Biological Resource Study

24200 Pacific Coast Highway

a.k.a. Crummer Site

City of Malibu, California

Prepared for:

AZ Winter Mesa, LLC
c/o Big Rock Partners, LLC
315 South Beverly Drive, Suite 315
Beverly Hills, California 90212

Prepared by:

Impact Sciences, Inc.
803 Camarillo Springs Road, Suite A
Camarillo, California 93012
(805) 437-1900

January 2009

TABLE OF CONTENTS

Section			Page
SUMMARY			3
1.0	INTRODUCTION		4
2.0	PROJECT DESCRIPTION		4
3.0	METHODOLOGY		5
	3.1	Literature Review	5
	3.2	Biological Resource Assessment	5
	3.3	Special-Status Plant and Wildlife Surveys	6
	3.4	Formal Raptor Surveys	7
	3.5	Protected Tree Survey	7
4.0	ENVIRONMENTAL SETTING		8
	4.1	General Project Site Description	8
	4.2	On-Site Habitats and Plant Communities	11
	4.3	Common Wildlife	22
	4.4	Special-Status Biological Resources	26
	4.5	Protected Tree Resources	31
	4.6	Jurisdictional Resources	32
	4.7	Wildlife Movement Corridors	32
	4.8	Coastal Biological Resources	33
5.0	RELATED PLANS AND POLICIES		33
	5.1	Federal Regulations and Plans	33
	5.2	State Regulations	33
	5.3	City of Malibu Local Coastal Program	34
	5.4	CEQA Thresholds of Significance Criteria	34
6.0	PROJECT IMPACTS		35
	6.1	Impacts to Biological Resources	39
7.0	CUMULATIVE IMPACTS		49
8.0	PROJECT ALTERNATIVES		49
9.0	MITIGATION MEASURES		50
	9.1	Direct Loss of Special Status Plant Species	50
	9.2	Increase in Non-Native Plants	50
	9.3	Construction Areas	52
	9.4	Protected Trees	52
	9.5	Native Nesting Birds (Common and Special-Status)	52
10.0	REFERENCES		54

Appendices

A Biological Resources Evaluation and Special-Status Plant Survey Results

B Protected Tree Report

LIST OF FIGURES

Figure		Page
1	Site Vicinity and Project Location	9
2	Habitats and Proposed Disturbance Areas on the Project Site	10
3	Site Photo 1	12
4	Site Photo 2	13
5	Site Photo 3	14
6	Site Photo 4	15
7	Site Photo 5	16
8	Site Photo 6	17
9	California Black Walnut Locations on the Project Site	18

LIST OF TABLES

Table		Page
1	Plant Species Observed on the Project Site	20
2	Bird Species Observed on the Project Site	24
3	Special-Status Plant Species with Potential to Occur on the Project Site	27
4	Special-Status Wildlife Species with Potential to Occur on the Project Site	30
5	Acreages of Plant Communities located on the Project Site	36
6	Acreages of Plant Communities Located on Lot 1	36
7	Acreages of Plant Communities Located on Lot 2	37
8	Acreages of Plant Communities Located on Lot 3	37
9	Acreages of Plant Communities Located on Lot 4	37
10	Acreages of Plant Communities Located on Lot 5	38
11	Acreages of Plant Communities Located on Lot 6 (Private Street and Private Open Space)	38
12	Acreages of Plant Communities Located on Lot 7 (Public Open Space)	38
13	Plant Species to be Avoided During Landscaping on the Project Site	51

SUMMARY

This Biological Resources Study for the 23.87-acre Project Site located at 24200 Pacific Coast Highway to be subdivided to 24108, 24120, 24134, 24150 and 24174 Pacific Coast Highway, Malibu, California (the Project Site) is prepared in compliance with the August 21, 2006 "Biological Studies Required for Review of Development Projects" of the City of Malibu and Section 4.4.2 Biological Study of the City of Malibu Local Coastal Program, Local Implementation Plan. This report summarizes the findings of the biological surveys conducted on the Project Site in May, 2006, and April, May and June, 2007. There are two native plant communities, mixed sage scrub, and coastal sage chaparral scrub, found on the Project Site in addition to, Eucalyptus trees, and non-native grassland that has been annually disked for fuel modification purposes. No federally or state-listed, or other special-status plant species were observed on the Project Site. No special-status wildlife species were observed on the Project Site during focused surveys. A total of six California black walnut trees subject to the City of Malibu's native tree protection ordinance occur within the Project Site boundary. Numerous Catalina mariposa lilies (Calochortus catalinae) occur within the mixed sage scrub habitat located on the upper slopes of the northeastern and eastern boundaries of the Project Site, being promoted by the 2007 wildfire, which scorched this portion of the Project Site. This species is considered a California Native Plant Society (CNPS) list 4 plant species which are "plants of limited distribution; a watch list," according to CNPS.

The Project Site does not (i) support any habitat area that is rare or especially valuable from a local, regional, or statewide basis; (ii) contain habitat area that contributes to the viability of plant or animal species that are designated or are candidates for listing as rare, threatened, or endangered under state or federal law; (iii) contain any habitat area that contributes to the viability of species that are designated "fully protected" or "species of special concern" under state law or regulations; (iv) contain any habitat area that contributes to the viability of species for which there is other compelling evidence of rarity, for example plant species eligible for state listing as demonstrated by their designation as "1b" (Rare or endangered in California and elsewhere) or designation as "2" (rare, threatened or endangered in California but more common elsewhere) by the California Native Plant Society; (v) contain any designated Area of Special Biological Significance, or Marine Protected Area; or (vi) contain any streams.

In addition, the Project Site contains no resources which could be easily disturbed or degraded by human activities or the proposed development of the Project Site. Therefore, there are no environmentally sensitive habitat areas on the Project Site. Impacts to biological resources from the implementation of the proposed Project are considered to be less than significant with the incorporation of the recommended mitigation measures.

1.0 INTRODUCTION

This Biological Resources Study analyzes potential impacts to plant and wildlife species, including special-status species and their associated habitats. In addition, potential impacts to raptors, coastal biological resources, and protected trees are also assessed. This report describes the methods and findings of focused surveys that were conducted on 24108, 24120, 24134, 24150 and 24174 Pacific Coast Highway (collectively referenced as 24200 Malibu Road), Malibu, California for special-status plants and wildlife, raptors, and trees between March 2006 and June 2007. This report is intended to disclose information related to the biological resources on the Project Site per the requirements of the City of Malibu (the City), the California Environmental Quality Act (CEQA), and the California Coastal Act.

In October 2007, a wildfire severely burned the northern, eastern, southern, and southwestern perimeters of the Project Site. A discussion of the current conditions of the Project Site and the condition of the Project Site prior to the wildfire is provided, in **Section 4.0, Environmental Setting**. Impact Sciences conducted all focused plant and wildlife surveys to determine presence/absence of special-status species, as described in **Section 4.4 Special-Status Biological Resources**, on the Project Site prior to the 2007 wildfire. The species sought during the focused surveys were identified in a Biological Resource Evaluation prepared by Impact Sciences, Inc., dated July 2006 (**Appendix A**).

No federally listed, state-listed, Species of Concern, or California Native Plant Society (CNPS) lists 1 through 3 plant species are currently present on the Project Site. However, following the 2007 wildfire, several Catalina mariposa lilies (*Calachortus catalinae*) emerged along the eastern boundary of the Project Site. A total of six mature Southern California black walnut trees (*Juglans californica var. californica*) are located on the Project Site. A separate tree report has been prepared that discusses impacts to City-protected trees (**Appendix B**). Although these walnut trees were damaged during the 2007 wildfire, none were killed by the wildfire. Mature eucalyptus trees occurring on Project Site have the potential to host nesting raptor species; therefore, formal raptor surveys were conducted in accordance with the City of Malibu's Local Implementation Plan (LIP). No nesting raptor species were observed on the Project Site during the 2007 surveys.

2.0 PROJECT DESCRIPTION

The proposed Project (the Project Site) is the subdivision of the 23.87-acre property into five residential parcels ranging in size from 2.60 acres to 5.96 acres, a new private street with private open space parcel of 2.88 acres to be maintained and operated by the homeowners association, and a proposed public open space of approximately 1.7 acres to be dedicated to the City of Malibu for recreational purposes and parking. The grading footprint for the proposed Project encompasses 12.83 acres.

A gate house is proposed to access the new 34-foot-wide, tree-lined private street ending in a cul-de-sac that will serve as a fire department turnaround. Each of the five residential lots would contain a single-family residence. A private, cul-de-sac driveway serving the five residences would extend east through the Project Site from Winter Mesa Drive. The proposed Project includes landscape buffers and sidewalks on each side of the new road. These areas will be landscaped with appropriate street trees, lawn, and ornamental plantings conforming to the approved City of Malibu Plant list.

3.0 METHODOLOGY

3.1 Literature Review

Prior to visiting the Project Site, a query of the California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDB) and CNPS *Inventory of Rare and Endangered Vascular Plants of California* was conducted to identify special-status plant or wildlife species previously recorded in the vicinity of the Project Site (see **Appendix A, Biological Resources Evaluation and Special-Status Plant Survey Results**). The CNDDB lists historical and recently recorded occurrences of both special-status plant and wildlife species, and the CNPS database lists historical and recent occurrences of special-status plant species. The areas searched include the US Geological Survey (USGS) 7.5-minute quadrangle for Malibu Beach (Project location), as well as the surrounding five USGS quadrangles.

The potential for special-status species to occur on the Project Site is based on the proximity of the Project Site to previously recorded occurrences in the CNDDB and CNPS databases, on-site vegetation and habitat quality, topography, elevation, soils, surrounding land uses, habitat preferences, and geographic ranges of special-status plant and wildlife species known to occur in the region. Additional information comes from the biological resource evaluation and focused plant survey conducted by Impact Sciences in 2006 and 2007, and the 1999 biological due diligence survey (BonTerra 1999). The BonTerra survey found two dominant native plant communities on the Project Site: mixed sage scrub and buckwheat scrub. In addition, two very small patches of native needlegrass grassland were also reported. The BonTerra report concluded that *Calochortus plummerae* (Plummer's mariposa lily) and *Chorizanthe parryi* var. *parryi* (Parry's spineflower) have the potential to occur on the Project Site. The report also concluded that there is a low expectation for special-status wildlife species to occur on the Project Site and that no significant impacts would occur to these species.

3.2 Biological Resource Assessment

In May 2006, Impact Sciences biologists conducted a general biological resource assessment and focused plant survey on the Project Site. The purpose of the biological resource assessment and focused plant survey was to identify those biological resources that may pose a constraint to the development of the

Project Site, and to disclose whether any special-status plant species occur on the Project Site or have the potential to occur on the Project Site. The focused plant surveys concentrated on those habitats with the potential for hosting any of the six special-status plant species identified in the May 2006 survey and Bon Terra Consultants 1999 biological due diligence survey of the Project Site and on the database search described above in **Section 3.1**. Biologists examined whether the Project Site could serve as an important regional wildlife movement corridor or habitat linkage to other open space areas. Potential jurisdictional resources on the Project Site under the protection of the U.S. Army Corps of Engineers (ACOE), CDFG, the City of Malibu, or the Regional Water Quality Control Board (RWQCB) are examined in a separate report.

3.3 Special-Status Plant and Wildlife Surveys

Special-status plant and wildlife species with the potential to occur on Project Site were determined based on Impact Sciences' 2006 biological resource assessment and BonTerra Consultants' 1999 biological due diligence survey for the Project Site, and on the database search described above in **Section 3.1**. Biologists walked transects approximately 20 feet apart for 100 percent visual coverage in (accessible) suitable habitats located on the Project Site where special-status plants or wildlife could occur. Potentially suitable habitats located within approximately 100 feet from the west boundary of the Project Site were also evaluated. Focused surveys, as the name implies, concentrate the site inspection on discovering evidence to the presence or absence of the special-status species identified in the manner described above.

To determine whether any special-status plants or wildlife species are present on the Project Site, focused surveys were conducted by Impact Sciences biologists on April 20, May 9, and June 1, 2007, as well as during the day of the biological resource assessment on May 3, 2006. All focused plant surveys in both 2006 and in 2007 were conducted during the appropriate flowering period for identification of special-status plant species with the potential to occur on Project Site, and focused wildlife surveys were conducted during the appropriate time of year for observing potentially occurring special-status animal species.

Suitable habitats for supporting special-status plants or wildlife primarily include the mixed sage scrub and coastal sage chaparral scrub habitats located along the southern, southwestern, eastern, and northern boundaries of the Project Site. Wildlife surveys were conducted during the appropriate time of year for observing potentially occurring special-status species. The methodology used for performing focused plant surveys followed the CDFG's 2000 *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities (Guidelines),* and the CNPS's 2001 *Botanical Survey Guidelines of the California Native Plant Society.*

3.4 Formal Raptor Surveys

Formal raptor surveys were conducted on March 30, April 5, April 20, May 4, and May 16, 2007. These raptor surveys were conducted during the nesting season (March 1 through June 15) and were in compliance with the LIP which states, "Where trees suitable for nesting or roosting or significant foraging habitat is present, a formal raptor survey will be conducted as part of the biological study. The biological study will account for seasonal variations in presence and abundance and will follow standard protocols developed by state or federal resource agencies when available." There are approximately five blue gum (*Eucalyptus globulus*) trees located at the northwest portion of the Project Site that have the potential to provide suitable breeding habitat for raptor species and raptors (i.e., red-tailed hawks (*Buteo jamaicensis*) were observed perched within these trees during several site visits. Therefore, focused raptor surveys were conducted per the criteria described in Section 4.4.2 of the City of Malibu Local Coastal Program LIP. Survey criteria included surveying the Project Site for 2 hours between dawn and 10:00 AM on five occasions with at least one week between surveys.

During the formal raptor surveys, all trees located on the Project Site were inspected for potential raptor nests and breeding raptor behavior. For trees adjacent to the Project Site's property boundary, binoculars were used to scan the trees from the Project Site. Surveys were also conducted from several fixed points to observe raptor behavior with minimal disturbance. Formal surveys conducted in 2007 in compliance with the LIP protocol (Section 4.4.2.A) occurred during mild weather conditions, under both clear skies and overcast conditions, with temperatures ranging between approximately 50 and 60 degrees Fahrenheit. All bird and other wildlife species observed during field surveys are noted in **Section 4.3**.

3.5 Protected Tree Survey

Evaluations of the Southern California black walnut trees were conducted on March 8, 2007 and on February 19, 2008. All walnut trees protected by the City of Malibu per the criteria (see **Section 4.5, Protected Tree Resources**) described in the City's tree protection ordinance were surveyed. Walnut tree locations and attribute data were collected from the base of each tree with a Trimble GeoXT Global Positioning System (GPS). The GPS records the spatial data with the evaluation criteria and attribute information required per the City's tree ordinance. The information from the GPS units was downloaded directly into the mapping software (ArcGIS 9.2) and subsequently overlain on the Project Site plan to determine the extent of impacts on walnut trees covered under the native tree protection ordinance provisions.

All trees surveyed were tagged with an individual number for identification purposes with 1-inch, non-corrosive, all-weather metal tags, and subsequently plotted on an aerial photograph using

Geographical Information System (GIS) software. A detailed discussion of the methods and results of proposed impacts to Southern California black walnut trees is provided in a separate report prepared by Impact Sciences contained in **Appendix B**.

4.0 ENVIRONMENTAL SETTING

4.1 General Project Site Description

The 23.87-acre Project Site is bounded by the Pacific Coast Highway (PCH) to the north, Malibu Road to the south and Winter Mesa Drive to the west (**Figure 1, Site Vicinity and Project Location**). The Project Site lies atop a bluff with steep downward slopes along its northern, eastern, southern, and southwestern boundaries. Two erosion channels occur on the Project Site, both which extend in a northwest to southeast direction. One occurs near the center of the Project Site and the other is located near the southwestern corner of the Project Site (see, **Figure 2, Habitats and Proposed Disturbance Areas on the Project Site**). Both channels extend off of the Project Site to the south. The general topography of the proposed development portions of the Project Site is generally flat, sloping slightly towards the center of the site; however areas in the southwestern portion of the Project Site slope slightly towards the southwestern channel. The Project Site ranges in elevation from about 50 feet above mean sea level (msl) in the southeast corner to 211 feet above msl in the north.

