)
<b>Sensitive Plant Survey/Vegetation Mapping</b>	05/21/03	1050-1245	80-85	1-2	0-0	DS, KM
<b>Sensitive Riparian Bird Surveys (Protocol Surveys for Least Bell's Vireo and Southwestern Willow Flycatcher)</b>	04/11/03	0830-1120	74-82	0-2	30	AI
	04/22/03	0810-1015	72-80	0-3	Hazy-0	AI
	05/10/03	0920-1100	75-85	0-0	Hazy-0	AI
	05/21/03	0905- 1050	73-80	0-1	Hazy-0	KM, DS
	06/11/03	0930-1100	27-26	0-0	Overcast-90	KM
	07/02/03	0825-1105	24-28	1-3	0-0	KM, DS
	07/08/03	0830- 1000	20-25	0-2	Overcast -0	KM
07/17/03	0750- 1010	73-90	0-1	50-60	KM, DS	
<b>Wildlife Assessment</b>	08/26/03	0930-1205	75-85	1-2	0	DS
<b>Wetland Delineation</b>	01/28/03	0830-1105	65-70	0-1	60	DS

Sensitive biological resources are those defined as: species that are recognized by federal, state, or local conservation agencies and organizations due to limited, declining, or threatened population sizes; habitat areas or plant communities that are unique, are of relatively limited distribution, or are of particular value to wildlife; and wildlife corridors and habitat linkages. All sensitive species incidentally encountered during the survey were recorded, their population sizes directly counted or estimated, and their locations mapped.

Limitations of the survey include seasonal and a diurnal bias. Surveys were conducted during the daytime to increase opportunity for detection of plants and most wildlife. Birds usually represent the largest component of the vertebrate fauna, and because they are diurnal, daylight surveys maximize the number of observations of this group. Daytime surveys are less effective for observations of mammals because most species are only active at night. The site was visited numerous times during the morning hours Spring and Summer 2003 to conduct protocol surveys for least Bell's vireo (*Vireo belli pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*). The focus of these surveys was sensitive riparian birds; however, a clear picture of the other wildlife species present was also obtained from incidental observations. An additional site visit was conducted to look for evidence of sensitive wildlife species that may not have been detected during the riparian bird surveys.

Soils in the vicinity of the project site consist of sandy soils (10YR 7/6) and sandy loam which are generally derived from alluvial deposits. Disturbed soils from artificial grading and fill are also present on the site. Topography in the project vicinity is relatively simple and includes the edge of a southeast to northwest tending riparian drainage and a relatively flat terraced upland. Slopes are gradual, less than nine (9) percent. Near the southern-most portion of the site elevations range from 460 to 480 feet above mean sea level.

## Results of Survey

### Vegetation

The Project site has a long history of physical disturbance resulting from past agricultural activities and as a result supports vegetation that consists of mainly agricultural or disturbance specialist species that are not native to the region. The adjacent riparian vegetation supports populations of native hydrophytic species with moderate abundances of non-native species [e.g., giant reed (*Arundo donax*)]. The majority of the vegetation onsite is either ruderal vegetation, ornamental landscaping or a lemon (*Citris limon*) grove. Coastal sage scrub is present outside of the project area north of Carbon Canyon Blvd. These vegetation types are described below (refer also to Figure 2 and Table 2).

**Table 2. Vegetation associations and land cover types within the Baldwin Hills Scenic Overlook Project vicinity.**

Vegetation Association	Acre(s)
Ruderal vegetation/non-native grassland	6.5
Southern willow scrub	4.2
Lemon Grove	3.9
Ornamental Trees	8.8
Giant Reed	1.6
Coastal Sage Scrub	0.6
Disturbed/Developed land	8.4
<b>Total Acres</b>	<b>34.0</b>

#### Ruderal Vegetation/Non-native grassland

Ruderal/non-native grassland includes areas supporting ruderal forbs and to a lesser extent non-native grasses. Onsite, this vegetation has resulted from mechanical disturbance related to the defunct agricultural activities. The majority of the ruderal/non-native grassland vegetation is composed of greater than 50 percent cover ruderal forb species. Typical exotic dicots include black mustard (*Brassica nigra*), milk thistle, Italian thistle (*Carduus pycnocephalus*), tocalote (*Centaurea melitensis*), and cheeseweed (*Malva parviflora*), prickly lettuce (*Lactuca serriola*), with low cover of exotic grasses [e.g., ripgut grass (*Bromus diandrus*), red brome (*B. madritensis*), slender oat (*Avena barbata*), and native herbs telegraph weed (*Heterotheca grandiflora*), and twiggy wreathplant (*Stephanomeria virgata*). Several Peruvian pepper trees (*Schinus molle*) are also present in ruderal vegetation/non-native grassland.

#### Lemon Grove

Lemon grove consists of rows of lemon trees that remain from a former commercial orchard. Most of these trees are dead or declining due to the lack of irrigation. Between rows of lemon trees are exotic forbs including black mustard, prickly lettuce, milk thistle, Italian thistle, tocalote, and cheeseweed.

## Southern willow scrub

Southern willow scrub onsite is composed of primarily of black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), Mexican elderberry (*Sambucus mexicana*), giant reed, and several large eucalyptus trees (*Eucalyptus* spp.). Common understory species included mulefat (*Baccharis salicifolia*), castor-bean (*Ricinus communis*), milk thistle (*Silybum marianum*), shrubby phacelia (*Phacelia ramosissima*) poison hemlock (*Conium maculatum*), California mugwort (*Artemisia douglasiana*), and wild celery (*Apium graveolens*). Southern willow scrub may include smaller stands of mulefat scrub and giant reed.

Southern willow scrub is a wetland vegetation type that is considered sensitive habitat for its ability to support sensitive plant and animal species and its water quality functions. Southern willow scrub vegetation is typically regulated by the California Department of Fish and Game (CDFG) and The Army Corps of Engineers (ACOE).

## Ornamental Trees

Exotic tree stands in the project site were varied. Stands west of the site (in the County Park) supported a variety of exotic trees including Elm (*Ulmus* sp.), redwood (*Sequoia sempervirens*), and fig (*Ficus* sp.). Elsewhere, exotic stands were composed of monotypic stands of eucalyptus or mixed stands of eucalyptus, pepper, castor-bean, and occasionally, a few native California black walnut (*Juglans californica* var. *californica*) trees.

## Giant Reed

Giant reed consists of nearly monotypic stands of giant reed (*Arundo donax*). Giant reed is an invasive plant that occurs in wetland habitats and spreads by growth and dispersal of sub-surface rhizomes.

## Coastal sage scrub

Coastal sage scrub is not present within the proposed project area. Sparse stands of coastal sage scrub are present approximately 130-feet north of the site across Carbon Canyon Boulevard, on private property. This vegetation is composed primarily of laurel sumac (*Malosma laurina*), non-native grasses and forbs, and low to moderate cover of sub-shrubs [e.g., coastal sage brush (*Artemisia californica*), bush monkeyflower (*Mimulus aurantiacus*), California buckwheat (*Eriogonum fasciculatum*), and deer weed (*Lotus scoparius*)].

## Developed and Disturbed Landcover Types

Developed land includes buildings, and paved roads. Disturbed land includes dirt and gravel roads and unvegetated areas. These denuded areas typically support bare, compacted soil and have received either heavy or repeated disturbance.

## Wildlife

### Birds

Approximately thirty-three bird species were observed in the Project area during recent surveys. Species commonly observed include house finch (*Carpodacus mexicanus*), common yellow-throat (*Geothlypis trichas*), black phoebe (*Sayornis nigricans*), spotted towhee (*Pipilo erythrophthalmus*), California towhee (*Pipilo crissalis*), Bewick's wren (*Thryomanes bewickii*), bushtit (*Thryomanes bewickii*), mourning dove (*Zenaida macroura*), song sparrow (*Melospiza melodia*), Anna's hummingbird (*Calypte anna*), ash-throated flycatcher (*Myiarchus cinerascens*), Cooper's hawk, and red-tailed hawk (*Buteo jamaicensis*). Most of the bird species observed onsite were observed within or directly adjacent to the southern willow scrub vegetation.

### Reptiles and Amphibians

Four reptiles were observed on the site during recent surveys, western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), common kingsnake (*Lampropeltis getulus*), and gopher snake (*Pituophis melanoleucus*). Other species likely to occur within the project vicinity are southern alligator lizard (*Elgaria multicarinatus*) and western rattlesnake (*Crotalus viridis*). Pacific tree frog (*Hyla regilla*) and western toad (*Bufo boreas*) is likely present but was not heard during surveys. No other reptile or amphibian species were observed or detected onsite.

### Mammals

Five mammal species were observed or detected within the Project area: desert cottontail (*Sylvilagus audubonii*), Botta's pocket gopher (*Thomomys bottae*), common raccoon (*Procyon lotor*), coyote (*Canis latrans*), and bobcat (*Lynx rufus*). Other species expected to occur within the Project vicinity include western harvest mouse (*Reithrodontomys megalotis*), deer mouse (*Peromyscus maniculatus*), house mouse (*Mus musculus*), black rat (*Rattus rattus*), California vole (*Microtus californicus*), grey fox (*Urocyon cinereoargenteus*), domestic dog (*Canis familiaris*), Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), and domestic cat (*Felis silvestris*).