In October 2007, a wildfire severely burned portions of the Project Site, as well as areas adjacent to the Project Site. The proposed development portions of the Project Site have been annually disked for fuel modification purposes and consist primarily of ruderal plant species (e.g., wild oats (*Avena fatua*) and black mustard (*Brassica nigra*)). Prior to the 2007 wildfire, the on-site perimeters of the Project Site to the north, east, south, and southeast were generally undisturbed and consisted of a natural plant community. Plants within these areas have resprouted after the wildfire (based on visual observation during a visit to the Project Site made by Impact Sciences biologist Greg Ainsworth, on February 19, 2008).

The northern bluff of the Project Site consists of a mixed sage scrub plant community and the southern, southwestern, and eastern bluffs consist of a coastal sage chaparral plant community. Modified slopes occur on the southern slopes of the Project Site, and as a result, vegetation is sparse in this area. The coastal sage chaparral scrub community also occurs within the two erosion channels located on the Project Site. The soils on Project Site are loose and friable and are classified as loamy. Immediately adjacent to the Project Site to the west is Winter Mesa Drive, beyond which is Malibu Bluff Park; to the north is Pacific Coast Highway, to the east is a vacant tow yard facility (i.e., the Towing Project Site); to the south is Malibu Road and single-family residences; and to the northwest across Pacific Coast Highway is the campus of Pepperdine University.



SOURCE: Google Earth – 2006, Impact Sciences, Inc. – June 2006

FIGURE **1**

Site Vicinity and Project Location



SOURCE: GlobeXplorer - 2007, Impact Sciences, Inc. - January 2009

FIGURE **2**

Habitats and Proposed Disturbance Areas on the Project Site

M:\GIS_Data\856-002_Malibu_Bluffs\MXD\Vegetation\Fig2_Veg_012609_Crummer.mxd

As previously mentioned, there are approximately five mature blue gum trees located northwest boundary of the Project Site. The foliage of these trees was partially scorched by the 2007 wildfire; however, the overall health of these trees has not declined as a result of the fire (based on visual observation during a visit to the Project Site made by Impact Sciences biologist Greg Ainsworth, on February 19, 2008).

A map depicting the habitats, described below, on the Project Site is provided in **Figure 2**. Photographs of the Project Site taken prior to the October 2007 wildfire are provided in **Figures 3, 4,** and **5, Site Photos 1, 2,** and **3,** respectively. Photographs of the Project Site taken after the 2007 wildfire are provided in **Figures 6, 7,** and **8, Site Photos 4, 5,** and **6, respectively.**

There are five mature Southern California black walnut trees *(Juglans californica* var. *californica)* located outside of the proposed impact areas at the northeast corner of the Project Site (see **Figure 9, California Black Walnut Locations on the Project Site**), all of which were scorched by the 2007 wildfire; however, the overall health of these trees has not declined as a result of the fire, and these trees have sprouted new growth (based on visual observation during a visit to the Project Site made by Impact Sciences biologist Greg Ainsworth, on February 19, 2008).

Land uses surrounding the Project Site include: Pacific Coast Highway (PCH) to the immediate north; the urbanized Pepperdine University campus to the northwest; the Rancho Malibu Hotel site to the north across PCH, which has been extensively disked and excavated; Bluffs Park immediately to the west and developed with roads, parking, and several ball fields and associated structures; and a proposed residential development to the east, with the intervening slope being relatively undisturbed.

4.2 On-Site Habitats and Plant Communities

Vegetation nomenclature used to describe plant communities is characterized per the CDFG's *List of California Terrestrial Natural Communities* (CDFG 2003). Common plant names are taken from J.C. Hickman (1993). A complete list of plants observed is provided in **Table 1, Plant Species Observed on the Project Site**. All plant communities occurring on the Project Site are depicted in **Figure 2**.



View of ephemeral drainage located near the center of the Crummer project site, facing south, May 2006.

SOURCE: Impact Sciences, Inc. – May 2006

FIGURE **3**

Site Photo 1

856-002•07/08

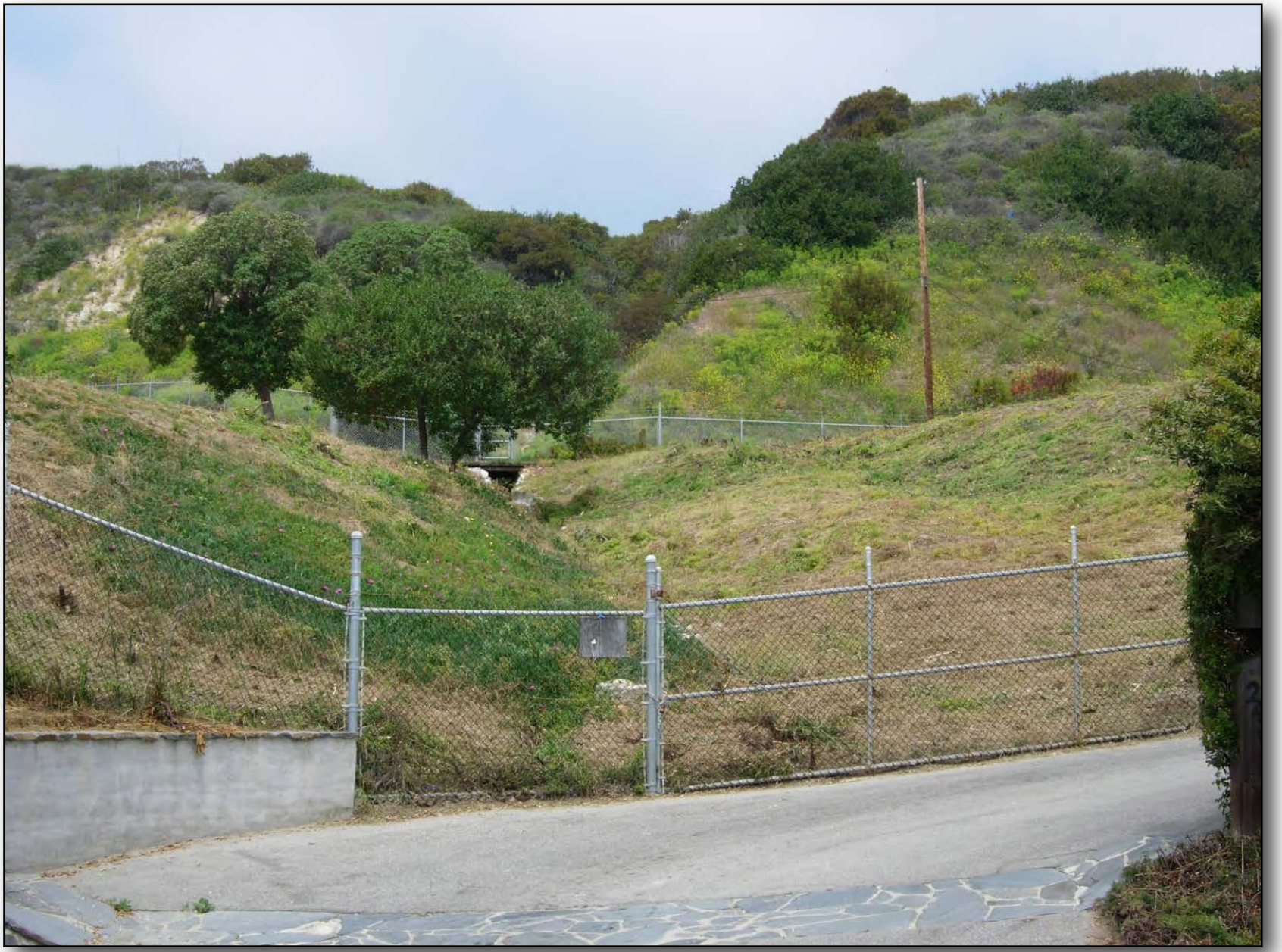


View of ephemeral drainage located near the center of the Crummer project site, facing southeast, May 2006.

SOURCE: Impact Sciences, Inc. – May 2006

FIGURE **4**

Site Photo 2



View of ephemeral drainage located near the center of the Crummer project site, facing north, May 2006.

SOURCE: Impact Sciences, Inc. – May 2006

FIGURE 5

Site Photo 3



View of ephemeral drainage located near the center of the Crummer project site, facing southeast, following the October 2007 wildfire.

SOURCE: Impact Sciences, Inc. – October 2007

FIGURE **6**

Site Photo 4



View of ephemeral drainage located near the center of the Crummer project site, facing south, following the October 2007 wildfire.

SOURCE: Impact Sciences, Inc. – October 2007

FIGURE **7**

Site Photo 5



View of northern boundary and disked areas of the project site following the October 2007 wildfire. Photograph taken from atop the ephemeral drainage located near the center of the project site.

SOURCE: Impact Sciences, Inc. – October 2007

FIGURE **8**

Site Photo 6



SOURCE: PSOMAS - 2007, GlobeXplorer - 2007, Impact Sciences, Inc. - January 2009

FIGURE **9**

California Black Walnut Locations on the Project Site

M:\GIS_Data\856-002_Malibu_Bluffs\MXD\Vegetation\Fig2_Veg_012609_Crummer.mxd

Mixed Sage Scrub (1.35 acres)

The northern boundary of the Project Site contains this natural community, which is characterized as a mixed sage scrub plant community. Dominant plants occurring within this community on the site include black sage *(Salvia mellifera)*, purple sage *(Salvia leucophylla)*, California sagebrush *(Artemisia californica)*, ashy-leaved buckwheat *(Eriogonum cinereum)*, California buckwheat *(Eriogonum fasciculatum)*, toyon *(Heteromeles arbutifolia),* and southern California black walnut trees. The 1999 Bonterra report categorized this area as buckwheat scrub; however, that vegetation type is not listed in the subsequent CDFG *List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database* (2003) and the greater presence of sage species is more accurately categorized as mixed sage scrub.

Coastal Sage Chaparral Scrub (7.75 acres)

The coastal sage chaparral scrub plant community covers the two erosion channels on the Project Site as well as the southern and southwestern slopes. Dominant plant species that occur within this community include laurel sumac *(Malosma laurina)*, coyote brush *(Baccharis pilularis)*, black sage *(Salvia mellifera)*, purple sage *(Salvia leucophylla)*, and California sagebrush *(Artemisia californica)*. Several small Mexican elderberry *(Sambucus mexicana)* trees and one willow *(Salix* sp.*)* tree were observed. This plant community forms a dense canopy, allowing for few plants to grow in the understory.

This plant community was described as mixed sage scrub in the 1999 Bonterra report. Mixed sage scrub, as described in the preceding paragraph and characterized in the CDFG *List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database* (2003), contains sage species as being dominant. While both black and purple sages are present within this pant community, these species are not dominant in this location as they are on the northern boundary.

Purple needlegrass (*Nassella pulchra*) grows sporadically within this plant community. The Bonterra report (1999) describes valley needlegrass grassland as occurring on the Project Site. However, based on the focused plant survey conducted by Impact Sciences in 2006 and 2007, purple needlegrass plants are associated with the herbaceous understory that sparsely occurs within this plant community, and the presencœ of this species does not constitute a separate plant community.

Non-Native Grassland (disked areas) (14.56 acres)

Dominant plants observed within this community include wild oats, ripgut brome *(Bromus diandrus)*, foxtail fescue *(Vulpia myuros)*, black mustard, tocalote *(Centaurea melitensis),* and sweet fennel *(Foeniculum vulgare).* A few scattered native plant species were observed within this community as well, which

include telegraph weed *(Heterotheca grandiflora)*, purple needlegrass *(Nassella pulchra)*, and narrow-leaved milkweed *(Asclepias fascicularis)*.

Eucalyptus Trees (0.21 acre)

Approximately five mature blue gum trees occur along the northwestern boundary of the site. Several common bird species (including red-tail hawks) were observed roosting in these trees during site visits conducted by Impact Sciences during 2006 and 2007.

Table 1
Plant Species Observed on the Project Site

Scientific Name	Common Name	Native (Yes/No)
AIZOACEAE	**FIG-MARIGOLD FAMILY**	
Carpobrotus edulis	Iceplant	No
ANACARDIACEAE	**CASHEW FAMILY**	
Malosma laurina	Laurel sumac	Yes
Rhus ovata	Sugarbush	Yes
APIACEAE	**CARROT FAMILY**	
Foeniculum vulgare	Sweet fennel	No
ASCLEPIADACEAE	**MILKWEED FAMILY**	
Asclepias fascicularis	Narrow-leaved milkweed	Yes
ASTERACEAE	**SUNFLOWER FAMILY**	
Ambrosia psilostachya	Western ragweed	Yes
Artemisia californica	California sagebrush	Yes
Baccharis pilularis	Coyote brush	Yes
Baccharis salicifolia	Mulefat	Yes
Carduus pycnocephalus	Italian thistle	No
Centaurea meliensis	Star thistle	No
Conyza canadensis	Horseweed	Yes
Coreopsis gigantean	Giant coreopsis	Yes
Encelia californica	California brittlebush	Yes
Eriophyllum confertiflorum	Golden Yarrow	Yes
Gnaphalium californica	Cudweed	No
Hazardia squarrosa	Common hazardia	Yes
Heterotheca grandiflora	Telegraph weed	Yes
Stephanomeria virgata	Twiggy wreath plant	Yes
BRASSICACEAE	**MUSTARD FAMILY**	

Scientific Name	Common Name	Native (Yes/No)
Brassica nigra	Black mustard	No
Raphanus sativus	Wild radish	No
CAPRIFOLIACEAE	**HONEYSUCKLE FAMILY**	
Sambucus mexicana	Mexican elderberry	Yes
CHENOPODIACEAE	**GOOSEFOOT FAMILY**	
Chenopodium album	Pigweed	No
CONVOLVULACEAE	**MORNING-GLORY FAMILY**	
Ipomoea purpurea	Common morning-glory	No
CUCURBITACEAE	**GOURD FAMILY**	
Marah macrocarpus	Wild cucumber	Yes
FABACEAE	**LEGUME FAMILY**	
Lotus scoparius	Deerweed	Yes
Melilotus officinalis	Yellow sweet clover	No
GERANIACEAE	**GERANIUM FAMILY**	
Erodium cicutarium	Red-stemmed filaree	Yes
HYDROPHYLLACEAE	**WATERLEAF FAMILY**	
Phacelia sp.	Phacelia sp.	Yes
JUGLANDACEAE	**WALNUT FAMILY**	
Juglans californica var. *californica*	Southern California black walnut	Yes
LAMIACEAE	**MINT FAMILY**	
Marubruium vulgare	Horehound	No
Salvia leucophylla	Purple sage	Yes
Salvia mellifera	Black sage	Yes
MYRTACEAE	**MYRTLE FAMILY**	
Eucalyptus sp.	Eucalyptus species	No
ONAGRACEAE	**EVENING PRIMROSE FAMILY**	
Clarkia purpurea ssp. *quadrivulnera*	Winecup fairyfan	Yes
PLANTAGINACEAE	**PLANTAIN FAMILY**	
Plantago lanceolata	English plantain	No
POLYGONACEAE	**BUCKWHEAT FAMILY**	
Eriogonum cinereum	Ashy-leaved buckwheat	Yes
Eriogonum fasciculatum	California buckwheat	Yes
PRIMULACEAE	**PRIMROSE FAMILY**	
Anagallis arvensis	Scarlet pimpernel	No
ROSACEAE	**ROSE FAMILY**	
Heteromeles arbutifolia	Toyon	Yes
SALICACEAE	**WILLOW FAMILY**	
Salix sp.	Willow species	Yes

Scientific Name	Common Name	Native (Yes/No)
SCROPHULARACEAE	**SNAPDRAGON FAMILY**	
Mimulus aurantiacus	Bush monkey flower	Yes
SOLANACEAE	**NIGHTSHADE FAMILY**	
Nicotina glauca	Tree tobacco	No
Solanum xanti	Purple nightshade	Yes
ANGIOSPERMS		
MONOCOTYLEDONS		
IRIDACEAE	**IRIS FAMILY**	
Sisyrinchium bellum	Blue-eyed grass	Yes
LILIACEAE	**LILY FAMILY**	
Bloomeria crocea	Goldenstars	Yes
*Calachortus catalinae**	Catalina mariposa lily	Yes
Yucca whipplei	Chaparral yucca	Yes
POACEAE	**GRASS FAMILY**	
Avena fatua	Wild oats	No
Bromus diandrus	Ripgut brome	No
Bromus hordeaceous	Soft brome	No
Bromus madritensis ssp. *rubens*	Red brome	No
Leymus cinereus	Giant wild rye	Yes
Nassella pulchra	Purple needle-grass	Yes
Piptatherum miliaceum	Smilo grass	No
Vulpia myuros	Foxtail fescue	No

* *CNPS list 4 species*

4.3 Common Wildlife

The mixed sage scrub and coastal sage chaparral scrub plant communities, and to a lesser extent the non-native grassland, located on and adjacent to the Project Site may provide habitat for several common wildlife species known to occur in the region. As a consequence of previous human disturbance on the Project Site (i.e., disking) and adjacent land uses such as Pacific Coast Highway, Malibu Bluffs Park, and Malibu Road, the number of terrestrial wildlife species expected to occur on the Project Site is low. Common wildlife species observed, detected, or having a high potential to occur within the Project Site's boundary and its vicinity are discussed below. Special-status wildlife species known to occur, or having the potential to occur within or in the immediate vicinity of the Project Site, are discussed later in **Section 4.4, Special-Status Biological Resources**. However, due to the disturbed condition of the Project

Site there is limited habitat or opportunity for most of the special-status biological resources to occur on the Project Site.

Reptiles

Several common reptile species also have the potential to occur on the Project Site. Reptiles observed on Project Site during various field surveys include side-blotched lizard (*Uta stansburiana*) and western fence lizard *(Sceloporus occidentalis).* Additional common species with the potential to occur within the Project Site, although they were not observed during any of the field surveys conducted by Impact Sciences in 2006 and 2007, include southern alligator lizard *(Elgaria multicarinatus),* gopher snake *(Pituophis melanoleucus),* common kingsnake *(Lampropeltis getulus),* and southern Pacific rattlesnake *(Crotalus viridis helleri).*

Mammals

Few mammal species are likely to occur on or in the vicinity of the Project Site, due to its disturbed condition and due to adjacent land uses. Common mammals either directly observed or for which diagnostic sign was detected during surveys of the Project Site include California ground squirrel, brush rabbit *(Sylvilagus bachmani)*, and coyote (scat) *(Canis latrans).* Other mammal species that have the potential to occur, although they were not observed during any of the field surveys conducted by Impact Sciences in 2006 or 2007, include Virginia opossum *(Didelphis virginiana)*, common raccoon *(Procyon lotor)*, striped skunk *(Mephitis mephitis),* long-tailed weasel *(Mustela frenata),* ornate shrew *(Sorex ornatus),* broad-footed mole *(Scapanus latimanus),* western harvest mouse *(Reithrodontomys megalotis),* deer mouse *(Peromyscus maniculatus),* California mouse *(Peromyscus californicus),* brush mouse *(Peromyscus boylii),* and California vole *(Microtus californicus)*. Non-native mammal species including house mouse *(Mus musculus),* Norway rat *(Rattus norvegicus),* and black rat *(R. rattus)* also may occur on Project Site. None of the aforementioned animals are considered special-status species.

Birds

The Project Site has the potential to provide foraging, roosting, and nesting habitat for a variety of common native bird species. Birds can nest within ruderal areas (including the disked portions of the site), underneath herbs, in shrubs, and in trees. Direct observations of species using standard field survey techniques of common bird species during the 2006 biological resources assessment and incidental to the 2007 focused raptor surveys include the following species listed below in **Table 2**.

Table 2
Bird Species Observed on the Project Site

Common Name	Scientific Name
Great Egret	*Ardea alba*
Turkey Vulture	*Cathartes aura*
Red-tailed Hawk	*Buteo jamaicensis*
American Kestrel	*Falco sparverius*
Western Gull	*Larus occidentalis*
Rock Pigeon	*Columba livia*
Mourning Dove	*Zenaida macroura*
Lesser Nighthawk	*Chordeiles acutipennis*
Anna's Hummingbird	*Calypte anna*
Allen's Hummingbird	*Selasphorus sasin*
Black Phoebe	*Sayornis nigricans*
Say's Phoebe	*Sayornis saya*
Western Kingbird	*Tyrannus verticalis*
Loggerhead Shrike	*Lanius ludovicianus*
Western Scrub-Jay	*Aphelocoma californica*
American Crow	*Corvus brachyrhynchos*
Common Raven	*Corvus corax*
Violet-green Swallow	*Tachycineta thalassina*
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*
Bushtit	*Psaltriparus minimus*
American Robin	*Turdus migratorius*
Northern Mockingbird	*Mimus polyglottos*
California Thrasher	*Toxostoma redivivum*
European Starling	*Sturnus vulgaris*
Orange-crowned Warbler	*Vermivora celata*
Yellow-rumped Warbler	*Dendroica coronata*
Spotted Towhee	*Pipilo maculatus*
California Towhee	*Pipilo crissalis*
Song Sparrow	*Melospiza melodia*
White-crowned Sparrow	*Zonotrichia leucophrys*
Western Meadowlark	*Sturnella neglecta*
Brewer's Blackbird	*Euphagus cyanocephalus*
House Finch	*Carpodacus mexicanus*
Lesser Goldfinch	*Carduelis psaltria*
House Sparrow	*Passer domesticus*

With the exception of the house sparrow, European starling, and rock pigeon, all these bird species are native to the United States. None of the aforementioned common birds were observed nesting or breeding on the Project Site during the 2006 and 2007 survey periods, which were conducted during peak breeding season.

Raptors are another group of bird species expected to periodically utilize the Project Site for foraging. During formal raptor surveys, two American kestrels, one male and one female, were observed foraging in the non-native grassland (i.e., the annually disked portions of the Project Site) on April 5, 2007. Courtship behavior was observed between these birds, which consisted of the male kestrel feeding the female in a laurel sumac shrub located above the bluffs at the southeastern boundary. It appeared the male was also preparing a nest atop an off-site telephone pole located to the south from where this observation was made. No other nesting or courtship behavior (by any bird species) was observed on the Project Site during subsequent surveys.

On each of the focused raptor surveys, two to three red-tailed hawks were observed foraging in the non-native grassland on the Project Site, using the telephone poles located near the eastern boundary as perches to observe prey. These telephone poles burned in the October 2007 wildfire but have been replaced with temporary poles. The City is requiring the project's applicant to underground all utilities servicing the Project Site and these temporary poles will be removed. Red-tailed hawks were also observed within the blue gum trees along the northwestern border of the Project Site. These blue gum trees have the potential to provide nesting habitat for red-tailed hawks (and other raptor species) in the future; however, with the exception of the American kestrels mentioned above, no breeding behavior (or nests) were observed by raptor species during the 2006/2007 surveys. A turkey vulture *(Cathartes aura)* was observed on one occasion on May 5, 2007, soaring above the Project Site, but was not observed utilizing the Project Site for foraging or nesting opportunities. No other raptor species were observed on the Project Site.

Other raptor species not observed on the Project Site during the formal raptor survey but which have the potential to roost or nest in the blue gum trees include red-shouldered hawk *(Buteo lineatus),* Cooper's hawk (*Accipiter cooperii*) and white-tailed kite *(Elanus leucurus)*. White-tailed kite and Cooper's hawk are special-status species and are discussed in more detail in the special-status biological resources portion of this section. No evidence of use of the Project Site, such as old nests, including raptor nests, or owl pellets, by great horned owl (*Bubo virginianus*) or barn owl (*Tyto alba*) was observed.

4.4 Special-Status Biological Resources

For the purposes of analysis of potential impacts to biological resources (under CEQA), "special status" refers to those resources that meet one or more of the following criteria:

- Plant and animal species listed by the US Fish and Wildlife Service (USFWS) or CDFG as Threatened or Endangered, proposed for listing as Threatened or Endangered, or a candidate for listing as Threatened or Endangered.

- Plant and animal species considered "Endangered, Rare or Threatened" as defined in Section 15380 of the *State CEQA Guidelines*. Section 15380(b) states that a species of animal or plant is "Endangered" when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors. A species is "Rare" when either (A) although not presently threatened with extinction, the species exists in such small numbers throughout all or a significant portion of its range that it may become Endangered if its environment worsens; or (B) the species is likely to become Endangered within the foreseeable future throughout all or a portion of its range and may be considered "Threatened" as that term is used in the Federal Endangered Species Act (ESA).

- Plants included on Lists 1 or 2 of the CNPS. These species are included because the CNPS is recognized as an authority by the CDFG on the status of rare plant species in California, and because the criteria for placement on List 1 or List 2 are similar to criteria that CDFG and USFWS use for listing species as Threatened or Endangered.

- Animal species designated as "Species of Special Concern" or "Fully Protected" by the CDFG. Although these species have no legal status under the California Endangered Species Act (CESA), the CDFG recommends their protection, as the populations of these species are generally declining and they could be listed as Threatened or Endangered (under CESA) in the future.

- Birds designated by the USFWS as "Birds of Conservation Concern." Although these species have no legal status under ESA, the USFWS recommends their protection as populations of these species are generally declining and they could be listed as Threatened or Endangered (under ESA) in the future.

- Riparian habitat or other natural communities considered sensitive or otherwise regulated by the CDFG.

- Wetlands or other aquatic habitats under the jurisdiction of the ACOE.

- Established resident or migratory wildlife movement corridors.

- Trees, habitats, or other resources protected by local policies, ordinances, or otherwise considered of local concern.

Special-Status Plant Species

No federally or state-listed plant species were observed on the Project Site. A list of special-status plant species that have been previously recorded in the vicinity of the Project Site (based on the CNDDB and

CNPS databases) and which have the potential to occur on the Project Site is provided below in **Table 3, Special-Status Plant Species with Potential to Occur on the Project Site**. The non-native grassland and the general disturbed condition of the Project Site does not provide suitable habitat for supporting the plant species listed below in **Table 3**. However, the mixed sage scrub and coastal sage chaparral scrub located on the Project Site does provide suitable habitat. Catalina mariposa (*Calachortus catalinae*) lilies were observed by Impact Sciences in 2006 within the coastal sage chaparral scrub community along the eastern and northeastern boundaries of the Project Site. During subsequent visits made by Impact Sciences in 2007 (following the wildfire), it was noted that the number of individual Catalina mariposa lilies within these locations substantially increased, which can be expected, since this species is known to emerge following severe burns. This species is considered a CNPS list 4 plant species which are "plants of limited distribution; a watch list," according to CNPS. The general locations of the Catalina mariposa lilies on the Project Site are depicted in **Figure 2** which are on the boundary of the proposed development of Lot 1 and more than 50 feet from the proposed development area of Lot 2.

Table 3
Special-Status Plant Species with Potential to Occur on the Project Site

Common Name and *Scientific Name*	Status			Habitat Requirements	Potential for Occurrence and Survey Results
	Federal	State	CNPS		
Braunton's milk-vetch *Astragalus brauntonii*	FE	--	1B.1	Occurs in chaparral, coastal sage scrub, valley and foothill grasslands, recent burns, or disturbed areas. Found on stiff gravelly soils overlying granite and limestone, below 1,500 feet above mean sea level (msl).	***Not Expected:*** This species was not observed during focused surveys conducted in May 2006 and May 2007, nor was it observed during a visit to the Project Site made by Impact Sciences biologist Greg Ainsworth, on February 19, 2008. Although Braunton's milk-vetch could potentially get establish on the Project Site since this species is known to occur within suitable habitat following burns (CNDDB 2007, CNPS 2007), the species is not expected because the preferred substrate is not present.

Common Name and *Scientific Name*	Status			Habitat Requirements	Potential for Occurrence and Survey Results
	Federal	State	CNPS		
Plummer's mariposa lily *Calochortus plummerae*	--	--	1B.2	Rocky and sandy sites, usually of granitic or alluvial material, within coastal sage scrub, chaparral, valley and foothill grassland, and forests and woodlands; between approximately 295–5,280 feet msl.	***Not Expected:*** This species was not observed during focused surveys conducted in May 2006 and Spring 2007. This species is not expected to occur on the Project Site because there is only limited suitable habitat available. The Project Site is located below 295 feet msl.
San Fernando Valley spineflower *Chorizanthe parryi* var. *fernandina*	FSC	SE	1B.1	Sandy soils within coastal sage scrub between approximately 1,000–3,600 feet above msl.	***Not Expected:*** This species was not observed during focused surveys conducted in May 2006 and Spring 2007. This species is not expected to occur on the Project Site as suitable habitat is not available. The Project Site is located below 1000 feet msl.
Parry's spineflower *Chorizanthe parryi* var. *parryi*	FSC	--	3.2	Occurs in coastal sage scrub and chaparral (flat dry slopes and sandy soils).	***Not Expected:*** Although portions of the Project Site hosted native plant communities potentially suitable for this species prior to the 2007 wildfire, there is currently no suitable habitat present on the Project Site, especially considering the steepness of the slopes where native plant communities were found. This species was not observed during focused surveys conducted in May 2006 and 2007 and it is not expected to occur on the Project Site
Dune larkspur *Delphinium parryi* ssp. *blochmaniae*	--	--	1B.2	Occurs on sandy and rocky soils in chaparral and coastal maritime dune habitats.	***Not Expected:*** This species was not observed during focused surveys conducted in May 2006 and May 2007. This species is not expected to occur on the Project Site because suitable habitat is not present.

Common Name and *Scientific Name*	Status			Habitat Requirements	Potential for Occurrence and Survey Results
	Federal	State	CNPS		
Chaparral nolina *Nolina cismontana*	--	--	1B.2	Occurs in chaparral and coastal sage scrub habitats on sandstone, shale, and gabbro substrates.	***Not Expected:*** This species was not observed during focused surveys conducted in May 2006 and May 2007 and is not expected to occur on the Project Site because suitable habitat is not present.

STATUS KEY:

Federal
FE = Federally Endangered
FSC = Federal Species of Concern
.1 = seriously Endangered in California

State
SE = State Endangered

CNPS
List 1B = plants Rare, Threatened, Endangered in California and elsewhere
List 3 = more information is needed about this species
.2 = fairly Endangered in California
.3 = not very Endangered in California

Special-Status Wildlife Species

No special-status wildlife species were observed on or adjacent to the Project Site during the 2007 focused surveys (or any other Project Site visit conducted by Impact Sciences [2006, 2007] or BonTerra Consulting [1999]). The mixed sage scrub and coastal sage chaparral scrub located on the Project Site could provide suitable habitat for potentially supporting seven special-status wildlife species. No other habitat suitable for supporting special-status wildlife species is currently present on the Project Site. A list of special-status wildlife species that have the potential to occur on the Project Site is provided below in **Table 4, Special-Status Wildlife Species with Potential to Occur on the Project Site**.

Table 4
Special-Status Wildlife Species with Potential to Occur on the Project Site

Common Name and *Scientific Name*	Status		Habitat	Potential Occurrence within the Project Site
	Federal	State		
Insects				
Monarch butterfly (wintering sites) *Danaus plexippus*	--	--	Wind-protected tree groves, including Blue gum, Monterey pine, and cypress trees with nearby water and nectar sources.	**No Potential:** The blue gum trees located on the Project Site do not provide typical roosting habitat for this species because they are too exposed and do not afford enough wind and cold protection and because there is no standing fresh water present on the Project Site.
Reptiles				
California Mountain Kingsnake *Lampropeltis zonata pulchra*	--	SC	Occurs in coniferous forest, oak-pine woodlands, riparian woodland, chaparral, and coastal sage scrub; near sea level to 7,000 ft.	***Low Potential:*** This species was not observed on the Project Site during focused surveys conducted in 2007. Because limited suitable habitat occurs on Project Site, there is a low potential for this species to occur.
Coast (San Diego) Horned Lizard *Phrynosoma coronatum blainvilli*	--	SC	Occurs in coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland, and coniferous forest on sandy soils, often in association with harvester ants. This species is commonly found on open ground within its habitat.	***Low Potential:*** This species was not observed on the Project Site during focused surveys conducted in 2007. This species has a low potential to occur on Project Site because there is limited surrounding habitat from which the species could disperse.
Coast Patch-nosed Snake *Salvadora hexalepis virgultea*	--	SC	Occurs in coastal sage scrub and chaparral with open ground and rocky outcrops, often in sandy soils.	***Low Potential:*** This species was not observed on the Project Site during focused surveys conducted in 2007. This uncommon species has a low potential to occur on Project Site because there is limited surrounding habitat from which the species could disperse.
Birds				
Southern California Rufous-crowned Sparrow *Aimophila ruficeps canescens*	--	SC	Sparsely vegetated hillsides in coastal sage scrub, rocky slopes; often in association with California sagebrush (*Artemesia californica).*	***Moderate Potential:*** This species was not observed on the Project Site during focused surveys conducted in 2007. This species has a moderate potential to occur because the mixed sage scrub offers some habitat that may be suitable for this species. However, this habitat is outside of the proposed development area and this species should not be directly impacted.