## Sensitive Biological Resources

Sensitive biological resources include plant and animal species present in the project APE that are considered sensitive by federal, state, or local conservation agencies and organizations or unique habitat areas that are of relatively limited distribution. References for determination of sensitive biological resources are as follows: wildlife, U.S. Fish and Wildlife Service (USFWS 1989, 1991), California Department of Fish and Game (Rarefind 1993, version 2003), plants, USFWS (2002), CNPS (2002), Skinner and Pavlik (1994), and Ferren *et al.* (1984); and habitats, Holland (1986).

### Sensitive Plant Species

The only sensitive plant species identified in the Project vicinity is California black walnut. Sensitive plant species known from the vicinity or with potential to occur within the project vicinity are described in Table 3.

**Table 3. Sensitive Plant Species Potentially Occurring in the Project Vicinity.**

Species	Conservation Status	Habitat	Status in the project vicinity
Braunton's milk-vetch <i>Astragalus brauntonii</i>	USFWS: None CDFG: None CNPS: List 1B	Chaparral, shrublands. Disturbed areas or burns on gravelly-clay soils.	Chaparral or shrubland habitat not present. Not present based on surveys. Known only from coal canyon area at CHSP.
Coulter's saltbush <i>Atriplex coulteri</i>	USFWS: None CDFG: None CNPS: List 1B	Sparse shrublands or grasslands near drainage margins. Alkaline or clay, open sites. Associated with <i>Distichlis spicata</i> , <i>Leymus triticoides</i> , and <i>Centromadia pungens</i> <i>ssp. laevis</i>	Alkaline or clay habitat not present in project vicinity. Not present based on surveys. Not known from CHSP.
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	USFWS: FE CDFG: CE CNPS: List 1B	Sparse shrublands, grasslands. Open clay habitats.	Clay soils not present. All uplands are heavily disturbed. Not present based on surveys. Not known from CHSP.
Catalina mariposa lily <i>Calochortus catalinae</i>	USFWS: None CDFG: None CNPS: List 4	Grasslands, chaparral and coastal sage scrub on clay soils.	Clay soils not present. All uplands are heavily disturbed.
Plummer's mariposa lily <i>Calochortus</i> <i>plummerae</i>	USFWS: None CDFG: None CNPS: List 1B	Openings chaparral and sage scrub. Granitic or alluvial soils.	Chaparral or shrubland habitat not present. Not present based on previous surveys. Not known from CHSP.
Intermediate mariposa lily <i>Calochortus weedii</i> <i>var. intermedius</i>	USFWS: None CDFG: None CNPS: List 1B	Openings chaparral and sage scrub. Granitic or alluvial soils.	Chaparral or shrubland habitat not present. Not present based on previous surveys. Known only from coal canyon area at CHSP.
Tecate cypress <i>Cupressus forbesii</i>	USFWS: None CDFG: None CNPS: List 1B	Chaparral.	Chaparral or shrubland habitat not present. Not present based on previous

Species	Conservation Status	Habitat	Status in the project vicinity
			surveys. Several individuals known from coal canyon near DFG reserve.
Slender-horned spineflower <i>Dodecahema leptoceras</i>	USFWS: FE CDFG: CE CNPS: List 1B	Alluvial fan sage scrub. Gravelly riverbeds.	Habitat not present. Not known from CHSP.
Many-stemmed dudleya <i>Dudleya multicaulis</i>	USFWS: None CDFG: None CNPS: List 1B	Open areas, coastal scrub, grasslands. Clay soils.	Clay soils habitat not present. Known from lower Aliso canyon and Coal Canyon areas.
Santa Ana River wooly-star <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	USFWS: FE CDFG: CE CNPS: List 1B	Alluvial fan sage scrub. Gravelly riverbeds.	Habitat not present. Not known from CHSP.
Smooth tarplant <i>Centromadia pungens</i> spp. <i>laevis</i>	USFWS: None CDFG: None CNPS: List 1B	Shrublands, grasslands adjacent wetlands. Alkaline soils.	Habitat not present. Not known from CHSP.
Southern California black walnut <i>Juglans californica</i> var. <i>californica</i>	USFWS: None CDFG: None CNPS: List 4	Mesic uplands, ravines north-facing slopes. Clay soils.	21 individuals present within the area. Numerous individuals at CHSP.
heart-leaved pitcher sage <i>Lepechinia cardiophylla</i>	USFWS: None CDFG: None CNPS: 1B	Chaparral.	Habitat not present. Not known from CHSP.
Robinson's peppergrass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	USFWS: None CDFG: None CNPS: 1B	Chaparral, coastal sage scrub. Dry, open habitats.	Habitat not present. Not known from CHSP.
Parish's gooseberry <i>Ribes divaricatum</i> var. <i>parishii</i>	USFWS: None CDFG: None CNPS: 1B	Riparian woodland habitats.	Habitat present. Not known from CHSP. Not observed during surveys.
Coulter's matilija poppy <i>Romneya coulteri</i>	USFWS: None CDFG: None CNPS: 4	Chaparral, coastal sage scrub. Dry washes, postburn vegetation, or gully banks.	Habitat not present. Present elsewhere at CHSP. Not observed during surveys.

CE = California Endangered  
FE = Federally Endangered

## Sensitive Wildlife Species

### Birds

Four sensitive bird species were observed within the project area during surveys: least Bell's vireo, willow flycatcher, yellow warbler (*Dendroica petechia brewsteri*), and yellow-breasted chat (*Icteria virens*). Sensitive bird species with potential to occur in the project vicinity are described in Table 5. These species are discussed below.

**Table 5. Sensitive Bird Species Potentially Occurring in the Project Vicinity.**

Species	Conservation Status	Habitat	Status in the project vicinity
Rufous-crowned sparrow <i>Aimophila ruficeps</i>	USFWS: None CDFG: CSC	Shrublands, chaparral, coastal sage scrub	Common in native shrublands at CHSP. Not observed within project area during surveys
Golden Eagle <i>Aquila chrysaetos</i>	USFWS: None CDFG: CSC	Nesting habitat large trees or cliffs ledges far from urban landuses. Foraging habitat shrublands or grasslands.	Observed flying high over site. Nesting habitat not present onsite. Very little forage area onsite.
Grasshopper sparrow <i>Ammodramus savannarum</i>	USFWS: None CDFG: CSC	Grasslands, sparse shrublands.	Suitable habitat not present onsite. Grasshopper sparrows typically use grasslands >12 Ha. Grasshopper sparrows are located elsewhere at CHSP.
Burrowing owl <i>Athene cunicularia</i>	USFWS: None CDFG: CSC	Open habitats, grasslands rangeland. Nesting on ground in burrows.	Suitable habitat not present. Ruderal areas onsite dominated by highly productive dicotyledonous herbs. No suitable burrows or owls observed within the project vicinity.
Cactus wren <i>Campylorhynchus brunneicapillus</i>	USFWS: None CDFG: CSC	Cactus scrub	Cactus scrub habitat not present in project area.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	USFWS: None CDFG: CE	Dense, wide riparian woodlands with well-developed understories.	Habitat marginally suitable. Known only from Prado Dam Basin east of CHSP.
Yellow warbler <i>Dendroica petechia brewsteri</i>	USFWS: None CDFG: CSC	Deciduous riparian thickets, southern willow scrub.	Several individuals were heard calling in riparian habitat near

Species	Conservation Status	Habitat	Status in the project vicinity
			the site.
South western willow flycatcher <i>Empidonax traillii</i> <i>extimus</i>	USFWS: FE CDFG: CE	Riparian woodlands near standing water (during breeding season).	Three willow flycatchers ( <i>Empidonax traillii</i> ) were observed adjacent to the site on a single date during a USFWS protocol survey. These were not observed during subsequent surveys. It is probable that these were temporary visitors to the project vicinity.
Horned Lark <i>Eremophila alpestris</i>	USFWS: None CDFG: CSC	Open habitats, grassland, range land. Nesting near the ground in grasslands.	Suitable habitat not present. Very little bare ground onsite. Not observed during surveys.
Yellow-breasted chat <i>Icteria virens</i>	USFWS: None CDFG: CSC	Dense riparian thickets	Three individuals observed in riparian habitat near the site.
Loggerhead shrike <i>Lanius ludovicianus</i>	USFWS: None CDFG: CSC	Open habitats, shrublands, grasslands, rangeland. Breeding near trees or shrubs	Some potential habitat onsite. Not observed during surveys.
California gnatcatcher <i>Polioptila californica</i>	USFWS: FT CDFG: CT	Coastal sage scrub	Coastal sage scrub habitat not present within limit of work. Suitable habitat may be present outside State Property north of Carbon Canyon.
Least Bell's vireo <i>Vireo bellii pusillus</i>	USFWS: FE CDFG: CE	Riparian woodlands and scrub.	Breeding territory present mapped near the project site.

CT = California Threatened  
CE = California Endangered  
CSC = California Species of Special Concern  
FT = Federally Threatened  
FE = Federally Endangered

## Reptiles and Amphibians

No sensitive reptile or amphibian species were observed within the project vicinity. Sensitive reptile and amphibian species with potential to occur in the project vicinity are described in Table 6.

**Table 6. Sensitive Reptile Species Potentially Occurring in the Project Vicinity.**

Species	Conservation Status	Habitat	Status in the project vicinity
Arroyo toad <i>Bufo californicus</i>	USFWS: FE CDFG: CSC	Middle reaches of third order streams with open sandy or gravelly areas and persistent standing water (March-Mid-June)	Low potential. Carbon Creek is not a third order stream and has few open sandy or gravelly areas. Little or no persistent water is present in early summer. Arroyo toad is not known from CHSP.
Western pond turtle <i>Clemmys marmorata pallida</i>	USFWS: None CDFG: CSC	Perennial or permanent streams with some ponding. Typically needs cover and water depth > 2 m and upland sites for overwintering and estivation.	Low potential. No ponding in the reach of Carbon Canyon Creek near the site.
Coastal western whiptail <i>Cnemidophorus tigris multiscutatus</i>	USFWS: None CDFG: CSC	Open rocky areas shrublands or grasslands with sunny, open microsites.	Few bare ground areas onsite. Not observed during surveys.
Red-diamondback rattlesnake <i>Crotalus ruber</i>	USFWS: None CDFG: CSC	Chaparral and coastal sage scrub, usually with some boulder or rock outcrops. Often found in areas with reddish soils.	Low potential. Native shrublands not present onsite. Likely present in undisturbed chaparral or coastal sage scrub elsewhere at CHSP.
San Diego horned lizard <i>Phrynosoma coronatum blainvillei</i>	USFWS: None CDFG: CSC	Shrublands, grasslands. Open habitats near harvester ant populations.	Low potential. Very few open areas present and no harvester ant colonies observed.
Western spade-foot toad <i>Scaphiopus hammondi</i>	USFWS: None CDFG: CSC	Shrublands and grasslands near vernal pools or ponding water that persists greater than 3-weeks.	Low potential. Few or no areas that support persistent standing water near the site. Heavy herb exotic herb cover. Spade-foot toad known from Bane Canyon Drainage at CHSP.

CSC = California Species of Special Concern

FE = Federally Endangered

## Mammals

No sensitive mammals were observed or detected within the project vicinity. Table 7. presents sensitive mammals that have potential occur within the APE.

**Table 7. Sensitive Mammal Species Potentially Occurring Within the Area of Potential Effect (APE).**

Species	Conservation Status	Habitat	Status in the project vicinity
Black-tailed jack-rabbit <i>Lepus californicus</i>	USFWS: None CDFG: CSC	Open habitats within chaparral or coastal sage scrub.	Low potential. Habitats onsite are orchards and grassland that are dominated by productive forbs. This species is present elsewhere at Chino Hills in sparse native shrublands and in less productive grasslands.
Desert woodrat <i>Neotoma lepida</i>	USFWS: None CDFG: CSC	Coastal sage scrub, chaparral.	Low potential. Desert woodrat typically occurs within open chaparral and coastal sage scrub. Two woodrat nests were observed within the edge of the riparian vegetation onsite. These are likely dusky-footed woodrats ( <i>Neotoma fuscipes</i> ).
Pallid bat <i>Antrozous pallidus</i>	USFWS: None CDFG: CSC	Associated with rock outcrops or buildings near water. Roosts in crevices and cracks.	Low potential roosting habitat not present. May use site to forage.
Pale big-eared bat <i>Plecotus townsendii pallescens</i>	USFWS: SOC CDFG: CSC	Associated with rock outcrops or buildings near water. Roosts in crevices and cracks.	Low potential. May use site to forage.
Spotted bat <i>Euderma maculatum</i>	USFWS: FSC CDFG: CSC	Closely associated with rocky cliffs. Roosts primarily in crevices in cliff faces	Low potential. May use site to forage. Roosting habitat not present.
Western red bat <i>Lasiurus blossevillii</i>	WBWG	Associated with riparian and woodland habitats. Roosts in trees.	Potential habitat present. Project will not impact riparian habitat.
Western small-footed myotis <i>Myotis ciliolabrum</i>	USFWS: FSC	Inhabits grasslands, oak woodlands. Roosts in mines and trees.	Potential habitat present but not detected during surveys. Project will not impact roosting habitat
Long-eared myotis <i>Myotis evotis</i>	USFWS: FSC	Associated with oak woodlands and known to roost in highway rip rap as well as caves, mines, trees, buildings, and bridges	Low potential. Project will not impact potential roosting habitat..
Fringed myotis	USFWS: FSC	Associated with woodlands and	Low potential. Project will

Species	Conservation Status	Habitat	Status in the project vicinity
<i>Myotis thysanodes</i>		scrub habitats. Roosts in mines, trees, buildings, and caves.	not impact potential roosting habitat..
Long-legged myotis <i>Myotis volans</i>	USFWS: FSC WBWG	Associated with oak woodlands. Roosts in hollow trees, rock crevices, buildings and mines.	Low potential. Roosting habitat not present
Yuma myotis <i>Myotis yumanensis</i>	USFWS: FSC CDFG: CSC	Associated with a variety of habitats. Roosts in tress, buildings, mines, caves, bridges and rock crevices.	Low potential. Roosting habitat not present
Pocketed free-tailed bat <i>Ncytinomops femorosaccus</i>	CDFG: CSC	Associated with chaparral habitat. Roosts in crevices in cliff faces and boulders, caves and mines.	Low potential Roosting habitat not present
Western mastiff bat <i>Eumops perotis</i>	USFWS: FSC CDFG: CSC WBWG	Associated with chaparral habitat. Roosts primarily in crevices in cliff faces and occasionally in buildings.	Potential habitat present. Roosting habitat not present
American badger Taxidea taxus	USFWS: None CDFG:CSC	Grassland, scrub, chaparral, woodland, riparian habitats on friable soils	Low potential. No suitable burrows observed. Unlikely due to adjacent development.
<i>Stephens' kangaroo rat</i> <i>Dipodomys stephensii</i>	USFWS: FE CDFG: CT	Open grasslands, sparse shrublands.	Low potential. Suitable habitat not present. Not known from CHSP.

FSC = Federal Species of Special Concern  
CSC = California Species of Special Concern  
CT = California Threatened  
FE = Federally Endangered  
WBWG – Western Bat Working Group

### Sensitive Invertebrates

No sensitive invertebrates are known from the project vicinity and none are likely to occur within the project area.

### Sensitive Habitats

Sensitive habitats are those considered rare within the region, support sensitive flora and/or fauna, or function as linkages for wildlife movement. The only sensitive habitat occurring within the project vicinity is southern willow scrub. Southern willow scrub is a wetland habitat type that is regulated by the ACOE and CDFG, and is known to support sensitive wildlife species. Typically, direct impacts to ACOE or DFG wetlands require “no net loss” of wetland area, and mitigation ratios greater than 1:1. A jurisdictional wetland delineation (according to the 1987 ACOE manual) was conducted for the project area. To satisfy the ACOE definition a wetland must have predominately hydrophytic vegetation, hydric soil indicators, and wetland hydrology. The DFG wetland boundaries are generally broader than

the ACOE. DFG jurisdictional habitat includes land that supports any of the three characteristics that define ACOE wetlands. For this study DFG wetlands are synonymous with the vegetation mapping (*i.e.*, the southern willow scrub boundary) (refer to Figure 2). The ACOE wetlands were less inclusive due to a lack of hydrology indicators. Generally, ACOE wetlands onsite were defined below the floodplain bench where recent evidence of hydrology was present (*e.g.*, driftlines, drainage patterns, water stained leaves, *etc.*). Soils within or near the riparian edge of the site are composed mainly sand-sized particles. Sandy soils are difficult to interpret in terms of identifying redoximorphic soil characteristics. Areas with wetland hydrology indicators, sandy soils, and hydrophytic vegetation were considered ACOE jurisdictional wetlands.

#### Habitat Connectivity (Wildlife Corridors and Habitat Linkages)

Wildlife corridors are relatively narrow landscape features that provide connections between larger blocks of native habitat. Habitat linkages are generally broader patches of native habitat that connect one habitat patch to another reducing the adverse effects of habitat fragmentation.

The Chino Hills Visitor Center is situated on the north edge of the Carbon Creek riparian drainage. The site is bounded by Carbon Canyon Boulevard to the north. West of the site native habitat continues to consists of very dense urban development.