Common Name and *Scientific Name*	Status		Habitat	Potential Occurrence within the Project Site
	Federal	State		
Bell's Sage Sparrow *Amphispiza belli belli*	--	SC	Occurs in shrublands near the coast, most often coastal sage scrub, and chaparral.	***Low Potential:*** This species was not observed on the Project Site during focused surveys conducted in 2007. This species has low potential to occur on the Project Site in the future because of the fragmentation of the Project Site to natural open space areas within the Malibu area.
Mammals				
San Diego Desert Woodrat *Neotoma lepida intermedia*	--	SC	Coastal scrub with moderate to dense canopies, especially with rock outcrops and rocky cliffs and slopes.	***Low Potential:*** This species was not observed on the Project Site during focused surveys conducted in 2007. This species has a low potential for occurrence within the on-site channels covered with coastal sage chaparral scrub, but does not have rocky cliffs or rock outcrops.

SC = California Species of Special Concern

4.5 Protected Tree Resources

Pursuant to the City of Malibu's native tree protection ordinance, removal of or damage to any native oak, walnut, sycamore, alder, or toyon tree that is at least 6 inches in diameter, or has a combined trunk circumference of any two trunks of at least 8 inches in diameter, as measured 4.5 feet above the mean natural grade (diameter at breast height [dbh]), "shall be prohibited except where no other feasible alternative exists" (Chapter 5 of the City of Malibu Local Coastal Program LIP, dated September 13, 2002, starting on page 138). If impacts to protected trees cannot be avoided, mitigation is required for native tree removal or the loss of or worsened health of native trees resulting from encroachment into the protective zone[1] of a given tree.

As discussed in the Project Site protected tree report (see **Appendix B**), six (6) southern California black walnut trees subject to the City of Malibu's native tree protection ordinance occur within the Project Site boundary, none of which would be impacted or removed as a result of the development of the project. The locations of these southern California walnut trees are provided in **Figure 9**.

1 The area within the dripline of a protected tree and extending to a point at least 5 feet outside the dripline, or 15 feet from the trunk[s] of a tree, whichever distance is greater.

4.6 Jurisdictional Resources

The two erosion channels located on the Project Site are addressed in a separate document within which the jurisdiction of CDFG and ACOE is discussed. However, there is no resource dependent riparian vegetation present and only elements of the coastal sage chaparral scrub community are present on the Project Site. The proposed development would not disturb or impact either of these channels. Moreover, an approximately 100-foot buffer would be incorporated between the developed portions of the Project Site and these two on-site erosion features (See **Figure 2**). No wetlands relating to Section 4.4.3 of the Malibu LIP (page 126) occur on the Project Site. Runoff generated from the Project Site would be diverted into a water quality treatment system, to be constructed as part of the proposed development of the Project Site, prior to discharge from the Project Site. Some runoff will be directed north to Pacific Coast Highway.

The Pacific Ocean to the south of the Project Site is a traditional navigable water and is regulated by ACOE and the California Coastal Commission. Runoff generated from the Project Site will be diverted, in compliance with the National Pollutant Discharge Elimination System (NPDES) requirements, into water quality treatment system to be constructed as part of the proposed development of the Project Site prior to discharge from the Project Site. Currently the storm water runoff is untreated prior to discharge from the Project Site.

4.7 Wildlife Movement Corridors

Wildlife corridors are pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or human-induced factors, such as urbanization. The Project Site does not provide a corridor for wildlife movement to and from adjacent sites, because the Project Site occurs in an area with residential development and the Pacific Ocean to the south, PCH to the north, with Winter Mesa Drive and Malibu Bluffs Park to the west, the vacant tow yard facility to the east, a Malibu retail center further to the east and the Pepperdine University campus to the northwest across Pacific Coast Highway. Potential wildlife movement to or from the remnant open space west of Malibu Bluffs Park and south of PCH would occur through Puerco Canyon to the northwest. Core wildlife habitat areas exist to the north of PCH and the band of urban development that parallels the highway through most of the City of Malibu. Therefore, migration or movement of mammalian species to and from large open space areas in the project region is not expected to occur through the Project Site and no sign of the Project Site being used as a corridor was observed at the time of either the 2006 or 2007 surveys.

4.8 Coastal Biological Resources

The City of Malibu's Local Coastal Program LIP does not depict any environmentally sensitive habitat area (ESHA) on the Project Site. The Project Site does not support any biological resources that can be considered to be rare, especially valuable, and easily disturbed or degraded by human activities or the proposed development of the Project Site. As previously indicated, the southern, southwestern, eastern and northern boundaries of the Project Site contain native plant communities; however, no special-status species covered by the Malibu LIP were observed on the site, as the Catalina mariposa lilies located near the eastern boundary are CNPS List 4.

The City of Malibu's Local Coastal Program LIP depicts an ESHA located immediately to the southwest of the Project Site. This ESHA is identified in the City's LCP on "ESHA Overlay Map: 3, Dan Blocker to Malibu Pier". The proposed project would have no direct impacts on this identified ESHA and the development footprint has been designed to be approximately 200 feet from the off-site designated ESHA.

5.0 RELATED PLANS AND POLICIES

The following policies and regulations potentially apply to the biological resources associated with the Project Site. Impacts that would conflict with these policies and regulations could be considered significant under Appendix G of the *State CEQA Guidelines* (see below, **5.4, CEQA Thresholds of Significance Criteria**).

5.1 Federal Regulations and Plans

Migratory Bird Treaty Reform Act of 1918

The proposed Project would also be subject to the requirements of the Migratory Bird Treaty Reform Act (MBTRA). This regulation protects all migratory birds native to the United States and their nests, and makes it unlawful to take any migratory bird and their active nests.

5.2 State Regulations

California Fish and Game Code (Sections 3503 and 3513)

The proposed Project would also be subject to the requirements of Sections 3503 and 3513 of the California Fish and Game Code. These regulations protect all native birds and their nests and make it unlawful to take any migratory bird and their active nests.

5.3 City of Malibu Local Coastal Program

The City of Malibu Local Coastal Program (LCP) contains numerous policies for land development, and several ordinances for implementation of the LCP. Those that are relevant to biological resources are identified in **Section 6.0, Project Impacts**, with an analysis of the proposed Project's consistency.

5.4 CEQA Thresholds of Significance Criteria

According to Appendix G of the *State CEQA Guidelines*, a project may result in significant impact to biological resources if it would:

1. have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by the CDFG or USFWS;

2. have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS;

3. have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

4. interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

5. conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

6. conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.

These criteria are directly related to the requirements of Section 15065(a) of the *State CEQA Guidelines*, which also states that a project may have a significant effect on the environment where it has the potential to:

- 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
- substantially reduce the number or restrict the range of an Endangered, Rare, or Threatened species.

6.0 PROJECT IMPACTS

Direct impacts typically represent the physical alteration (i.e., habitat degradation or loss) of biological conditions that are expected to occur within a site as a result of the project's implementation. Indirect impacts are those reasonably foreseeable effects on remaining or adjacent biological resources that are expected to be caused by the project subsequent to its implementation. Impacts can also be short- or long-term, depending on the duration of the effect on a given biological resource. Short-term impacts are temporary, arising from direct impacts to biological resources during a project's implementation, but not after completion. Long-term impacts result in the permanent modification of a biological resource caused by the project's implementation.

The physical alteration of habitat is not, in itself, a significant impact under CEQA. Significance is determined by comparing physical alteration of habitat to each of the significance threshold criteria defined above. For example, should the alteration of habitat result in the direct or indirect loss or have an otherwise substantial adverse effect on a species identified as a "candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the CDFG or USFWS," impacts would be considered significant unless a project implements mitigation that would reduce the impact to a less than significant level.

An evaluation of whether an impact on biological resources would be substantial and, therefore, a significant impact must consider both the resource and the CEQA threshold of significance criteria. For example, because of the dependence of most plant and wildlife species on native habitats to satisfy various life cycle requirements, a habitat-based approach that addresses the overall biological value of a particular plant community or habitat area is appropriate when determining whether alteration of that habitat will substantially affect special-status species, sensitive habitats, wetlands, and movement corridors. The relative biological value of a particular habitat area—its functions and values—can be determined by such factors as disturbance history, biological diversity, its importance to particular plant and wildlife species, its uniqueness or sensitivity status, the surrounding environment, and the presence or absence of special-status resources.

However, direct impacts with respect to specific plant and wildlife resources (e.g., active nests and individual plants and wildlife) are also evaluated and discussed when impacts to these resources, in and of themselves, could be considered significant or in conflict with local, state, and federal statutes or regulations. The significance of impacts with respect to direct impacts to individuals or populations of plant and wildlife species takes into consideration the number of individual plants or animals potentially affected; how common or uncommon the species is, both within a site and from a regional perspective; and the sensitivity status if the species is considered of special status by resource agencies. These factors

are evaluated based on the results of on-site biological surveys and studies, results of literature and database reviews, discussions with biological experts, and established and recognized ecological and biodiversity theory and assumptions.

To identify plant communities that would be directly affected by the proposed Project, the development boundary of the Project Site, which includes the daylight grading limits and the fuel modification zone that extends 100 feet from each of the proposed structures, was evaluated and overlain on a map of the recently surveyed plant communities within the Project's boundary (**Figure 2**). The total acreage of each plant community occurring on the Project Site was calculated using a GIS database. Total and impacted acreage of each community that occurs on the Project Site is provided below in **Table 5, Acreages of Plant Communities located on the Project Site**. Total and impacted acreages of each plant community within each lot (lots 1 through 7) are provided below in **Tables 6- through 12**.

Table 5
Acreages of Plant Communities located on the Project Site

Plant Community	Total Acres Present	Acres Impacted	Percent Impacted	Acres Remaining
Mixed Sage Scrub	1.35	0.52	39%	0.82
Coastal Sage Chaparral Scrub	7.75	0.43	6%	7.33
Mature Eucalyptus Trees	0.21	0.12	57%	0.09
Non-Native Grassland (disked areas)	14.56	11.76	81%	2.80
TOTAL	**23.87**	**12.83**	**54%**	**11.04**

Source: Impact Sciences Inc. 2007. Note: These figures based on vegetation mapped prior to the October 2007 fire. Acres and percentages of impacted plant communities include fuel modification zone.

Table 6
Acreages of Plant Communities Located on Lot 1

Plant Community	Total Acres Present	Acres Impacted	Percent Impacted	Acres Remaining
Mixed Sage Scrub	0.45	0.36	80%	0.09
Coastal Sage Chaparral Scrub	1.55	0.05	3%	1.50
Mature Eucalyptus Trees	--	--	--	--
Non-Native Grassland (disked areas)	1.87	1.68	90%	0.19
TOTAL	**3.87**	**2.09**	**54%**	**1.78**

Source: Impact Sciences Inc. 2007. Note: These figures based on vegetation mapped prior to the October 2007 fire. Acres and percentages of impacted plant communities include fuel modification zone.

Table 7
Acreages of Plant Communities Located on Lot 2

Plant Community	Total Acres Present	Acres Impacted	Percent Impacted	Acres Remaining
Mixed Sage Scrub	--	--	--	--
Coastal Sage Chaparral Scrub	1.05	0.03	3%	1.02
Mature Eucalyptus Trees	--	--	--	--
Non-Native Grassland (disked areas)	2.32	1.47	63%	0.85
TOTAL	**3.37**	**1.50**	**45%**	**1.87**

Source: Impact Sciences Inc. 2007. Note: These figures based on vegetation mapped prior to the October 2007 fire. Acres and percentages of impacted plant communities include fuel modification zone.

Table 8
Acreages of Plant Communities Located on Lot 3

Plant Community	Total Acres Present	Acres Impacted	Percent Impacted	Acres Remaining
Mixed Sage Scrub	--	--	--	--
Coastal Sage Chaparral Scrub	0.68	0.01	2%	0.67
Mature Eucalyptus Trees	--	--	--	--
Non-Native Grassland (disked areas)	1.92	1.31	68%	0.61
TOTAL	**2.60**	**1.32**	**51%**	**1.28**

Source: Impact Sciences Inc. 2007. Note: These figures based on vegetation mapped prior to the October 2007 fire. Acres and percentages of impacted plant communities include fuel modification zone.

Table 9
Acreages of Plant Communities Located on Lot 4

Plant Community	Total Acres Present	Acres Impacted	Percent Impacted	Acres Remaining
Mixed Sage Scrub	--	--	--	--
Coastal Sage Chaparral Scrub	1.57	0.29	18%	1.28
Mature Eucalyptus Trees	--	--	--	--
Non-Native Grassland (disked areas)	1.89	1.80	95%	0.09
TOTAL	**3.46**	**2.09**	**60%**	**1.37**

Source: Impact Sciences Inc. 2007. Note: These figures based on vegetation mapped prior to the October 2007 fire. Acres and percentages of impacted plant communities include fuel modification zone.

Table 10
Acreages of Plant Communities Located on Lot 5

Plant Community	Total Acres Present	Acres Impacted	Percent Impacted	Acres Remaining
Mixed Sage Scrub	--	--	--	--
Coastal Sage Chaparral Scrub	2.84	0.05	2%	2.79
Mature Eucalyptus Trees	--	--	0%	--
Non-Native Grassland (disked areas)	3.12	2.12	68%	1.00
TOTAL	**5.96**	**2.17**	**36%**	**3.79**

Source: Impact Sciences Inc. 2007. Note: These figures based on vegetation mapped prior to the October 2007 fire. Acres and percentages of impacted plant communities include fuel modification zone.

Table 11
Acreages of Plant Communities Located on Lot 6 (Private Street and Private Open Space)

Plant Community	Total Acres Present	Acres Impacted	Percent Impacted	Acres Remaining
Mixed Sage Scrub	0.89	0.16	18%	0.04
Coastal Sage Chaparral Scrub	0.07	--	--	--
Mature Eucalyptus Trees	0.21	0.12	57%	0.04
Non-Native Grassland (disked areas)	1.71	1.68	98%	1.27
TOTAL	**2.88**	**1.96**	**68%**	**1.35**

Source: Impact Sciences Inc. 2007. Note: These figures based on vegetation mapped prior to the October 2007 fire. Acres and percentages of impacted plant communities include fuel modification zone.

Table 12
Acreages of Plant Communities Located on Lot 7 (Public Open Space)

Plant Community	Total Acres Present	Acres Impacted	Percent Impacted	Acres Remaining
Mixed Sage Scrub	--	--	--	--
Coastal Sage Chaparral Scrub	--	--	--	--
Mature Eucalyptus Trees	--	--	--	--
Non-Native Grassland (disked areas)	1.73	1.70	98%	0.03
TOTAL	**1.73**	**1.70**	**98%**	**0.03**

Source: Impact Sciences Inc. 2007. Note: These figures based on vegetation mapped prior to the October 2007 fire. Acres and percentages of impacted plant communities include fuel modification zone.

6.1 Impacts to Biological Resources

Impact 6.1.1 **Have a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

Substantially reduce the number or restrict the range of an Endangered, Rare, or Threatened species?

Direct Loss of Special Status Plant Species

As previously indicated, suitable habitat for supporting special-status plant species existed primarily within the mixed sage scrub and coastal sage chaparral scrub on the Project Site. However, no special-status plants species were observed on the Project Site during the 2006 and 2007 focused plant surveys conducted by Impact Sciences. Because none of the potentially occurring special-status plants were observed, it is unlikely that a seed bank is present for re-establishment of these plants following the 2007 wildfire. However, there is a low potential that Braunton's milk-vetch could establish itself in the future, since it is documented that this species is known to occur within suitable habitat (i.e., coastal sage scrub, chaparral) on sites following recent burns (CNDDB 2007, CNPS 2007). With the implementation of **Mitigation Measure 1 (MM-1)**, which requires a focused survey for Braunton's milk-vetch during the typical blooming period (February through July) prior to development or grading of the Project Site, impacts from the proposed Project's implementation would be less than significant.