#### **Regional Resource Planning Context**

California State Parks (CSP) has signed a Memorandum of Agreement with CDFG outlining each agencies responsibility in the implementation of the Coastal Sage Scrub Natural Communities Conservation Program (NCCP). Chino Hills State Park has been enrolled as a reserve in the NCCP program, and its contribution to a regional NCCP HCP is imminent. The park's inclusion in the NCCP program necessitates that management of the park should be consistent with NCCP long-term plans and management plans. The Northern Orange County NCCP that involves a comprehensive list of species and habitats is currently being planned for the region but has not yet been implemented. A smaller Habitat Conservation Plan (HCP) "Shell/MWD HCP" has been implemented and includes lands within the western 1/3 of CHSP (ca. 2600 acres). This HCP covers coastal California gnatcatcher and coastal cactus wren and the habitats and habitat connections that they utilize.

Based on site surveys, the Project area (on State Property) does not support suitable habitat for California gnatcatcher or coastal cactus wren nor were either species observed within the Project area during surveys (see Figure 2). The closest suitable habitat for California gnatcatcher within the park is approximately 400 feet south of the Project site. Suitable habitat may be present north of Carbon Canyon road, 200' north of the Visitor Center Site. Additional coastal sage scrub habitat is present east of the proposed Visitor center site. Although the proposed Project will involve construction of a parking lot and a building it will also increase the vegetated shrubland habitat through restoration of a buffer that would be conducive to California gnatcatcher movement.

### General Plan Consistency

Because the proposed development is entirely within a Recreation and Operations Zone, and seeks to avoid native habitats, minimize or mitigate indirect impacts to sensitive species and habitats, it is consistent with the CHSP General Plan (1999). Although the Recreation and Operations Zone allows intense visitor use, some uses are not appropriate due to the proximity of sensitive wildlife species. These restrictions are discussed below in the Mitigation and Conservation Measures Section.

### 3.3 FLOODPLAIN & HYDROLOGY

The project is located within the 100-year Floodplain and a USACE flowage easement for flood control. Please see Figure 4. The project area is subject to inundation from storm events at the confluence of the Telegraph and Carbon creeks, flood discharges from the Diemer Filtration Plant, and backed up floodwaters from downstream flood control dams.

### 3.4 HISTORIC BACKGROUND & DESCRIPTION

The following overview provides a summary account of historic land-use patterns located within and immediate to the site of the proposed Chino Hills State Park Visitor Center. A site visit and walkthrough of the project's A.P.E. and the immediate area revealed certain physical improvements. They included an access road, bridge, remnants of an abandoned lemon orchard, a large cleared area between the orchard and the mouth of Telegraph Canyon, and an isolated corrugated tractor storage shed surrounded by weeds. A cursory investigation of archival materials and contemporary sources suggested that the area experienced agricultural and mineral exploration and extraction activities since the mid-to-late 19<sup>th</sup> Century. A more in-depth study of the archival record revealed the following information.

There is no evidence of historic land use during California's Spanish or Mexican periods of occupation. The land contained within the present Chino Hills State Park was considered *sobrante*, or land not claimed as part of a Spanish or Mexican Rancho. That is not to say that the area wasn't subject to use by herds wandering off from the neighboring ranchos. After California became a U.S. territory and state, the land became part of the federal public domain. However, the 1853-1894 U.S. Surveyor General's public domain surveys do not indicate the appearance of any structures, fences, or wagon roads in the entire park. While ranching developed in the park's eastern section (Pellissier/Rolling M Ranch) during the 1920/40s, there is no map evidence to suggest improvements to the project area's A.P.E. during this time (Bevil 2001:1-2; Brea 2000-03; Cramer 1982:58; and US 1939 and 1981).

An etymological search of the name origins of both canyons adjacent to the A.P.E. reveals tantalizing but inconclusive clues to past land use. For example, Telegraph Canyon was reportedly the route used to extend a telegraph line between Orange and San Bernardino counties. However, it is not known when this occurred. Second, *Carbon Canyon* could be a Spanish-English hybridization for "charcoal canyon." A *carbonera* is a place where charcoal was made. Perhaps it was named after exposed coal deposits along the canyon walls. Place name combinations using 'carbon' or 'coal' are often associated with coal

mining. An example in Orange County would be the 1878 town site of Carbondale, in Silverado Canyon (Cal 2003; and Gudde 1969:53 and 333).

The closest historic landmarks located near the project site are both associated with other hydrocarbon deposits. Within the adjacent Carbon Canyon Regional Park is State Historic Landmark (No. 918), which commemorates the townsite of Olinda. The town played an important role in the growth and development of Southern California's oil-related economy. From 1898 until the wells shut down in the late 1940s, the Olinda oil field was Orange County's top petroleum producer.

Similar to other oil boomtowns in the Greater Los Angeles Basin foothills, Olinda was a company town in which the local oil company built and owned the houses, stores and other buildings on the land. While oil derricks dotted the surrounding hills, the town's train depot, school and primary residential area was located where the regional park is today. A goodly portion of the rest of the community lies under the waters of the Carbon Canyon Reservoir, the result of damming the creek's mouth in 1959. In 1965, 114 acres upstream from the dam was chosen as a county park, which opened in 1975 (Brea 2000-03; Cal 2003; Orange 2002; and US 1939 and 1981).

The town's business and administrative area was north of the intersection of Carbon Canyon (Olinda) Road and Santa Fe Avenue (now a private access road). It is the location of the second historic landmark. Located at the mouth of Tonner Canyon, it commemorates the site of Olinda Well #1, the first successful oil well in what became the historic Olinda oil field. The site includes the wellhead, which is still operating, along with a field house that served as the oil company's field headquarters. In addition is a Jackline Pump building and a small concrete storage building that may have been used as a temporary holding cell for miscreants. The City of Brea recently placed Olinda Well #1 on its local historic register and hopes to form a partnership with California State Parks to develop it into an oil heritage museum/interpretive center (Olinda 2003:3-4).

Reportedly associated with pioneer oil developer Edward L. Doheny in 1897, Olinda Well #1 represents the first successful attempt to extract petroleum from the first of seven giant oil fields in the Greater Los Angeles basin. Techniques developed at the Olinda Field (later reclassified as portion of the Brea-Olinda field, revolutionized oil production in the United States. The use of cable-tool drilling, using a water-filled casing, resulted in deeper well production. Instead of being limited to 850 feet, after 1899 wells could be drilled to 1,465 feet. The resulting wells produced as much as 700 barrels of crude oil a day. The Olinda Oil Field, in addition to subsequent discoveries of vast deposits at Brea; Beverly Hills; West Coyote and East Coyote hills; Montebello; and Richfield/Santa Fe Springs, were responsible for a series of major oil rushes and booms to the area. As a result, by 1912 the Los Angeles basin became the nation's leading oil producer, pumping over 100 million barrels of oil. By the 1920s, oil wells and pumps competed for space with citrus groves throughout the basin (Cal 2003; and Rintoul 1990:22).

According to archival maps, historic aerial photographs, land ownership/transfer records, and an interview with Chino Hills Park Superintendent Ron Krueper, the lemon trees

growing within the project's A.P.E. are less than 40 years ago. Some time during the 1960s, Jack Christensen, a local grower, leased the property from the Shell Oil Company to plant and harvest approximately 40-acres of lemon trees. The park's 1986 General Plan refers to this as the "Lemon Grove Area," containing trees that reflect a historic local land use "that played an important role in the growth of Southern California." However the orchard's age and condition do not qualify it as a historic resource. Likewise, the corrugated metal storage shed, which Christensen reportedly used it to house his tractor, dates back to the 1960s. A 1981 topographic map suggests the location of a windmill near the shed. Although no longer standing, it is possible that the wellhead lies hidden under tall weeds and debris (Cal 1986:10; Krueper 2003; and Cal 1998a and 1998b:8).

### **3.5 ARCHAEOLOGY**

#### **3.5.1 Ethnographic Background**

Chino Hills State Park is located in the inland southern portion of the traditional Gabrielino territory, in close proximity to the Juaneño, Luiseño, Serrano, and Cahuilla groups. Kroeber (1925:620-621) describes Gabrielino territory as extending from the San Gabriel Mountains through Orange County south to Aliso Creek, and including Santa Catalina and San Clemente Islands. Bean and Smith (1978) include San Nicholas Island as well. Like the neighboring Luiseño, Juaneño, Cahuilla, and Serrano, the Gabrielino spoke a Uto-Aztecan Shoshonean language. Bordering the Shoshonean speaking groups to both the north and south were Hokan speaking peoples, the Chumashan above Malibu Creek and Yuman groups in San Diego County. This separation of Hokan speaking groups by Shoshonean speakers has been referred to as the "Shoshonean wedge" and was likely the result of a series of migrations of Shoshonean speakers into Southern California (Koerper 1983; Macko 1987).

For most of the year the Gabrielino occupied village sites in large domed circular structures thatched with tules or ferns. The villages were located near the coast or inland watercourses. The people traveled to various gathering sites within their territory as various resources became seasonally available. Kroeber (1925:649) names twenty varieties of seeds and six varieties of acorns used by the neighboring Luiseño. It is assumed that the Gabrielino exploited similar vegetable resources. Fish and shellfish were a primary source of protein in coastal areas; additionally, a variety of large and small terrestrial vertebrates was hunted with bow and arrow or trapped with nets.

The climate was undemanding, and clothing was simple. Men typically wore loincloths and women the double apron commonly found throughout California. All wore deerskin, fur, or bird skin capes when weather was poor. The Gabrielino manufactured steatite bowls and decorative items, stone mortars and pestles, manos, drills, knives, and projectile points. Bone was utilized to manufacture fishhooks, needles, and awls. Shell was made into fishhooks, beads and spoons. They also manufactured baskets, nets, and coiled paddle and anvil pottery (Barter 1983).

The Gabrielino participated in an extensive exchange network, providing them access to exotic resources such as obsidian, certain foods, and other commodities that were unavailable within their own territory. The most intensively used source of steatite in prehistoric California was within Gabrielino territory on Santa Catalina Island, and manufactured goods as well as raw materials were exchanged with other groups. Additionally, shell beads, dried fish, and sea otter furs were traded with inland peoples for deerskins, acorns, and seeds from the interior (Macko 1987).

Spanish colonization permanently and completely altered the cultures of the people inhabiting Southern California, removing them from their villages and incorporating them into the labor pool necessary to maintain the mission system (Barter 1983).

San Gabriel Mission baptism records suggest that four villages were located in the Santa Ana River basin, immediately adjacent to the Chino Hills. The people of these villages would likely have exploited the resources available in the present-day park (DPR 1999:31). Three pre-contact archaeological sites and numerous isolated occurrences located within the park indicate that the area was used for hunting and gathering. Testing at SBr-3690 revealed an appreciable occupational deposit dating between 1070-2380 years before present, including dart points, milling stones, and charred animal bone (Macko and Weil 1989). Site SBr-5286 was also tested and determined to be a single-use campsite with no subsurface component (Alcorn 1986:14).

### **3.5.2 Site Specific Archaeological Resources**

A records search was conducted at the South Central Coastal Information Center for a one-mile radius of the project area. This search included a review of all recorded archaeological sites, cultural resource reports, and the California Points of Historical Interest, California Historical Landmarks, California Register of Historic Places, the National Register of Historic Places, and California State Historic Resources Inventory listings. District Archaeologist Larynn Carver additionally conducted a visual inspection of the proposed visitor center location in August 2003.

Thirteen studies have been conducted within a one-mile radius of the project area, documenting four archaeological sites and three historic resources. Three of the archaeological sites are located in areas now developed for housing on the north side of Carbon Canyon Road, approximately one-half mile northwest of the visitor center location. One historic resource, the Santa Fe house, is similarly located within the housing development on the north side of Carbon Canyon Road. Two other historic resources are located approximately one half mile from the project location, one adjacent to Carbon Canyon Dam, and the other within Carbon Canyon Park.

Archaeological site CA-Ora-1101, a small scatter of historic trash, is located approximately one quarter mile west of the proposed visitor center. As the site is difficult to access and located on the opposite side of the creek from the project, no impacts are anticipated. Due to the disturbance of the immediate project area by the citrus grove, as well as its location within the floodplain of Carbon Creek, discoveries of additional cultural resources are not anticipated.

## 4 ENVIRONMENTAL EFFECTS & MITIGATION

This section describes the probable impacts of the Preferred Alternative. The environmental impact analysis and the proposed mitigation measures are based on preliminary project design and current information and circumstances. Technical reports and analyses were prepared as part of the environmental studies for the proposed action. These reports analyze existing conditions and identify potential impacts for the Preferred Alternative. This section summarizes the findings of these reports and analyses and incorporates information that may be more current than the information contained in the technical studies. The following studies and analyses were conducted for this EIR: biology report, archaeological resources and historic resources.

### 4.1 POTENTIALLY SIGNIFICANT IMPACTS & PROPOSED MITIGATION

#### 4.1.1 Floodplain & Hydrology

Impact: The project has the potential to obstruct water flow within the 100-year Floodplain and receive flood related damages. Obstruction of the water flow could force floodwater onto additional facilities or properties.

Discussion: The project is located within the 100-year floodplain and is used as a site for water storage during flood events. The project will be designed to allow similar flowage during storm events. The building will be constructed on piers, as necessary, and portions of the parking lot could be lowered to accommodate additional floodwater to achieve a net balance of water storage capability. The buildings will be constructed to FEMA standards to reduce the likelihood of flood damage.

Mitigation: Final site design, specifications, and grading will incorporate and hydrological analysis to eliminate potential off-site flooding and reduce potential damage to structures constructed on-site.

Finding: Potentially significant impacts associated with flood damage will be mitigated below significance.

#### 4.1.2 Natural Resources

Impact: No significant direct impacts to sensitive habitats or native vegetation, and no significant direct impacts to sensitive plants or wildlife species are expected due to implementation of the proposed project. However, because sensitive vegetation (southern willow scrub) and four sensitive riparian bird species are known from the project area, there is some potential for significant indirect impacts.

Discussion: Explanation of Direct and Indirect Impacts, and Analysis of Significance According to California Environmental Quality Act (CEQA), impacts to biological resources (e.g., native habitats, sensitive plants, sensitive wildlife species) must be analyzed to determine whether impacts are significant. CEQA Guidelines section 15064(b) states that

an absolute definition of "significant" effect is not possible because the significance of an activity may vary with the setting. Appendix G of the Guidelines, provides "examples of consequences which may be deemed to be a significant effect on the environment" (Guidelines section 15064(e)). Examples of these effects are substantial effects on rare or endangered species of animal or plant or the habitat of the species. Guidelines section 15065(a) can be used to determine whether or not "a significant effect on the environment" is likely to occur. According to the guidelines section 15065(a), a project may have a significant effect on the natural environment if it has the potential to: substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or reduce the number or restrict the range of a rare or endangered plant or animal. The only sensitive habitat occurring within the project vicinity is southern willow scrub. Southern willow scrub is a wetland habitat type that is regulated by the ACOE and CDFG, and is known to support sensitive wildlife species.

Direct impacts were quantified by comparing the proposed project footprint with the biological resources mapping of the within the project vicinity (Figure 3). This assessment, assumes all biological resources within the limits of grading for the project facilities (*e.g.*, roads, parking lots, and the visitor center) were considered lost. Additional temporary impacts may result from cut and fill activity to accommodate flood water holding capacity. Temporarily impacted areas will be planted with plant species native to the CHSP.

Indirect effects include short-term indirect impacts related to construction or long-term indirect impacts associated with the location of development in proximity to biological resources. During construction of the project, short-term indirect impacts may include dust and noise, which could temporarily disrupt habitat and species health and create soil erosion and runoff. Long-term indirect impacts include increased park use, noise, lighting, increased opportunity of invasion by exotic plant and wildlife species, runoff from built areas, soil erosion, litter, fire, and hydrological changes (*e.g.*, groundwater level and quality). All project grading and construction will be subject to the standard restrictions and requirements that address erosion and runoff, including the federal Clean Water Act, National Pollution Discharge Elimination System (NPDES), and a Stormwater Pollution Prevention Plan.

## **Vegetation Communities**

Discussion: Implementation of the proposed Chino Hills Visitor Center project may result in the direct loss of the following habitat or landcover types (Table 8). Portions of these losses are considered temporary because of some grading activity that may be necessary to balance flood holding capacity within the 100-year floodplain.

Table 8. Impact to Vegetation Communities or Land Cover Types.

Vegetation Association	Permanent Impacts	Temporary Impacts	Total Impacts	Acres Not Impacted	Total Acre(s)
Ruderal vegetation/non-native grassland	1.5	0.9	2.4	4.1	6.5
Southern willow scrub	0.0	0.0	0.0	4.2	4.2
Lemon Grove	3.0	0.0	3.0	0.9	3.9
Ornamental Trees	0.9	0.0	0.9	7.9	8.8
Giant Reed	0.0	0.0	0.0	1.6	1.6
Coastal Sage Scrub	0.0	0.0	0.0	0.6	0.6
Disturbed/Developed land	3.0	0.0	3.0	5.4	8.4
<b>Total Acres</b>	<b>8.4</b>	<b>0.9</b>	<b>9.3</b>	<b>24.7</b>	<b>34.0</b>

Ruderal vegetation/non-native grassland, lemon grove, ornamental trees, and disturbed/developed land are not considered sensitive by state or federal agencies or California State Parks. Impacts to these vegetation types are not considered significant.

Sensitive habitats include southern willow scrub, giant reed (a non-native wetland type), and coastal sage scrub. Because the project was designed to avoid all sensitive habitats, no direct impacts to sensitive habitats are anticipated. All project components including the wetland buffer plantings shall be designed to avoid significant impacts to sensitive habitats.

Indirect impacts to southern willow scrub, giant reed, and coastal sage scrub may result from short-term edge effects caused by dust, noise, lighting, construction related soil erosion and runoff, or introduction of exotic species. Because of the past history of disturbance, lack of well-developed native vegetation, short-term indirect effects are not likely to be significant. Implementation of “best management practices” (BMP) including dust and erosion controls and a native species landscape design shall be implemented to minimize these effects.