Direct Loss of Special Status Wildlife Species

Monarch butterfly *(Danaus plexippus)*: The Monarch butterfly typically winters in wind-protected tree groves, which includes blue gum, Monterey pine, and cypress trees with nearby fresh standing water and nectar sources throughout coastal California. Because the blue gum trees on the Project Site do not provide suitable wintering habitat for Monarch colonies because they are too exposed and do not afford enough wind and cold protection, and there is no standing fresh water present on the Project Site this species has no potential to occur on the Project Site (http://www.ecology.info/monarch-butterfly-page-4.htm; http://www.monarchwatch.org/tagmig/ winter.htm). The on-site biological surveys conducted over the past two years have shown no use of the Project Site by this species. No direct loss of special-status insect species is expected to occur; therefore, no impacts would occur as a result of the proposed Project's implementation.

California mountain kingsnake (*Lampropeltis zonata pulchra*), coast (San Diego) horned lizard (*Phrynosoma coronatum*), and coast patch-nosed snake (*Salvadora hexalepis virgultea*): The suitable habitat for these California Species of Concern occurs within the mixed sage scrub and coastal sage chaparral scrub on the Project Site. No special-status wildlife species were observed on the Project Site during the 2007 focused surveys conducted by Impact Sciences. No loss of these three reptile species is expected to occur; therefore, no impacts would occur as a result of the proposed Project's implementation.

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) and Bell's sage sparrow (*Amphispiza belli belli*): The suitable habitat for these California Species of Concern occurs within the mixed sage scrub and coastal sage chaparral scrub on the Project Site. No special-status wildlife species were observed on the Project Site during the 2007 focused surveys conducted by Impact Sciences. No loss of these two bird species is expected to occur; therefore, no impacts would occur as a result of the proposed Project's implementation.

San Diego desert woodrat (*Neotoma lepida intermedia*): The suitable habitat for these California Species of Concern occurs within the mixed sage scrub and coastal sage chaparral scrub on the Project Site. No special-status wildlife species were observed on the Project Site during the 2007 focused surveys conducted by Impact Sciences. No loss of San Diego desert woodrat is expected to occur; therefore, no impacts would occur as a result of the proposed Project's implementation.

Increase in Non-Native Plants

As a result of previous human disturbances and the recent 2007 wildfire, a number of non-native plants could establish on the Project Site. Further, non-native plants, which tend to be more adapted to urban environments than native species, are often planted within residential sites. Non-native plants could potentially be introduced into open-space areas near the Project Site, especially, given the disturbed condition of the area that resulted from the 2007 fire. Plants typical of an urban environment already occur to some degree in the region due to the presence of development in the immediate vicinity of the Project Site. The City of Malibu prohibits the introduction of invasive plant species in a project's landscape plan. In addition, with the implementation of **Mitigation Measure 2 (MM-2)**, the impacts from an increase in non-native plants would be less than significant as a result of the proposed Project's implementation.

Impact 6.1.2 **Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?**

Sensitive Plant Communities

No riparian habitat occurs on the Project Site. None of the plant communities identified as occurring on the Project Site are listed as sensitive communities by the California Department of Fish and Game or the US Fish and Wildlife Service; therefore, no significant impacts to sensitive plant communities would occur as a result of the proposed Project's implementation. No streams are mapped on the Project Site.

Impact 6.1.3 **Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

Jurisdictional Resources

There are two erosion features on the Project Site. These erosion channels are evaluated in a separate report.

Impact 6.1.4 **Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?**

Wildlife Movement Corridors

Wildlife movement corridors are linear landscape elements that serve as linkages between historically connected habitat/natural areas, thereby facilitating wildlife movement between these natural areas. Because the Project Site is separated from large areas of open space and occurs in an urbanized area with a residential neighborhood to the south, Winter Mesa Drive and Malibu Bluffs Park to the west, the vacant tow yard facility to the east, Pepperdine University campus to the northwest and PCH to the north, migration or movement of wildlife species to and from large open space areas in the region is not expected to occur through the Project Site.

Moreover, the proposed development would be confined to the currently disturbed portions of the Project Site (i.e., the disked areas containing non-native grasses) and would not substantially impact the native bluff vegetation. The proposed Project is situated at the western end of the Malibu Civic Center

urban area, with a continuous strip of residences to the south along the Pacific Ocean coast. To the north of the Project Site, on the north side of PCH, is property containing a former plant nursery and currently proposed for development as a hotel. Further to the north are residential neighbors to the northeast and Pepperdine University to the northwest. It is only to the north of the residential neighbors and west of Pepperdine University where large areas of open space are found that would function as core habitat for wildlife. Therefore, no impacts to wildlife movement would occur as a result of the proposed Project's implementation.

Impact 6.1.5 **Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?

Sensitive Natural Communities: City of Malibu Environmentally Sensitive Habitat Area (ESHA)

City of Malibu LCP Land Use Plan (Adopted by the California Coastal Commission on September 13, 2002)

Policy 3.1: Areas in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments are Environmentally Sensitive Habitat Areas (ESHAs) and are generally shown on the LUP ESHA Map. The ESHAs in the City of Malibu are riparian areas, streams, native woodlands, native grasslands/savannas, chaparral, coastal sage scrub, dunes, bluffs, and wetlands unless there is site-specific evidence that establishes that one of these habitat areas is not especially valuable because of its special nature or role in the ecosystem. Regardless of whether drainages, streams, or wetlands are designated as ESHA, the policies and standards in the LCP applicable to streams and wetlands shall apply. Existing, legally established agricultural uses, confined wildlife facilities, and fuel modification areas required by the Los Angeles County Fire Department for existing, legal structures do not meet the definition of ESHA.

Policy 3.3: All Areas of Special Biological Significance and Marine Protected Areas (as designated by the California Department of Fish and Game), shall be considered ESHA and shall be accorded all protection provided for ESHA in the LCP.

Policy 3.4: Any area not designated on the LUP ESHA Map that meets the ESHA criteria is ESHA and shall be accorded all the protection provided for ESHA in the LCP. The following areas shall be considered ESHA, unless there is compelling site-specific evidence to the contrary:

- Any habitat area that is rare or especially valuable from a local, regional, or statewide basis.
- Areas that contribute to the viability of plant or wildlife species designated as rare, threatened, or endangered under state or federal law.
- Areas that contribute to the viability of species designated as Fully Protected or Species of Special Concern under state law or regulations.
- Areas that contribute to the viability of plant species for which there is compelling evidence of rarity, for example, those designated 1B (Rare or endangered in California and elsewhere) or 2 (rare, threatened or endangered in California but more common elsewhere) by the California Native Plant Society.

Policy 3.21: Wildfire burn areas shall be allowed to revegetate naturally, except where re-seeding is necessary to minimize risks to public health or safety. Where necessary, re-seeding shall utilize a mix of native plant seeds appropriate for the project site and collected in a similar habitat within the same geographic region, where feasible. Wildfire burn areas that were previously subject to fuel modification or brush clearance for existing structures, pursuant to the requirements of the Los Angeles County Fire Department, may be revegetated to pre-fire conditions.

Analysis: The purpose of an ESHA overlay zone (as defined in Chapter 2 of the Malibu LIP) is to identify resources in order to "protect and preserve areas in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments."

The ESHA overlay provisions apply to those areas designated as an ESHA on the Malibu Local Implementation Plan (LIP) ESHA overlay map and those areas within 200 feet of designated ESHA. Additionally, those areas not mapped as ESHA, but found to be ESHA under the provisions of Section 4.3

of the Malibu LIP are also subject to these provisions. Any area not designated on the ESHA Overlay Map that meets the ESHA definition is ESHA and shall be accorded all the protection provided for ESHA in the LCP.

The LIP for the City of Malibu lists the following habitat criteria as ESHA:

1. Any habitat area that is rare or especially valuable from a local, regional, or statewide basis;
2. Any habitat area that contributes to the viability of plant or animal species that are designated or are candidates for listing as rare, threatened, or endangered under state or federal law;
3. Any habitat area that contributes to the viability of species that are designated "fully protected" or "species of special concern" under state law or regulations;
4. Any habitat area that contributes to the viability of species for which there is other compelling evidence of rarity, for example plant species eligible for state listing as demonstrated by their designation as "1b" (Rare or endangered in California and elsewhere) or designation as "2" (rare, threatened or endangered in California but more common elsewhere) by the California Native Plant Society;
5. Any designated Area of Special Biological Significance, or Marine Protected Area;
6. Streams.

The Project Site is addressed on the City of Malibu Local Coastal Program **ESHA and Marine Resources Map 3: Dan Blocker to Malibu Pier**. The City of Malibu's Local Coastal Program LIP indicates that no ESHA is located on the Project Site. The biological resources on the Project Site are not rare or especially valuable; do not contribute to the viability of plant and wildlife species designated as threatened or endangered under state or federal law; do not contribute to the viability of any fully protected species or species of special concern; do not contribute to the viability of other rare species such as those listed by the California Native Plant Society; nor are they easily damaged by human activities. The on-site channels found on the Project Site are not designated as Special Biological Significance or Marine Protected Area. Therefore, the on-site resources are determined to not qualify as ESHA and there are no published reports found that identify any on-site ESHA.

The Project Site is addressed on the City of Malibu Local Coastal Program **ESHA and Marine Resources Map 3: Dan Blocker to Malibu Pier**. The City of Malibu's Local Coastal Program LIP depicts an ESHA as located off site, immediately to the southwest of the Project Site. The proposed project development footprint has been design to stay a minimum of 100 feet distant from the off-site ESHA, consistent with the policies of the Malibu LCP.

Proposed development of the Project Site would not impact the adjacent ESHA to the southwest, nor would it impact the native plant communities located within the two on-site erosion channels or the native landscape on its southern, southwestern, eastern, or northern boundaries, which are contiguous with the plant community located within the ESHA to the southwest. As previously indicated, a 100-foot buffer consistent with Section 4.6.1 of the LIP would occur between the development zone and the native plant communities located at the southern boundary of the site (See **Figure 2**), and development would occur more than 200 feet from this off-site mapped ESHA.

As described above in **Section 4.0, Environmental Setting**, several special-status plant and wildlife species are known to occur in the mixed sage scrub and coastal sage chaparral scrub plant communities throughout the region. Because of this, several focused plant surveys were conducted in 2006 and 2007 and focused wildlife surveys were conducted in 2007 on the Project Site. Given that no special-status plants or wildlife occur on the Project Site, and because there are no biological resources on the Project Site that meet the requirements of an ESHA (and described on page 123 of the City's LIP), no ESHA currently exists on the Project Site. Therefore, no impact to special-status plant or wildlife species would occur as a result of the implementation of the proposed Project and the proposed Project would be consistent with LIP policies.

Although greater than 200 feet from the proposed Project's development boundary property boundary (including its fuel modification zone), the Pacific Ocean is not identified as an ESHA although the offshore kelp beds are designated in the Malibu LCP as a valuable marine resource. These kelp beds will not be impacted by the proposed Project as potential indirect water quality impacts will be avoided by compliance with the NPDES requirements.

Protected Tree Resources

Native Tree Protection

Policy 3.63: New development shall be sited and designed to preserve oak, walnut, sycamore, alder, toyon, or other native trees that are not otherwise protected as ESHA. Removal of native trees shall be prohibited except where no other feasible alternative exists. Structures, including roads or driveways, shall be sited to prevent any encroachment into the root zone and to provide an adequate buffer outside of the root zone of individual native trees in order to allow for future growth.

Policy 3.64: New development on sites containing oak, walnut, sycamore, alder, toyon, or other native trees shall include a tree protection plan.

Policy 3.65: Where the removal of native trees cannot be avoided through the implementation of project alternatives or where development encroachments into the protected zone of native trees result in the loss or worsened health of the trees, mitigation measures shall include, at a minimum, the planting of replacement trees on site, if suitable area exists on the project site, at a ratio of 10 replacement trees for every one tree removed. Where on-site mitigation is not feasible, off-site mitigation shall be provided through planting replacement trees or by providing an in-lieu fee based on the type, size and age of the tree(s) removed.

Policy 3.66: A fund shall be established to receive the in-lieu fee payments required under **Policy 3.65**. This fund, administered by the Santa Monica Mountains Conservancy, shall be used for the restoration or creation of native tree woodland or savanna habitat areas within the Santa Monica Mountains Coastal Zone. Fees paid to mitigate impacts of development approved within the City may be used to restore habitat anywhere within this area. Priority shall be given to restoration or creation on properties containing areas designated ESHA, and to properties contiguous with existing parklands containing suitable native tree habitat.

Analysis: Pursuant to the City of Malibu's native tree protection ordinance, removal or damage to any native oak, walnut, sycamore, alder, or toyon tree that is at least 6 inches in diameter, or has a combined trunk circumference of any two trunks of at least 8 inches in diameter, as measured 4.5 feet dbh "shall be prohibited except where no other feasible alternative exists" (Chapter 5 of the City of Malibu Local Coastal Program LIP). If impacts to protected trees cannot be avoided, mitigation is required for native tree removal or the loss of or worsened health of native trees resulting from encroachment into the protective zone of a tree.

A protected tree survey was conducted and a subsequent report was prepared (see **Appendix B, Protected Tree Report**). Six Southern California black walnut trees are located within the Project Site boundary, which includes the proposed grading limit line, none of which would be removed or impacted by the grading or development of the proposed Project.

Because there are six Southern California black walnut trees located on the Project Site a protected tree report was prepared, which maintenance and monitoring measures for these six trees. Impacts to protected trees are considered less than significant.

Impact 6.1.6 **Substantially reduce the habitat of a fish or wildlife species?**

Threaten to eliminate a plant or animal community?

Cause a fish or wildlife population to drop below self-sustaining levels?

Direct Loss of Common Wildlife

During construction and grading activities, most common wildlife species are expected to be displaced to adjacent areas, such as the ESHA located to the southwest of the Project Site. At the time of site disturbance, some species of low mobility (particularly burrowing mammals, amphibians, and reptiles) could be disturbed or lost during site preparation and construction. Because of the disturbed nature of the habitat within the majority of the development area (from both previous human disturbances), the Project Site does not provide sufficient resources to support large populations. Therefore, wildlife species diversity as well as the total numbers of wildlife on the Project Site is currently low.

Some common animals known to occur in the region (e.g., western fence lizard, side-blotched lizard, California ground squirrel) may be inadvertently taken as a result of grading activities. Implementation of the proposed Project would not reduce local or regional populations to below self-sustaining levels or otherwise substantially affect common fish or wildlife species populations on the Project Site. Consequently, no significant impacts to common wildlife species are expected to occur as a result of the proposed Project's implementation.

No bird nests were observed within the drainages or along the bluffs that surround the Project Site and no evidence of breeding or nesting occurs within the blue gum trees located on the northern boundary of the Project Site. Common birds that could nest within the coastal sage scrub and chaparral habitats include (but are not limited to) goldfinch, hummingbird, mourning dove, sparrow, and towhee. The blue gum trees could provide nesting habitat for red-tailed hawks; however, the potential is considered to be low since these trees are shorter than the typical height used for nesting by hawks (i.e., typically greater than 50 feet tall in non-forested areas), they are located immediately adjacent to Pacific Coast Highway, and the trees are rather exposed lacking a dense canopy cover which is preferred. Most of the species that would be expected to nest within the surrounding vegetation are better adapted to urban environments. Because the Project Site is situated within an urban setting, adjacent to Pacific Coast Highway, and above residences along Malibu Road to the south, implementation of the proposed Project would not substantially reduce the potential for avian nesting in adjacent vegetation.

Because several common bird species have the potential to nest on the ground, in shrubs, or in trees located on the Project Site in the future, construction activities could result in the direct loss of active nests

of common bird species (including raptors) or the abandonment of active nests by adult birds. The MBTRA and the California Fish and Game Code consider the loss of active nests (nests with eggs or young) of all native bird species as unlawful. Consequently, the loss or abandonment of nests of common bird species as a result of construction-related activities is considered a potentially significant impact and would conflict with state and federal laws. However, with implementation of **MM-5 and MM-6**, which provide for the avoidance of the loss or abandonment of any active nests found on the Project Site prior to grading and construction, impacts are considered less than significant as a result of the proposed Project's implementation.

Loss of Foraging and Nesting Habitat for Common Wildlife Species

The mixed sage scrub, coastal sage chaparral scrub, and mature trees located within the Project Site provide foraging and breeding habitat for a number of small mammals, reptiles, amphibians, and invertebrates that, in turn, provided a source of prey for a variety of common and special-status birds (including passerines and both local and wintering raptors) and mammal species. The development of the Project Site would remove 0.52 acre (22,651.2 square feet) of mixed sage scrub, 0.43 acre (18,730.8 square feet) of coastal sage chaparral scrub, 0.12 acre (5,227.2 square feet) of mature eucalyptus trees, and 11.76 acres of non-native grassland. Although the Project Site currently has the potential to provide habitats for foraging and nesting opportunities for common reptile, mammal, and bird species, the loss of these habitats as a result of the proposed Project's implementation would not substantially reduce the populations of native wildlife or their habitats. Because the Project Site occurs in an area of urban development, migration or movement of mammalian species to and from large open space areas in the region is not expected to occur through the Project Site and no such migration or movement was observed during any visit to the Project Site. Therefore, the loss of these plant communities and associated habitats would not be considered a significant impact as a result of the proposed Project's implementation.

In addition, the plant communities on the Project Site are not unique and occur elsewhere within the surrounding areas. Therefore, the implementation of the proposed Project would not eliminate any plant or animal community since these resources would continue to exist within the surrounding area and other places within the larger region. In addition, development on the Project Site and surrounding parcels will be consistent with the provisions of the LCP providing more than enough area for the continued existence of the urban-tolerant species.

7.0 CUMULATIVE IMPACTS

Cumulative impacts are defined in CEQA as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (*State CEQA Guidelines* Section 15355). Stated in another way, "A cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing relating impacts." (*State CEQA Guidelines* Section 15130 (a)(1)).

The currently known projects which could cause related impacts are the Towing project on the parcel immediately to the east, which does not present significant impacts to biological resources (Impact Sciences, 2006); a proposed hotel to the north of the Project Site (immediately north of PCH); and the Legacy Park. The City of Malibu Local Coastal Program **ESHA and Marine Resources Map 3: Dan Blocker to Malibu Pier** does not identify any ESHA on these parcels.

The development of the Project Site and related projects in the vicinity of the Project Site would have limited adverse effects on the diversity and abundance of native flora and fauna either locally or in the region because there are limited native communities and those present are chiefly avoided in project design features. The Project Site, the ESHA to the southwest, and property of the proposed hotel to the north, contain suitable habitat for potentially occurring special-status wildlife and plant species. Most wildlife species that could be expected to use the Project Site and these adjacent properties are common species (e.g., western fence lizard (*Sceloporus occidentalis*), house sparrow *(Passer domesticus)*, western harvest mouse (*Reithrodontomys megalotis*) that are adapted to the disturbance that is caused by human activity. Because development of the Project Site is confined to previously disturbed areas and has limited impact on surrounding native plant communities, and because the surrounding lands are either developed with urban uses or are adjacent to such uses, it is highly unlikely that implementation of the proposed Project would contribute considerably to cumulative adverse impacts to regional flora and fauna. Therefore, there would not be a cumulative loss of suitable habitat in the region for supporting sensitive biological resources (i.e., special-status species) as a result of the development of the Project Site.

8.0 PROJECT ALTERNATIVES

Because no significant impacts to sensitive resources would occur as a result of the proposed Project's implementation, no project alternatives are discussed.

9.0 MITIGATION MEASURES

9.1 Direct Loss of Special Status Plant Species

MM-1 A focused survey for Braunton's milk-vetch shall occur prior to the issuance of a grading permit. The focused survey shall occur within on-site suitable habitat (i.e., mixed sage scrub and coastal sage chaparral scrub) that may be disturbed as a result of the proposed Project implementation, during the typical blooming period (February through July). This survey shall be conducted in accordance with the methodologies used for performing focused plant surveys per the CDFG's 2000 *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities (Guidelines),* and the CNPS's 2001 *Botanical Survey Guidelines of the California Native Plant Society*.

9.2 Increase in Non-Native Plants

MM-2 Certain ornamental plants are known to escape from planted areas and invade into native plant communities. In order to protect established native plant communities located in the vicinity, the plants listed below in **Table 14, Plant Species to be Avoided During Landscaping on the Project Site**, shall not be planted within the Project Site. This list shall also be distributed to new homeowners and included within any covenants, conditions, and restrictions. The landscaping plans within common areas of the Project shall be reviewed by a qualified botanist who shall recommend appropriate provisions to prevent other invasive plant species from colonizing remaining on site or adjacent natural areas. These provisions may include the following: (a) review and screening of proposed plant palette and planting plans to identify and avoid the use of invasive species; (b) weed removal during the initial planting of landscaped areas; and (c) monitoring for and removal of weeds and other invasive plant species as part of ongoing landscape maintenance activities. The frequency and method of monitoring for invasive species shall be determined by a qualified botanist.

Table 13
Plant Species to be Avoided During Landscaping on the Project Site

Scientific Name	**Common Name**
Acacia ssp.	Acacia
Aeonium sp.	aeonium
Ailanthus altissima	tree of heaven
Aptenia cordifolia	ice plant, baby sun rose
Arctotheca calendula	capeweed
Arundo donax	giant cane, false bamboo
Asarum caudatum	wild ginger
Atriplex semibaccata	Australian saltbush
Buddleia davidii	butterfly bush
Bromus tectorum	cheat grass
Carpobrotus spp.	ice plant
Chrysanthemum coronarium	annual chrysanthemum
Cistus salvifolius	sageleaf rockrose
C. 'Sunset'	magenta rockrose
C. 'Warley rose'	Warley rose rockrose
Cotoneaster horizontalis	cotoneaster
C. adpressus praecox	creeping cotoneaster
C. salicifolius 'Emerald Carpet'	willowleaf cotoneaster
C .s. 'Repens'	willowleaf cotoneaster
Cortaderia spp.	pampas grass
Cytisus spp.	Scotch, Spanish, and Portuguese Broom
Echium fatuosum	pride of Madeira
Encelia farinosa	brittlebush
Erigeron karvinskianus	Latin American fleabane, daisy fleablane
Eucalyptus spp.	eucalyptus, Gum trees
Foeniculum vulgare	fennel
Gazania rigens var. *leucolaena*	trailing gazania
Genista monspessulana	French broom
Hedera helix	English ivy
Iris spp.	iris
Lepidium latifolium	perennial pepperweed
Lobularia maritima	sweet alyssum
Lonicera japonica	Japanese honeysuckle
Myoporum laetum	myoporum
Olea europa	olive tree
Nerium oleander	oleander

Scientific Name	Common Name
Osteospermum fruticosum	shrubby daisybush, trailing African daisy
Pelargonium peltatum	ivy geranium
P. tomentosum	peppermint-scented geranium
Pennisetum clandestinum	Kikuyu grass
Pennisetum setaceum	fountain grass
Phalaris aquatica	harding grass
Platanus acerifolia	London plane tree
Rhus lancea	African sumac
Ricinus communis	castor bean
Rubus discolor	Himalayan blackberry
Schinus spp.	pepper tree
Senecio mikanioides	German-ivy
Taeniatherum caput-medusae	medusa-head
Tamarix spp.	tamarisk
Tropaeolum majus	nasturtium
Vinca minor	periwinkle

Sources: California Native Plant Society. 1992. Non-Native Invasive Plants in the Santa Monica Mountains; Dudley, T. 1998. Exotic Plant Invasions in California Riparian Areas and Wetlands. Fremontia 26(4): 24–29; California Exotic Pest Plant Council. 1996. Lists of Exotic Pest Plants of Greatest Ecological Concern in California. Flora of Santa Monica Mountains, California, Second Edition (Prigge, Thompson and Raven. 1986) and the California Invasive Plant Council's Invasive Plant Inventory (http://portal.cal-ipc.org/weedlist).

9.3 Construction Areas

MM-3 Seeded areas shall be irrigated with temporary overhead irrigation until plants have established as determined by a qualified biologist.

9.4 Protected Trees

MM-4 As required per the City of Malibu protected tree ordinance, mitigation and maintenance measures shall be developed to preserve the six Southern California black walnut trees located on the Project Site. A protected tree report is provided in **Appendix B**.

9.5 Native Nesting Birds (Common and Special-Status)

MM-5 To avoid impacts to native nesting birds, the applicant and/or its contractors shall retain a qualified biologist (with selection to be reviewed by the City) to conduct nest surveys in potential nesting habitat within the Project Site prior to construction or site preparation

activities. Specifically, within 30 days of ground disturbance activities associated with construction or grading, a qualified biologist shall conduct weekly surveys to determine if active nests of bird species protected by the Migratory Bird Treaty Act (MBTA) or the California Fish and Game Code are present in the construction zone or within a distance determined by CDFG or the City of Malibu biologist. Because many birds known to use the project area (including Anna's hummingbird, Cooper's hawk, and loggerhead shrike) nest during the late winter, breeding bird surveys shall be carried out both during the typical nesting/breeding season (mid March through September) and in January and February. The surveys shall continue on a weekly basis, with the last survey being conducted no more than three days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, additional pre-construction surveys will be conducted such that no more than three days will have elapsed between the last survey and the commencement of ground disturbance activities. Surveys shall include examination of trees, shrubs, and the ground within grassland for nesting birds, as several bird species known to occur in the area are shrub or ground nesters, including (but not limited to) California horned lark, kill deer, and mourning dove.

MM-6 If active nests are found, clearing and construction activities within a buffer distance determined by CDFG or the City of Malibu biologist, shall be postponed or halted until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting during the same year. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts to these nests will occur. The results of the survey, and any avoidance measures taken, shall be submitted to the City of Malibu within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.

10.0 REFERENCES

BonTerra Consultants. 1999. Biological Due Diligence Survey Report for 24-Acre Tentative Tract 52487 Project Site in the City of Malibu, Los Angeles County, California.

California Department of Fish and Game. September 2003. Wildlife and Habitat Data Analysis Branch. California Department of Fish and Game Natural Diversity Database. List of California Terrestrial Natural Communities Recognized by The California Natural Diversity Database.

California Department of Fish and Game. California Natural Diversity Database. 2006. Wildlife and Habitat Data Analysis Branch.

California Department of Fish and Game. 2006. *Fish and Game Code of California*.

California Native Plant Society. *Inventory of Rare and Endangered Vascular Plants of California*. 6th ed. www.cnps.org/inventory.

California Native Plant Society Rare Plant Advisory Committee, (December 1983, revised June 2001). *Botanical Survey Guidelines of the California Native Plant Society*.

California Native Plant Society. 1992. *Non-Native Invasive Plants in the Santa Monica Mountains*.

Code of Federal Regulations, as amended. Volume 33: Sections 325 through 328.

Faber, Phyllis M., Keeler-Wolf, Todd, Ornduff, Robert. 2003. *Introduction to California Plant Life*. University of California Press, Berkeley and Los Angeles.

California Exotic Pest Plant Council. 1996. "Lists of Exotic Pest Plants of Greatest Ecological Concern in California." *Fremontia* 26(4): 24–29.

Hickman, James C. ed. 1993. *The Jepson Manual*. University of California Press, Berkeley and Los Angeles, California.

Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Game Report.

Impact Sciences. 2006. Biological Resource Evaluation and Special-Status Plant Survey Results, Towing Project Site, City of Malibu, California.

Jameson, E.W. JR., and Hans J. Peeters. Revised 2004. *California Mammals.* University of California Press.

Malibu LCP. 2002. *City of Malibu Local Coastal Program Land Use Plan*. Adopted by the California Coastal Commission September 13, 2002.

Munz, Phillip. 1974. *A Flora of Southern California.* University of California Press, Berkeley, California.

Sawyer, John O. and Keeler-Wolf, Todd. 1995. *A Manual of California Vegetation.* California Native Plant Society. United Sates of America.

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

Stebbens, Robert. 1985. *Western Reptiles and Amphibians.* Houghton Mifflin Company, New York.

Jepson Online Interchange. 2005. University of California, Berkeley. http://ucjeps.berkeley.edu/interchange.html.

United States Fish and Wildlife Service. 2000. *Guidelines for conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants*. United States Fish and Wildlife Service, Washington D.C.

Wheeler, Brian. 2003. *Raptors of Western North America.* Princeton University Press, Princeton, New Jersey.

APPENDIX A

Biological Resource Evaluation and Special-Status Plant Survey Results

Biological Resource Evaluation
and
Special-Status Plant Survey Results

Crummer Project Site,
City of Malibu, California

Prepared for:

AZ Winter Mesa, LLC
c/o Big Rock Partners LLC
315 South Beverly Drive, Suite 315
Beverly Hills, California 90212

Prepared by:

Impact Sciences, Inc.
803 Camarillo Springs Road, Suite A
Camarillo, California 93012
(805) 437-1900

July 2006

1.0 SUMMARY

One special-status plant species (Catalina mariposa lily [Calochortus catalinae]) was observed within the Ecological Sensitive Habitat Areas (ESHA) adjacent to the site during the focused plant survey. No other special-status plant species were observed on site. Suitable chaparral and sage scrub habitat occurs on the project site for potentially supporting six special-status animal species: California mountain kingsnake (Lampropeltis zonata pulchra), coast (San Diego) horned lizard (Phrynosoma coronatum blainvilli), coast patch-nosed snake (Salvadora hexalepis virgultea), Southern California rufous-crowned sparrow (Aimophila ruficeps canescens), Bell's sage sparrow (Amphispiza belli belli), and San Diego Desert woodrat (Neotoma lepida intermedia). However, no special-status wildlife species were observed on site during the time of the surveys.

The extent of the site has the potential to host many breeding bird species, including raptors; therefore, a qualified biologist should conduct a pre-construction nesting bird survey no later than three days prior to the commencement of ground disturbing activities on the site. Two drainages, flowing generally north to south directly through the project, drain to the Pacific Ocean, and may be protected under the jurisdiction of the U.S. Army Corps of Engineers (ACOE), the California Department of Fish and Game (CDFG), the Regional Water Quality Control Board (RWQCB), and the City of Malibu. Prior to any activities that may impact the on-site drainages, a jurisdictional delineation should be conducted to determine whether on-site waters are considered jurisdictional and, if so, the exact extent/boundary of agency jurisdiction.

The City of Malibu's Local Coastal Program's Land Use Plan (LUP) contains policies for sensitive environmental resources, which include ESHA. This site is located adjacent to an ESHA, as identified in the LUP. The policies in the Malibu LUP require development adjacent to, or within an ESHA to be located so as to minimize impacts related to vegetation clearance and consequent soil erosion, as well as adverse impacts on wildlife resources and visual resources.

2.0 INTRODUCTION

The purpose of this report is to identify those biological resources that may pose a constraint to the development of the Crummer site (site), and to disclose whether any special-status plant species occur on the site or have the potential to occur on the site based on a focused plant survey that was conducted by Impact Sciences in May 2006. Impact Sciences biologists evaluated the potential of on site and adjacent habitats for supporting special-status plant and/or animal species, and whether any trees under the protection of the City of Malibu are located on the site. In addition, biologists identified whether the site could serve as an important regional wildlife movement corridor or habitat linkage to other open space areas, and whether any potential jurisdictional resources under the protection of the ACOE, the CDFG, the City of Malibu, and/or the RWQCB potentially occur on the site.

A preliminary biological resource evaluation formed the basis of identifying whether any focused surveys should be conducted on the site. As a result of conducting this evaluation, several potentially occurring special-status plant species were identified; therefore, Impact Sciences conducted a subsequent presence/absence plant survey on the site. Thus, this report also includes the methods and findings of the focused plant survey conducted on the site. It should be noted that as a result of conducting the initial biological constraints evaluation, the preparation of a formal jurisdictional delineation report (JDR) was recommended; however, the JDR is provided in a separate report. As indicated in **Section 6.0, Potential Constraints/Recommendations**, no other focused surveys or reports were suggested.