Long-term indirect effects associated with implementation of the proposed project will be minimized by designing trails and access points to avoid sensitive habitats or placing appropriate barriers or interpretive signage near the edge of native habitat; minimizing lighting at night, avoiding the use of irrigation adjacent to native habitats and using appropriate native species in landscaping and planters; limiting the use of pesticides or herbicides near native habitats to those approved by the regulatory agencies; focusing runoff from buildings, roads and parking lots to appropriate storm water collection facilities. The majority of the parking areas shall be constructed with permeable surfaces (e.g., porous concrete or stabilized decomposed granite). A small portion of the development (the access road and accessible spaces) may require construction of non-permeable surfaces.

Mitigation: Site irrigation shall be limited to the parking lot area and lemon tree plantings. No permanent irrigation shall occur within 100 feet of the riparian drainage.

Except for planting of lemon trees in the parking lot area, all site landscaping shall consist of species native to CHSP and of local genetic stock. All plant material must be approved by the Inland Empire District Ecologist.

To decrease the potential for indirect effects to riparian habitat and sensitive riparian birds a 50-foot riparian buffer area will be planted with transitional riparian/upland vegetation (Figure 4). [Note: A portion of this revegetation is dependant on acquisition of an in-holding parcel.] Dominant species should include mulefat (*Baccharis salicifolia*), California mugwort (*Artemisia douglasiana*), California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), California encelia (*Encelia californica*), black sage (*Salvia mellifera*), Mexican elderberry (*Sambucus mexicana*), California black walnut (*Juglans californica* var. *californica*), and toyon (*Heteromeles arbutifolia*). Additional species to be included in the planting palette must be approved by the Inland Empire District Resource Ecologist. This revegetation effort shall avoid discharge of sediment or disturbance to the adjacent wetland vegetation or floodplain channel or bank. If any unforeseen wetland disturbance is required 404 and 1600 permits shall be obtained from the ACOE and DFG respectively. Implementation of the revegetation effort shall avoid construction during the breeding season (March 15 to September 15) and shall employ the appropriate BMP's.

### **Sensitive Plants**

Discussion: Approximately five (5) California black walnut trees will be affected by the proposed project.

Mitigation: All efforts will be expended to avoid impacts to California black walnut mainly through avoiding impacts near the entrance road slope. To compensate for losses to native tree species California black walnut or Mexican elderberry should any occur, all native tree species lost during construction of the proposed project shall be replaced onsite within project landscaping and/or the riparian buffer area at a mitigation ratio of 5:1.

### **Sensitive Wildlife**

Discussion: The least Bell's vireo, willow flycatcher, yellow-breasted chat, and yellow warbler have been documented in close proximity the proposed project. All four species are known to breed within riparian habitats or native shrublands in close proximity to riparian habitats. The project has been designed to avoid any potential displacement or take of the species discussed below.

**Least Bell's vireo**— Discussion: A least Bell's vireo breeding territory was identified in close proximity to the project site (refer to Figure 3.). This territory includes riparian vegetation and a small area supporting ornamental trees on the adjacent County parkland. Included within the territory is a frequently used walking trail. This area is separated from State Park land by a wooden split rail fence. The north-eastern edge of the least Bell's vireo territory (nearest the proposed development) is entirely composed of tall ornamental trees. The nest was not located on this edge because this portion of the territory does not support

the habitat structure conducive to least Bell's vireo nesting (*i.e.*, 1-2 meter native riparian shrubs or small trees adjacent taller-stature riparian trees).

Mitigation: The proposed project has been designed to avoid this territory by placing all buildings and new infrastructure at least 50-feet from the outer edge of the mapped territory (including the ornamental trees) and by locating the building entrances away from the territory's eastern edge. All window glass shall incorporate etching, non-reflective film, or other suitable material to reduce or eliminate injury or mortality to native bird species. Windows should be minimized on the western side of the building. Lighting onsite shall be limited to subdued downward focused path lighting. If additional lighting is necessary for special nighttime events, any lighting shall be the minimum wattage for the special event purpose and shall face toward Carbon Canyon Road. Any lighting shall be shielded to minimize lighting toward sensitive habitat. Nighttime special events shall be prohibited during least Bell's vireo breeding season (March 15 to September 15). Daytime activities involving loud noise (*i.e.*, public address equipment, large groups of children, etc.) shall be prohibited during the least Bell's vireo breeding season (March 15 to September 15). Interpretive signage shall be placed at trailheads, on the boardwalk, and on the viewing platform so that park users are encouraged to minimize noise while in close proximity to native habitat areas. A portion of the interpretive program at the visitor's center shall focus on the sensitivity and nature of the urban/wildland interface including discussion of least Bell's vireo and other sensitive species known to occur at CHSP.

All construction within 200 feet of the riparian vegetation or the least Bell's vireo territory shall not occur within the breeding season of least Bell's vireo or willow flycatcher (March 15 and September 15). If it is necessary to work during the breeding season all activity shall be approved in writing by the USFWS. To minimize incidental impacts to sensitive habitats, construction fencing shall be placed along the construction limits of work. Additionally, a biological monitor shall be present during grading or ground clearing directly adjacent to sensitive habitats (*e.g.*, southern willow scrub). All construction will be limited to daylight hours and heavy construction equipment will not begin work prior to 7:30 am.

#### **Willow flycatcher—**

Discussion: Three willow flycatchers were observed in riparian vegetation near the proposed project on a single date. A USFWS protocol survey was conducted to determine if the species was breeding or displaying breeding behavior on the site. Based on the survey breeding behavior was not exhibited. Furthermore, the species was not observed on subsequent protocol site visits. Based on these observations, willow flycatchers observed onsite were likely of a migratorial subspecies (*Empidonax traillii*).

Mitigation: A riparian buffer area will be revegetated with native species to enhance the existing riparian habitat for willow flycatcher migration. All structures, parking areas, interpretive areas, and other built structures shall be at least 50-feet away from the edge of the riparian vegetation. A single exception may include a boardwalk and viewing platform that extends through the riparian buffer area approximately 20 feet from the edge of the southern willow scrub vegetation (refer to Figure 3). These structures shall be designed to

minimize noise, lighting, and reflective surfaces. All window glass shall incorporate etching, non-reflective film, or other suitable material to reduce or eliminate injury or mortality to native bird species. Windows should be minimized on the western side of the building. Lighting onsite shall be limited to subdued downward focused path lighting. If additional lighting is necessary for special nighttime events, any lighting shall be the minimum wattage for the special event purpose and shall face toward Carbon Canyon Road. Any lighting shall be shielded to minimize lighting toward sensitive habitat. Interpretive signage shall be placed at trailheads, on the boardwalk, and on the viewing platform so that park users are encouraged to minimize noise while in close proximity to native habitat areas. All construction within 200 feet of the riparian vegetation or the least Bell's vireo territory shall not occur within the breeding season of least Bell's vireo or willow flycatcher (March 15 and September 15). If it is necessary to work during the breeding season all activity shall be approved in writing by the USFWS. To minimize incidental impacts to sensitive habitats, construction fencing shall be placed along the construction limits of work. Additionally, a biological monitor shall be present during grading or ground clearing directly adjacent to sensitive habitats (*e.g.*, southern willow scrub). All construction will be limited to daylight hours and heavy construction equipment will not begin work prior to 7:30 am.

**Yellow-Breasted Chat**—Yellow-breasted chat was observed in riparian vegetation near the site throughout much of the least Bell's vireo breeding season. The yellow-breasted chats were located within riparian vegetation. Because the project will not result in loss of riparian habitat and additional habitat will be revegetated, significant impacts to yellow-breasted chat are not expected to occur.

**Yellow Warbler**—Discussion: The Yellow-breasted chat was observed in riparian vegetation near the site throughout much of the least Bell's vireo breeding season and were located within riparian vegetation.

Mitigation: A riparian buffer area will be revegetated with native species to enhance the existing riparian habitat. All structures, parking areas, interpretive areas, and other built structures shall be at least 50-feet away from the edge of the riparian vegetation. These structures shall be designed to minimize noise, lighting, and reflective surfaces. All window glass shall incorporate etching, non-reflective film, or other suitable material to reduce or eliminate injury or mortality to native bird species. Windows should be minimized on the western side of the building. Lighting onsite shall be limited to subdued downward focused path lighting. If additional lighting is necessary for special nighttime events, any lighting shall be the minimum wattage for the special event purpose and shall face toward Carbon Canyon Road. Any lighting shall be shielded to minimize lighting toward sensitive habitat. Nighttime special events shall be prohibited during least Bell's vireo breeding season (March 15 to September 15). Daytime activities involving loud noise (*i.e.*, public address equipment, large groups of children, etc.) shall be prohibited during the least Bell's vireo breeding season (March 15 to September 15). Interpretive signage shall be placed at trailheads, on the boardwalk, and on the viewing platform so that park users are encouraged to minimize noise while in close proximity to native habitat areas. A portion of the interpretive program at the visitor's center shall focus on the sensitivity and nature of the

urban/wildland interface. All construction within 200 feet of the riparian vegetation or the least Bell's vireo territory shall not occur within the breeding season of least Bell's vireo or willow flycatcher (March 15 and September 15). If it is necessary to work during the breeding season all activity shall be approved in writing by the USFWS. To minimize incidental impacts to sensitive habitats, construction fencing shall be placed along the construction limits of work. Additionally, a biological monitor shall be present during grading or ground clearing directly adjacent to sensitive habitats (e.g., southern willow scrub). All construction will be limited to daylight hours and heavy construction equipment will not begin work prior to 7:30 am.