3.0 EXISTING CONDITIONS

3.1 General

The Crummer site is located in the City of Malibu, at the junction of the Pacific Coast Highway and Malibu Canyon Road (**Figure 1, Site Vicinity and Project Location**). An ESHA designated by the City of Malibu immediately adjacent to the site is located on the steep downward slopes along the southern and eastern borders to the site. Pacific Coast Highway borders the site to the north, an automobile towing facility occurs to the east beyond the ESHA, and residences and Amarillo Beach occur to the south, beyond the ESHA. Immediately to the west is Malibu Canyon Road, beyond which is the Malibu Bluffs State Recreational Area.

The topography of the site is generally flat, with steep downward slopes to the south and west within the ESHA. Soils on the site are sandy and friable. The site is considered disturbed due to previous weed abatement activities. In addition, there are two large ephemeral drainages that drain to the south, down the slope towards Amarillo Beach. Photographs of the project site and these drainage features are provided in **Figure 2, Site Photos 1 & 2**.



SOURCE: Google Earth – 2006, Impact Sciences, Inc. – June 2006

FIGURE **1**

Site Vicinity and Project Location



Photo 1 – View to the south from top of westernmost drainage



Photo 2 – View to the south from top of easternmost drainage

SOURCE: Impact Sciences, Inc. – June 2006

FIGURE **2**

Site Photos 1 & 2

3.2 On-Site Plant Communities

Vegetation nomenclature used to describe plant communities is based on the CDFG's *List of California Terrestrial Natural Communities* (CDFG 2003) where applicable. Common plant names are taken from J.C. Hickman (1993).

Vegetation on the site (excluding the ESHA) can be characterized as Non-Native Grassland, dominated by non-native grass and weed species. Dominant plants observed within this community include: wild oats *(Avena fatua),* ripgut brome *(Bromus diandrus),* foxtail fescue *(Vulpia myuros)*, black mustard *(Brassica nigra),* tocalote *(Centaurea melitensis),* and sweet fennel *(Foeniculum vulgare).* A few scattered native plant species were observed within this community as well, which include: telegraph weed *(Heterotheca grandiflora)*, purple needlegrass *(Nassella pulchra)*, and narrow-leaved milkweed *(Asclepias fascicularis)*.

Within the two drainages on the site, the vegetation is primarily Coastal Sage Chaparral Scrub, dominated by laurel sumac *(Malosma laurina)*, coyote brush *(Baccharis pilularis)*, black sage *(Salvia mellifera)*, purple sage *(Salvia leucophylla)*, and California sagebrush *(Artemisia californica)*. Several small Mexican elderberry *(Sambucus mexicana)* and willow *(Salix* sp.*)* trees were observed within the drainages as well. This plant community forms a dense canopy, allowing for few plants to grow in the understory.

Within the slopes of the ESHA along the eastern bluffs of the site, the vegetation can be classified as a Mixed Sage Scrub plant community. Dominant plants in this community include black sage, purple sage, California sagebrush, ashy-leaved buckwheat *(Eriogonum cinereum)*, and California buckwheat *(Eriogonum fasciculatum)*. Furthermore, a number of toyon and California walnut trees were observed within the on-site drainages that occur on the site.

3.3 Wildlife Movement Corridors

Wildlife movement corridors are linear landscape elements that serve as linkages between historically connected habitat/natural areas, thereby facilitating wildlife movement between these natural areas. Because the site occurs in an area of urban development to the south, with a tow yard to the east, as well as the Pacific Coast Highway to the north, migration or movement of mammalian species to and from large open space areas in the region is not expected to occur through the project site.

4.0 METHODOLOGY

In order to assess all habitat areas on the site, Impact Sciences biologists walked the extent of the site from Pacific Coast Highway to the north and Malibu Canyon Road to the west, to the southern and eastern boundary of the site that abuts the City of Malibu's ESHA surrounding the site to the south, southeast,

and east. Prior to visiting the site, a query of the CDFG's California Natural Diversity Database (CNDDB) (CDFG 2006) and California Native Plant Society database (CNPS 2006) was conducted to identify special-status plant or animal species previously recorded in the area. The CNDDB lists historical and recently recorded occurrences of both special-status plant and animal species, and the CNPS database lists historical and recent occurrences of special-status plant species. The areas searched include the U.S. Geological Survey (USGS) 7.5-minute quadrangle for Malibu Beach (project location), as well as the surrounding eight USGS quadrangles.

The potential for special-status species to occur on the project site is based on the proximity of the site to recorded occurrences in the CNDDB and CNPS databases, on-site vegetation and habitat quality, topography, elevation, soils, surrounding land uses, habitat preferences, and geographic ranges of special-status plant and animal species known to occur in the region, as well as a 1999 Biological Due Diligence Survey conducted on the site by BonTerra Consulting.

To accurately determine whether potentially occurring special-status plants are present on the site (see, **Table 1, Special-Status Plant Species With Potential to Occur on the Crummer Project Site**, which appears later in this document), presence/absence surveys were conducted during the appropriate blooming period for each plant species with the potential to occur. The methodology used for performing focused surveys followed the CDFG's 2000 *Guidelines For Assessing The Effects Of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities (Guidelines)*, and the CNPS 2001 Policy on *Botanical Survey Guidelines of the California Native Plant Society*.

Two qualified biologists performed the presence/absence plant survey on May 3, 2006. Biologists walked transects spaced at approximately 20 feet apart for 100 percent visual coverage in areas where special-status plants may occur. However, biologists did not conduct focused plant surveys within the adjacent ESHA areas, although, the ESHA was visually inspected for presence of special-status plant species from the top of the ESHA, where the ESHA and the Crummer site abut.

5.0 RESULTS

5.1 Special-Status Plant Survey

No special-status plants previously recorded in the project vicinity were observed on the Crummer site during focused surveys conducted during the appropriate blooming periods. **Table 1** lists those special-status plant species that have the been previously recorded in the project vicinity based on a review of the CNDDB and CNPS databases and have the potential to occur on site or within the ESHA areas. The non-native grassland that covers the majority of the site, as well as the general disturbed condition of the site are not considered suitable habitat for supporting potentially occurring special-status plant species;

however, the ESHA does contain suitable habitat for several potentially occurring special-status plant species. Several Catalina mariposa lilies *(Calochortus catalinae)* were observed in the Mixed Sage Scrub vegetation within the ESHA located along the eastern bluffs of the site. Catalina mariposa lily is a CNPS list 4 plant species (i.e., plants of limited distribution – watch list), which does not have a recorded occurrence by CNDDB or CNPS within the vicinity of the site. The plants were observed in association with purple sage, black sage, California buckwheat, and purple needlegrass.

Table 1
Special-Status Plant Species with Potential to Occur on the Crummer Project Site

Common Name and *Scientific Name*	Status			Habitat Requirements	Potential for Occurrence and Survey Results
	Federal	State	CNPS		
Braunton's milk-vetch *Astragalus brauntonii*	FE	--	1B.1	Occurs in chaparral, coastal sage scrub, valley and foothill grasslands, recent burns, or disturbed areas. Found on stiff gravelly soils overlying granite and limestone, below 1,500 feet above mean sea level (msl).	Suitable coastal sage scrub, grassland, and chaparral habitat exists within the ESHA, and disturbed grassland occurs on the site. This species was not observed during focus surveys conducted on the proposed development portions of the site.
Plummer's mariposa lily *Calochortus plummerae*	--	--	1B.2	Rocky and sandy sites, usually of granitic or alluvial material, within coastal sage scrub, chaparral, valley and foothill grassland, and forests and woodlands; between approximately 295–5,280 feet msl.	Suitable coastal sage scrub, grassland, and chaparral habitat exists within the ESHA, and disturbed grassland occurs on the site. This species was not observed during focus surveys conducted on the proposed development portions of the site.
San Fernando Valley spineflower *Chorizanthe parryi* var. *fernandina*	FSC	SE	1B.1	Sandy soils within coastal sage scrub between approximately 1,000–3,600 feet msl.	Although the site is just out of this plant's elevation range, suitable coastal sage scrub habitat exists within the ESHA. This species was not observed during focus surveys conducted on the proposed development portions of the site.
Parry's spineflower *Chorizanthe parryi* var. *parryi*	FSC	--	3.2	Occurs in coastal sage scrub and chaparral (flat dry slopes and sandy soils).	Suitable coastal sage scrub and chaparral habitat exists within the ESHA. This species was not observed during focus surveys conducted on the proposed development portions of the site.
Dune larkspur *Delphinium parryi* ssp. *blochmaniae*	--	--	1B.2	Occurs on sandy and rocky soils in chaparral and coastal maritime dune habitats.	Suitable chaparral habitat exists within the ESHA. This species was not observed during focus surveys conducted on the proposed development portions of the site.

Common Name and *Scientific Name*	Status			Habitat Requirements	Potential for Occurrence and Survey Results
	Federal	State	CNPS		
Chaparral nolina *Nolina cismontana*	--	--	1B.2	Occurs in chaparral and coastal sage scrub habitats on sandstone, shale, and gabbro substrates.	Suitable coastal sage scrub and chaparral habitat exists within the ESHA. This species was not observed during focus surveys conducted on the proposed development portions of the site.

STATUS KEY:

Federal
FE = Federally Endangered
FSC = Federal Species of Concern

State
SE = State Endangered

CNPS
List 1B = plants Rare, Threatened, Endangered in California and elsewhere
List 3 = more information is needed about this species
.1 = seriously Endangered in California
.2 = fairly Endangered in California
.3 = not very Endangered in California

Table 2, Plant Species Observed on and Adjacent to the Crummer Project Site, is a cumulative list of plant species observed on the Crummer project site. As previously noted, focused plant surveys were not conducted within ESHA areas; however, several of the plants listed in **Table 2** do occur within the ESHA based on visual observation from the Crummer project site.

Table 2
Plant Species Observed On and Adjacent to the Crummer Project Site

Scientific Name	Common Name	Native (Yes/No)
AIZOACEAE	**FIG-MARIGOLD FAMILY**	
Carpobrotus edulis	Iceplant	No
ANACARDIACEAE	**CASHEW FAMILY**	
Malosma laurina	Laurel sumac	Yes
Rhus ovata	Sugarbush	Yes
APIACEAE	**CARROT FAMILY**	
Foeniculum vulgare	Sweet fennel	No
ASCLEPIADACEAE	**MILKWEED FAMILY**	
Asclepias fascicularis	Narrow-leaved milkweed	Yes
ASTERACEAE	**SUNFLOWER FAMILY**	
Ambrosia psilostachya	Western ragweed	Yes
Artemisia californica	California sagebrush	Yes
Baccharis pilularis	Coyote brush	Yes
Baccharis salicifolia	Mulefat	Yes
Carduus pycnocephalus	Italian thistle	No
Centaurea meliensis	Star thistle	No
Conyza canadensis	Horseweed	Yes
Coreopsis gigantean	Giant coreopsis	Yes
Encelia californica	California brittlebush	Yes
Eriophyllum confertiflorum	Golden Yarrow	Yes
Gnaphalium californica	Cudweed	No
Hazardia squarrosa	Common hazardia	Yes
Heterotheca grandiflora	Telegraph weed	Yes
Stephanomeria virgata	Twiggy wreath plant	Yes

Scientific Name	Common Name	Native (Yes/No)
BRASSICACEAE	**MUSTARD FAMILY**	
Brassica nigra	Black mustard	No
Raphanus sativus	Wild radish	No
CAPRIFOLIACEAE	**HONEYSUCKLE FAMILY**	
Sambucus mexicana	Mexican elderberry	Yes
CHENOPODIACEAE	**GOOSEFOOT FAMILY**	
Chenopodium album	Pigweed	No
CONVOLVULACEAE	**MORNING-GLORY FAMILY**	
Ipomoea purpurea	Common morning-glory	No
CUCURBITACEAE	**GOURD FAMILY**	
Marah macrocarpus	Wild cucumber	Yes
FABACEAE	**LEGUME FAMILY**	
Lotus scoparius	Deerweed	Yes
Melilotus officinalis	Yellow sweet clover	No
GERANIACEAE	**GERANIUM FAMILY**	
Erodium cicutarium	Red-stemmed filaree	Yes
HYDROPHYLLACEAE	**WATERLEAF FAMILY**	
Phacelia sp.	Phacelia sp.	Yes
JUGLANDACEAE	**WALNUT FAMILY**	
Juglans californica var. *californica*	Southern California black walnut	Yes
LAMIACEAE	**MINT FAMILY**	
Marubruium vulgare	Horehound	No
Salvia leucophylla	Purple sage	Yes
Salvia mellifera	Black sage	Yes
MYRTACEAE	**MYRTLE FAMILY**	
Eucalyptus sp.	Eucalyptus species	No
ONAGRACEAE	**EVENING PRIMROSE FAMILY**	
Clarkia purpurea ssp. *quadrivulnera*	Winecup fairyfan	Yes
PLANTAGINACEAE	**PLANTAIN FAMILY**	
Plantago lanceolata	English plantain	No
POLYGONACEAE	**BUCKWHEAT FAMILY**	
Eriogonum cinereum	Ashy-leaved buckwheat	Yes
Eriogonum fasciculatum	California buckwheat	Yes
PRIMULACEAE	**PRIMROSE FAMILY**	
Anagallis arvensis	Scarlet pimpernel	No
ROSACEAE	**ROSE FAMILY**	
Heteromeles arbutifolia	Toyon	Yes
SALICACEAE	**WILLOW FAMILY**	
Salix sp.	Willow species	Yes
SCROPHULARACEAE	**SNAPDRAGON FAMILY**	
Mimulus aurantiacus	Bush monkey flower	Yes
SOLANACEAE	**NIGHTSHADE FAMILY**	
Nicotina glauca	Tree tobacco	No
Solanum xanti	Purple nightshade	Yes
ANGIOSPERMS		
MONOCOTYLEDONS		
IRIDACEAE	**IRIS FAMILY**	
Sisyrinchium bellum	Blue-eyed grass	Yes
LILIACEAE	**LILY FAMILY**	
Bloomeria crocea	Goldenstars	Yes
*Calachortus catalinae**	Catalina mariposa lily	Yes
Yucca whipplei	Chaparral yucca	Yes

Scientific Name	Common Name	Native (Yes/No)
POACEAE	**GRASS FAMILY**	
Avena fatua	Wild oats	No
Bromus diandrus	Ripgut brome	No
Bromus hordeaceous	Soft brome	No
Bromus madritensis ssp. *rubens*	Red brome	No
Leymus cinereus	Giant wild rye	Yes
Nassella pulchra	Purple needle-grass	Yes
Piptatherum miliaceum	Smilo grass	No
Vulpia myuros	Foxtail fescue	No

**CNPS list 4 species*

5.2 Native Trees

No native tees that are protected under the City of Malibu's Native Tree Protection Ordinance were observed on the proposed development portions of the Crummer site. However, a number of toyon and California walnut trees were observed within the on-site drainages (ESHA) that occur on the site.

5.3 Wildlife

No mammal species were observed during the site visits; however, the scat of a canine species, likely from a coyote *(Canis latrans)*, was observed in the area of non-native grassland, and the following bird species were observed on or adjacent to the site within the ESHA (all of which have the potential to nest on or adjacent to the site): western scrub-jay *(Aphelocoma californica),* California quail *(Callipepla californica),* Anna's hummingbird *(Calypte anna)*, house finch *(Carpodacus mexicanus),* American crow *(Corvus brachyrhynchos),* song sparrow *(Melospiza melodia),* black phoebe *(Sayornis nigricans)*, Say's phoebe *(Sayornis saya),* European starling *(Sturnus vulgaris),* Bewick's wren *(Thryomanes bewickii),* California thrasher *(Toxostoma redivivum),* and mourning dove (*Zenaida macroura*).

As previously described, the site visit did not include focused surveys for special-status animal species. A list of special-status animal species that have the potential to occur on site is provided below in **Table 3, Special-Status Animal Species With Potential to Occur on the Site**. As previously indicated, the potential for special-status species to occur on the project site is based on the proximity of the site to recorded occurrences in the CNDDB and CNPS databases, on-site vegetation and habitat quality, topography, elevation, soils, surrounding land uses, habitat preferences, geographic ranges of special-status plant and animal species known to occur in the region, as well as a 1999 Biological Due Diligence Survey conducted on the site by BonTerra Consulting.