### **Habitat Linkages/Movement Corridors**

Discussion: This site is not in a designated core linkage area and is already constrained Carbon Canyon Road, however animals move through the area nonetheless Carbon creek and carbon canyon road are valuable movement corridors due to their proximity to the riparian habitat. Because it is placed

Mitigation: To facilitate the potential for movement between the riparian habitat and the upland habitats across Carbon Canyon Road, a 50-foot riparian buffer area will be planted with transitional riparian/upland vegetation. All site landscaping shall consist of species native to CHSP and of local genetic stock. Dominant species should include mulefat (*Baccharis salicifolia*), California mugwort (*Artemisia douglasiana*), California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), California encelia (*Encelia californica*), black sage (*Salvia mellifera*), Mexican elderberry (*Sambucus mexicana*), California black walnut (*Juglans californica* var. *californica*), and toyon (*Heteromeles arbutifolia*).

Mitigation. The following conservation and mitigation measures are proposed to reduce the potential for significant indirect effects to sensitive vegetation and sensitive wildlife:

The Parking lot shall be constructed with primarily permeable surfaces (e.g., porous concrete or stabilized soil or decomposed granite). A smaller area including the access road, and some accessible spaces and trails may require construction of non-permeable surfaces. All storm water runoff from onsite built structures shall be focused away from the riparian habitat and directed to appropriate storm-water collection or treatment systems. If grading Project site to drain toward Carbon Canyon Road requires excessive earth movement runoff will be directed to a bio-swale at least 50 feet away from the riparian drainage.

Site irrigation shall be limited to the parking lot area and lemon tree plantings. No permanent irrigation shall occur within 100 feet of the riparian drainage.

Open trenches or pits will be filled or sealed at the end of each workday in order to avoid trapping wildlife. If any trenching or depressions are required to be left open overnight, a means of escape (e.g., a diagonally placed 2' by 4' or similar structure) must be provided to prevent mortality to small mammals or reptiles.

Implement Best Management Practice (BMP) including dust and erosion controls. BMP's are implemented to protect water quality and reduce the potential for pollution associated with storm water runoff. During construction provide fencing along the construction limits

of work that would reduce potential for losses of reptiles and small mammals. At night or non-working days cover or provide escape routes for any footings or other holes that may trap small mammals or reptiles. To avoid inadvertent damage to native tree species California black walnut or Mexican elderberry trees, all activity involving heavy equipment shall avoid the drip line of these species. Otherwise, mitigation in the form of 5:1 tree replacement is recommended for all trees that incur disturbance inside their canopy drip line.

Finding: No significant direct impacts to biological resources. Incorporation of mitigation measures will reduce the potential for indirect impacts to a less than significant level.

#### **4.1.3 Aesthetics**

Impact: The project will introduce an urban/park element into the rural landscape that may have significant temporary impacts until native landscaping matures.

Discussion: Introduction of a visitor center complex, highway widening, and parking facility will create a change in the rural landscape that is fast disappearing in this portion of Orange County. As indicated in the Decision Research Study, open space is very important to a large number of nearby residents. However, as a park facility, the visual impact should blend in with the adjacent facilities at Carbon County Regional Park. As introduced native landscaping matures, the aesthetic nature of the visitor center complex will improve. Funding constraints may, however, cause a delay in the implementation of landscape elements of the project. Additionally, the abandoned lemon grove currently consists of dying trees that are fast becoming a visual blight as well as a fire hazard.

Mitigation: Appropriate native plantings will be incorporated into the site planning but may be delayed due to funding constraints.

Finding: Aesthetic impacts due to the construction of the proposed project may remain significant for an extended period of time; therefore, the project's aesthetic impacts will remain significant, even with mitigation.

#### **4.1.4 Traffic**

Impact: The visitor center will attract additional traffic and a mix of traffic that includes large vehicles such as school busses and horse trailers. This traffic, combined with the existing traffic from the Diemer Filtration Plant may adversely affect the operation of Carbon Canyon Road (State Highway 142)

Discussion: The proposed project will accommodate about 225 vehicles on peak user days. This assumes a turnover of 2.5 vehicles during the course of the day. Additional traffic may attempt to access the site and be turned away because the parking lot is full. This represents about 1.4% of existing ADT and about 1.0% of projected traffic on Carbon Canyon Road. The proposed project includes highway improvements at Entrance Location A to accommodate this traffic increase and must be approved by Caltrans through their encroachment permit process. Peak highway use caused by commuters and peak park use

on weekends and holidays do not occur at the same time so potential traffic conflicts would be lessened because of the type of facility proposed. Most traffic accessing the visitor center site will come on weekends although users will be welcome during any daylight hours. It is not anticipated that the level of service would drop on Carbon Canyon Road as a result of the project.

Mitigation: The proposed project includes the construction, at Entrance Location A, of turning lanes and acceleration and deceleration lanes. Improvements to the highway will be done at Entrance Location B if required by Caltrans standards and signal warrants.

Finding: Although the traffic accessing the visitor center will create new impacts on a busy highway, highway improvements are planned that will mitigate any potential impacts below a level of significance.

#### **4.1.5 Noise**

Impact: Construction impacts in particular and operational impacts will introduce a new source of noise at the project site.

Discussion: Pile driving very loud for piers – temporary in nature. Except for birds and park users (especially in the Regional Park) no sensitive receptors. However, due to the projects close proximity to the highway, ambient noise is high. (Please see noise tables A and B.)

Mitigation: bio monitor/no pile driving during nesting season

Finding: mitigated below

#### **4.1.6 Public Utilities**

Impact: potential construction impacts to utilities and daily operations of Diemer filtration plant

Discussion: The Metropolitan Water District of Southern California (MWD) owns and operates the Diemer Filtration Plant to the south of the project site and the Yorba Linda Feeder to the east of the project site. MWD hauls sludge out of the Diemer Plant settling ponds approximately 60 days of the year with about 25 truck trips on each of those scheduled days, which do not occur on weekends or holidays. Power lines owned by Southern California Edison are located adjacent to Carbon Canyon Road and water and sewer lines owned by the City of Brea are located underground in the same vicinity.

Mitigation: State Parks will coordinate with Metropolitan Water District of Southern California (MWD) to avoid traffic delays. Southern California Edison and the City of Brea will also be contacted to ensure utility and sewer services are not disrupted.

Finding: Although the construction traffic accessing the visitor center will create increased traffic, this impact will be temporary and highway improvements are planned that will mitigate any potential impacts below a level of significance.

## **4.2 IMPACTS THAT ARE LESS THAN SIGNIFICANT & AVOIDANCE OF SIGNIFICANCE**

### **4.2.1 Historic Resources**

Discussion & Impact: There is no written or physical evidence to suggest the existence of historical resources within the proposed project's A.P.E. However, the information contained in Section 3.4 could be used to educate park visitors to the area's history and the impact that the ranching, oil, and citrus industries had to the area's economy and ecology.

### **4.2.2 Archaeological Resources**

Discussion & Impact: No known sites are recorded within the APE and an examination of the proposed visitor center location did not identify any resources. Due to the disturbance of the area by the citrus grove, as well as its location within the floodplain of Carbon Creek, discoveries of cultural resources are not anticipated. Therefore, the proposed project is not anticipated to have any impact upon archaeological resources.

Mitigation: No mitigation is anticipated, however, in the unlikely event that cultural materials are discovered during excavation, work will be redirected until a state park archaeologist can recommend a course of action that would avoid or eliminate potential significant effects to cultural resources.

### **4.2.3 Air Quality**

Impact: Potential impact will be attributable to new trips and grading

Discussion & Impact: The proposed project is an air quality non-attainment area. However, the proposed project is consistent with air quality management policies in the current Air Quality Management Plan and its emissions would be below the emissions thresholds established in the South Coast Air Quality Management District, *CEQA Air Quality Handbook*, April, 1993. Operational emissions associated with the proposed project would be less than significant. Therefore, no significant effects to air quality are anticipated to occur from implementation of the proposed project.

Potential air quality impacts during construction include fugitive dust from demolition and grading and emissions from utility engines, generators, and construction vehicles and heavy equipment. There are no sensitive receptors in the immediate vicinity which might be exposed to blowing dust or odors associated with asphalt paving. Standard specifications for construction equipment and processes, including frequent watering, will reduce fugitive dust and other emissions below a level of significance.

Mitigation: The area disturbed by earthmoving equipment or excavation operations shall be minimized at all times. Demolition and earth moving activities shall be limited or redirected during periods of high winds. On-site vehicle speed shall be reduced to 15 mph. Storage piles of material and graded areas shall be either watered twice daily or covered to prevent fugitive dust emissions. Coastal Sage Scrub located within the likely dust drift radius of construction areas shall be periodically sprayed with water to reduce accumulated dust on the leaves as recommended by monitoring. All mechanical equipment shall be operated in compliance with appropriate air quality controls.

#### **4.2.4 Mineral Resources**

Impact: Potential future impacts to oil drilling and production sites for subsurface mineral resources.

Discussion: AERA Energy has indicated that the privately held inholding at the visitor center site could be used for resource extraction in the future and is concerned about potential conflicts with the visitor center. The construction and operation of the visitor center would not preclude AERA Energy from proceeding with resource extraction. No visitor center ancillary improvements would be constructed on the site unless it was acquired by the Department. Since resource extraction is not an existing use, future proposals by AERA Energy for such use would undergo appropriate environmental and permitting review at the time such a proposal is implemented.

### **4.3 EFFECTS WITH LITTLE OR NO IMPACTS**

Additionally, the project will not adversely affect cultural resources, agriculture, energy and mineral resources, utilities, local plans, or employment.

### **4.4 BENEFICIAL EFFECTS**

This project is intended to help satisfy the demand for interpretive facilities and recreational access in the Southern California area. Namely, the construction of the visitor center and parking will provide safer access to park visitors. No longer will visitors be forced to park along the highway. The visitor center will provide educational and interpretive opportunities to visitors so that they can better understand the significance and value of the state's natural and cultural resources. Another beneficial effect resulting from this project is that a potential fire hazard will be reduced by the removal of multiple dying and dead lemon trees.

### **4.5 ENVIRONMENTAL ALTERNATIVES ANALYSIS**

#### **4.5.1 No Project Alternative**

The No Project Alternative would continue the status quo. However, the stated needs of providing a facility that allows effective interpretation for the protection of significant resources within the park, and providing a safe western access to the park and trails within the park would not be met.

#### **4.5.2 Environmentally Superior Alternatives**

The Environmentally Superior Alternative other than the “No Alternative” is the Preferred Alternative. The Visitor Center Concept Alternative was determined to be an inferior alternative when park resource ecologists, determined that the visitor center building should be moved to reduce potential impacts to natural resources. Therefore, the proposed project would be the environmentally superior alternative.

## **5 CEQA REQUIRED CONSIDERATIONS**

### **5.1 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH CANNOT BE AVOIDED**

Construction and operation of Chino Hills Visitor Center would result in the use of nonrenewable resources during construction, including fossil fuels, natural gas, and water and building materials such as concrete and steel. However, this project in the long term would not result in an irreversible or irretrievable commitment of resources.

### **5.2 RELATIONSHIP OF LOCAL SHORT-TERM USES AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY**

The long-term use of the project site for public park use will provide a unique opportunity to the local community, region, and vacation travelers to enjoy a pristine location while improving aesthetics and water quality and protecting resources. Versus short-term construction impacts.

### **5.3 GROWTH INDUCING IMPACTS**

There will be no growth inducing impacts because the project does not create new housing or provide infrastructure to support new residential, commercial or industrial development. The proposed project will provide a quality of life improvement to the existing and growing communities around it, however, as a park improvement, the project does not contribute to such growth.

### **5.4 CUMULATIVE IMPACTS**

The project, when considered with other projects in the area, will not have significant adverse cumulative environmental effects but will have significant beneficial effects including increased public recreational and educational access.



## 6 REFERENCES

### 6.1 LIST OF PREPARERS AND REVIEWERS

Alexander D. Bevil, Historian II, BA History, SDSU, 16 years experience as a professional historian; 5 years with California State Parks, Southern Service Center

Michael A. Bonk, Research Analyst II (GIS), B.S. Geography, 4 years GIS experience

Larrynn Carver, Associate State Archaeologist, 13 years archaeological research and cultural resource management experience with state, federal, and tribal government. Inland Empire District.

Suzanne M. Lahitte, P.E., Project Manager, B.S. Civil Engineering, 15 years civil engineering experience, including 10 years with Caltrans. Southern Service Center.

Michael T. Penner, P.E., Associate Civil Engineer, B.S. Civil Engineering, 20 years civil engineering experience, including 8 years with Caltrans and 7 years in the private sector. Southern Service Center.

Darren Scott Smith, Associate Resource Ecologist, B.A. Geography, M.A. Biogeography, 11 years professional experience in biological resource management including City of San Diego (1 year), San Diego State Foundation (2 years as a research associate), California State Parks (3-years) and 5 years in a private consulting firm.

### 6.2 LITERATURE REFERENCED

Alcorn, D.C.

1986 Report of Archaeological Test Level Investigation at CA-SBr-5286, Chino Hills State Park, Lower Aliso Canyon, San Bernardino County, California. Ms on file, California Department of Parks and Recreation Inland Empire District, Perris, California.

Bevil, Alexander D.

2001 Rolling M Ranch. Historic Overview and Resource Inventory. San Diego: California Department of Parks and Recreation Southern Service Center, January 21.

Brea

2000-3About Brea. [Http://www.myoc.com/community/brea/](http://www.myoc.com/community/brea/)

Brea Chamber of Commerce

<http://breachamber.com/brea/living.asp>

California Air Resources Board

- 2002 ARB Almanac 2002 – chapter 4: Air Basin Trends and Forecasts – Criteria Pollutants

California Department of Parks and Recreation

- 2003 Orange County Landmarks Listing.

1998a Chino Hills State Park. Land Ownership Record. 8 Sheets. April.

1998b Chino Hills State Park: Preliminary General Plan, October.

1986 Chino Hills State Park: General Plan, May.

1999 Chino Hills State Park General Plan, February.

2002 California Outdoor Recreation Plan

California Department of Transportation

- 2004 Personal Contact, Firooz Hamedani, Transportation Planning for traffic data.

Cramer, Esther Ridgeway

- 1982 Brea: The City of Oil, Oranges and Opportunity. Brea: The City of Brea.

Decision Research/Waters & Faubel

- 2003 Aera Energy land Use Alternative Survey Report

Gudde, Erwin G.

- 1969 California Place Names: The Origin and Etymology of Current Geographical Names. Berkeley: University of California Press.

Hampson, Teresa

- 1993 Brea, Celebrating 75 Years: an Illustrated History. Placentia, California: Premiere Editions.

Krueper, Ron

- 2003 Chino Hills Park Superintendent. Interviews with Alexander D. Bevil.

Macko, M., and E. Weil

- 1989 ORA-614, SBR-3690, and SBR-4032: a Reassessment of the Encinitas Tradition I the Chino Hills. Pacific Coast Archaeological Society Quarterly 25(2): 1-19.

Olinda Historic Museum and Park Task Force

- 2003 Meeting Notes, October 20.

Orange County Regional Parks

- 2003 Carbon Canyon Regional Park. History. [Http://www.ocparks.com/carboncanyon/](http://www.ocparks.com/carboncanyon/)

Rintoul, William.

- 1990 Drilling Through Time: 75 Years with California's Division of Oil and Gas. Susan F. Hodgson, ed. Sacramento: California Department of Conservation. Division of Oil and Gas.

Sampson, M.

- 1986 Memo to Jan Anderson, District Superintendent, regarding archaeological monitoring of leach line trenching. On file, Department of Parks and Recreation Inland Empire District, Perris, California.

Saul, Brian

- 2003 E-mail Communications with Alexander D. Bevil, November 21 and 24.

United State Census Bureau

- 2000 Census 2000 Summary File 1

United States Department of the Interior

- 1981 Geological Survey Map. Corona, California Quadrangle.
- 1939 Geological Survey Map. Yorba Linda, California Quadrangle.

Hickman, J. C. 1993. The Jepson manual: Higher plants of California. University of California Press, Berkeley. 1400 pp.

Holland, R. F. 1986. Preliminary descriptions of the terrestrial natural communities of California. Nongame-Heritage Program, California Department of Fish and Game. 156 pp.

Kelly, P. 1991. Professor of Biology University of California at Riverside, mammal Survey Report for the Vista Pacifica Site in Culver City, June 24, 1991.

Munz, P. 1974. A flora of Southern California. University of California Press, Berkeley, California. 1086 pp.

Rarefind2. 1993. California Natural Diversity Data Base, Version August 2003. California Department of Fish and Game, Natural Heritage Division.

Skinner, M. W. and B. M. Pavlik. 1994. California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California. Special Publication No. 1 (5th Edition), California Native Plant Society, Sacramento, California. 338 pp.

United States Fish and Wildlife Service (USFWS). 2002. Federal Register, Part 8, Endangered and Threatened Wildlife and Plants; Review of Plant Taxa for Listing as Endangered or Threatened Species. 50 CFR Part 17. Vol. 58. No. 188. Department of the Interior.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White (eds.). 1990. California's Wildlife. Volumes I-III. State of California. The Resources Agency. Sacramento, CA

**APPENDIX A NOTICE OF PREPARATION, INITIAL STUDY, & RESPONSES**

## **APPENDIX B BIOLOGICAL ASSESSMENT & TABLES**