Table 3
Special-Status Animal Species with Potential to Occur on the Crummer Project Site

Common Name *Scientific Name*	Status		Habitat	Development Constraint
	Federal	State		
California Mountain Kingsnake *Lampropeltis zonata pulchra*	None	SC	Occurs in coniferous forest, oak-pine woodlands, riparian woodland, chaparral, and coastal sage scrub; near sea level to 7,000 ft.	If present, potential significant impact under CEQA
Coast (San Diego) Horned Lizard *Phrynosoma coronatum blainvilli*	None	SC	Occurs in coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland, and coniferous forest on sandy soils, often in association with harvester ants. This species is commonly found on open ground within its habitat.	If present, potential significant impact under CEQA
Coast Patch-nosed Snake *Salvadora hexalepis virgultea*	None	SC	Occurs in coastal sage scrub and chaparral with open ground and rocky outcrops, often in sandy soils.	If present, potential significant impact under CEQA
Southern California Rufous-crowned Sparrow *Aimophila ruficeps canescens*	None	SC	Sparsely vegetated hillsides in coastal sage scrub, rocky slopes; often in association with California sagebrush (*Artemesia californica).*	If present, potential significant impact under CEQA
Bell's Sage Sparrow *Amphispiza belli belli*	None	SC	Occurs in shrublands near the coast, most often coastal sage scrub and chaparral.	If present, potential significant impact under CEQA
San Diego Desert Woodrat *Neotoma lepida intermedia*	None	SC	Coastal scrub with moderate to dense canopies, especially with rock outcrops and rocky cliffs and slopes.	If present, potential significant impact under CEQA

SC = California Species of Special Concern

Based upon the review of the CNDDB database, our knowledge of both common and special-status animal species occurring in the project region, and our evaluation of habitats on the project site, Impact Sciences has determined that following six California Species of Special Concern have a low potential to occur on site: California mountain kingsnake *(Lampropeltis zonata pulchra),* coast (San Diego) horned lizard *(Phrynosoma coronatum blainvilli),* coast patch-nosed snake *(Salvadora hexalepis virgultea),* Southern California rufous-crowned sparrow *(Aimophila ruficeps canescens),* Bell's sage sparrow *(Amphispiza belli belli),* and San Diego desert woodrat *(Neotoma lepida intermedia).*

Because the site has been previously disked and is predominantly covered with non-native weed species, the habitat quality on the site for supporting the aforementioned special-status animal species is considered low. However, the habitat within the adjacent ESHA areas is suitable for potentially supporting the six aforementioned species. The coast horned lizard and coast patch-nosed snake prefer loose sandy soils; therefore, habitat on the site for supporting these two species is considered poor, but conversely, the habitat within the ESHA is good. The range of the coast patch-nosed snake has been

greatly reduced due to disking operations and urban development (Online, http://www.californiaherps.com/, reviewed on 7/05/06); therefore, its presence on the site is unlikely, although, suitable habitat within the adjacent ESHA does occur.

Additionally, the adjacent ESHA areas have the potential to support the desert woodrat, California mountain kingsnake, Southern California rufous-crowned sparrow, and Bell's sage sparrow. The habitat quality on the Crummer site for supporting these species is very low. The Southern California rufous-crowned sparrow and the Bell's sage sparrow could occur within areas of mixed chaparral and within the trees located on the northern boundary of the site; however, measures to avoid direct impacts on these avian species can be easily implemented (see, **Section 6.3 Raptor and Bird Nests**). The potential for the California mountain kingsnake to occur on or adjacent to the site is low, because the location of the site is within the edge of its known range and this species typically occurs at higher elevations within the Santa Monica Mountains.

6.0 POTENTIAL CONSTRAINTS/RECOMMENDATIONS

6.1 Special-Status Plant Species

Because the 2006 presence/absence plant survey was conducted during the appropriate blooming period for those special-status plant species previously recorded in the area, and because the extent of the site was traversed by foot in appropriate habitats for supporting special-status plant species; no special-status plant species are expected to occur on the project site. The Catalina mariposa lily was the only special-status plant species observed (within the ESHA) during the focused plant survey; however, it should be noted that the ESHA areas were not adequately surveyed to determine presence/absence of other potentially occurring special-status plant species.

Development Constraint: While no special-status plant species were observed on the site during the focused plant surveys conducted during the blooming period, the adjacent ESHA areas do contain suitable habitat for supporting potentially occurring special-status plants. As indicated above, several Catalina mariposa lilies *(Calochortus catalinae)* were observed in the Mixed Sage Scrub vegetation within the ESHA located along the eastern bluffs of the site. The Catalina mariposa lily is a CNPS list 4 species, a watch list for plants of limited distribution. If impacts are proposed within the ESHA, direct impacts to this species may be considered a potential significant impact under the California Environmental Quality Act (CEQA).

Recommendation: If any impacts would occur within the ESHA areas, a qualified biologist should conduct a focused plant survey in such areas to determine if any special-status plant would be impacted. In some cases, if a CNPS list 4 species would be impacted by the proposed project, the plants and their

plant parts (bulbs) may be relocated to an on-site mitigation area and maintained for a minimum of two years. In some cases, a minimum 2 to 1 mitigation ratio (two plants introduced for every plant impacted) may be utilized to offset impacts to such sensitive plants. Such on-site mitigation area(s) should be protected from potential direct or indirect impacts (i.e., domestic animals, hikers, etc.), and informative signage should be posted within public vantage points.

Furthermore, during construction activities, adjacent ESHA areas should be delineated with orange construction fencing to avoid potential construction impacts to native vegetation (see **Section 6.6, Ecologically Sensitive Habitat Areas**). A qualified biologist should approve installation of fencing and monitor construction activities to assure that no impacts occur within the ESHA during and after grading operations.

6.2 Special-Status Animal Species

No special-status animal species were observed during the site visits and none are expected to occur on the Crummer site. However, the adjacent ESHA areas do contain suitable habitat for supporting six of the special-status animal species that have been previously recorded in the region pf the towing site.

Development Constraint: As stated in **Table 3**, if a special-status animal species is determined to be present on the site, there may be a significance determination during the CEQA process. During that time, mitigation requirements would be established by the appropriate regulating agency (Lead Agency or Trustee Agency).

Recommendation: If special-status animals are determined to be present, a potential mitigation option may be to purchase mitigation credits from the Santa Monica Mountains Conservancy, if such credits are available.

Exclusionary fencing (e.g., silt fencing) should be installed between the development portions of the site and the ESHA to reduce the potential for impacting an animal during construction activities. Prior to construction activities, a qualified biologist should perform a presence/absence survey within the proposed development areas to assure that no special-status animals are present on the project site. If a Species of Special Concern is observed on the site, it shall be relocated to adjacent suitable habitat areas by a biologist that has possession of a Scientific Collection Permit issued by the CDFG, and a Memorandum of Understanding with the CDFG. Weekly monitoring should be performed during the duration of ground disturbing activities to inspect whether any special-status animal species have moved onto the site. Furthermore, to avoid impacts to special-status bird species, a preconstruction survey should occur during the nesting season if construction would occur during such time. See **Section 6.3, Raptor and Native Bird Nests**, for further discussion of impacts to breeding birds.

6.3 Raptor and Native Bird Nests

Both the large eucalyptus trees that occur near the northern boundary of the site and the ESHA areas have the potential to host several breeding native bird species known to nest in the region of the site. However, during the time of the site visit, no active nests or nesting raptors were observed.

Development Constraint: Breeding birds and their active nests are protected under the Fish and Game Code of California, the federal Migratory Bird Treaty Act, and the California Coastal Commission; therefore, impacts from grading and/or construction-related activities shall be avoided. Furthermore, as stated in the Local Coastal Plan (LCP), the California Coastal Commission requires a formal raptor survey in areas with nesting habitat adjacent to an ESHA (i.e., the large cottonwood tree), if construction activities are to occur during the breeding season of February 1 to August 30.

Recommendation: Where an active bird nest is identified, CDFG G*uidelines* indicate that a 300-foot buffer (or 500-foot buffer for raptors and special-status bird species) should be established around an active nest until the nest is deemed inactive and there is no evidence of a second attempt of using the nest, as determined by a qualified biologist. The buffer area should be delineated with orange construction fencing, and a qualified biologist should verify installation.

The applicant shall have nest surveys conducted by a qualified biologist (e.g., experienced with the nesting behavior of bird species of the region) within 30 days of ground disturbances associated with construction or grading that would occur during the nesting/breeding season of a native bird species potentially nesting on site. The intent of the surveys would be to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the construction zone or within 500 feet of the construction zone. The surveys shall be timed such that the last survey is concluded no more than three days prior to the initiation of vegetation clearance or construction work.

6.4 Native Tree Protection Ordinance

The City of Malibu protects the following native tree species: native oaks *(Quercus* sp.*)*, California walnut *(Juglans californica),* western sycamore *(Platanus racemosa)*, alder *(Alnus rhombifolia)*, and toyon *(Heteromeles arbutifolia).* Native trees proposed for removal or impacts that have a diameter of 6 inches or greater when measured at 4.5 feet above the mean natural grade are protected by the City. In some cases, protected trees that are proposed for removal may be mitigated with replacement trees of the same species at a ratio of 10 to 1. As previously indicated, a number of toyon and California walnut trees were observed within the on-site drainages; however, these trees are located within the ESHA and are subject

to the protection of this zone. No other native trees of the appropriate size and species were observed on site; therefore, a formal tree survey and protection plan is not required.

6.5 Jurisdictional Resources

Two ephemeral drainages flow north to south directly through the project and drain to the Pacific Ocean. These drainages are very likely to be considered "waters of the United States," which would mean that they would be regulated by the ACOE, RWQCB, and the City of Malibu. The CDFG would likely regulate the riparian corridors and associated vegetation within these drainage features.

Development Constraint: Impacts to streams, drainages, and wetlands are regulated by Section 404 of the Clean Water Act, which provides jurisdiction over such waters to the ACOE. Streams, drainages, and wetlands are also protected by Section 1600 of the Fish and Game Code, which provides jurisdiction over streambeds and riparian corridors to the CDFG. Waters that fall under the jurisdiction of the ACOE are also regulated by the RWQCB, by Section 401 of the Clean Water Act. The drainages on the site are likely to be regulated by all three resource agencies. Additionally, impacts to jurisdictional water resources are considered potentially significant under CEQA and any impact to the waters or streambeds require the appropriate permits from the CDFG and/or, the ACOE, the RWQCB, and the City of Malibu.

Recommendation: Where it is determined that project activities will impact jurisdictional waters or streambeds, and that permits from the CDFG, ACOE, RWQCB, and City of Malibu are required, appropriate mitigation is determined by the permitting agency. Often mitigation will involve on-site restoration of disturbed jurisdictional waters and associated vegetation, or, where impacts to jurisdictional waters are permanent, additional mitigation may be required. Payment into an in-lieu fee payment program may also be an option for mitigation, if on-site mitigation is not possible and determined to be appropriate by the agencies.

It is recommended that, prior to any activities that may impact the on-site drainages, a jurisdictional delineation be conducted by a qualified biologist to determine whether these water ways are jurisdictional and, if so, map the exact extent/boundary of agency jurisdiction. The delineation would then be verified by the regulating agencies. If development would impact the drainage, then pre-permit consultation with the regulating agencies is recommended to identify potential permitting issues and acceptable mitigation.

6.6 Environmentally Sensitive Habitat Areas

As previously mentioned, the project site is adjacent to an ESHA, as designated by the Local Coastal Plan and Land Use Plan (LUP). The LUP describes restrictions on building in and around the ESHA, as well

as the necessary biological studies required. The proposed grading limits do not enter the ESHA located on site; however, the site is located immediately adjacent to the ESHA.

Constraint: Development occurring adjacent to an ESHA requires a 100-foot buffer between native vegetation and the ESHA in order to assure that the biological resources within the ESHA are protected.

Recommendation: As stated in the LUP/LCP, if grading limits cannot be adjusted accordingly, the impacts to the ESHA shall be analyzed and one of the following Habitat Impact Mitigation methods should be implemented: habitat restoration, habitat conservation, or an in-lieu fee for habitat conservation.

All proposed development areas within 100 feet from the ESHA should be delineated with orange construction fencing to avoid potential construction impacts to such areas. A qualified biologist should approve the installation of fencing and periodically monitor construction activities to assure that no impacts occur during or after grading operations. All mitigation plans are subject to the approval of the City of Malibu.

7.0 REFERENCES

California Department of Fish and Game. 2003a. Wildlife and Habitat Data Analysis Branch. *California Department of Fish and Game Natural Diversity Database*: Commercial version (May 27, 2005).

California Department of Fish and Game. September 2003b. Wildlife and Habitat Data Analysis Branch. *California Department of Fish and Game Natural Diversity Database. List of California Terrestrial Natural Communities Recognized by The California Natural Diversity Database*.

California Native Plant Society, *Inventory of Rare and Endangered Vascular Plants of California*. 6th edition. [Online inventory] www.cnps.org/inventory.

California Native Plant Society Rare Plant Advisory Committee, (December 1983, revised June 2001). *Botanical Survey Guidelines of the California Native Plant Society*.

Faber, Phyllis M., Keeler-Wolf, Todd, Ornduff, Robert. 2003. *Introduction to California Plant Life*. University of California Press, Berkeley and Los Angeles. California. 341 pp.

Hickman, James C. ed. 1993. *The Jepson Manual*. University of California Press, Berkeley and Los Angeles, California. 1400 pp.

Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Game Report. 156 pp.

Malibu LCP. 2002. *City of Malibu Local Coastal Program Land Use Plan*. Adopted by the California Coastal Commission September 13, 2002. *Land Use Plan Policies*.

Sawyer, John O. and Keeler-Wolf, Todd. 1995. *A Manual of California Vegetation.* California Native Plant Society. United Sates of America. 471 pp.

Jepson Online Interchange. 2005. University of California, Berkeley. http://ucjeps.berkeley.edu/interchange.html.

APPENDIX B

Protected Tree Report

PROTECTED TREE REPORT

The Crummer Project Site

City of Malibu, California

Prepared for:

AZ Winter Mesa, LLC
c/o Big Rock Partners LLC
315 South Beverly Drive, Suite 315
Beverly Hills, California 90212

Prepared by:

Impact Sciences, Inc.
803 Camarillo Springs Road, Suite A
Camarillo, California 93012
(805) 437-1900

June 2008

TABLE OF CONTENTS

Section		Page
1.0	EXECUTIVE SUMMARY	1
2.0	INTRODUCTION	1
2.1	Purpose	2
2.2	Project Description	2
2.2	Environmental Setting	2
3.0	SURVEY METHODS	4
4.0	RESULTS	6
5.0	SUGGESTED MITIGATION MEASURES	7
5.1	Development Standards	7
5.2	Maintenance	7
5.3	Monitoring	8
5.4	Monitoring Report	8

Appendices

A – Protected Tree Survey Data

LIST OF FIGURES

Figure		Page
1	Site Vicinity and Project Location	3
2	Site Plan and Location of California Black Walnut Trees	5

LIST OF TABLES

Table		Page
1	Summary of Tree Survey Data on the Crummer Project Site	1

1.0 EXECUTIVE SUMMARY

Southern California black walnut trees are the only City-recognized protected tree located on the Crummer site. A total of six southern California black walnut trees (subject to the City of Malibu's Native Tree Protection Ordinance) occur within the Crummer project site boundary, none of which would be removed or impacted by the proposed Crummer residential development project.

All southern California black walnut trees are located outside of the proposed grading limits and proposed grading limits are not located within their protective zone (See, **Table 1 Summary of Tree Survey Data on the Crummer Project Site**).

Table 1
Summary of Tree Survey Data on the Crummer Project Site

Summary of California Black Walnut Survey Data		Tree Tag No.
Total Number of Trees Located on the Towing Project Site	6	1-5, 25
Total Number of Trees that Would be **Removed**	0	--
Total Number of Trees that May be **Encroached** Within Their Protective Zone	0	--
Total Number of Trees That Would **Not** be Impacted	6	1-5, 25
Total Number of Trees that Would Require a Coastal Development Permit (Removed)	0	--

2.0 INTRODUCTION

Pursuant to the City of Malibu's Native Tree Protection Ordinance, removal or damage to any native oak, walnut, sycamore, alder, or toyon tree that is at least 6 inches in diameter, or has a combined trunk circumference of any two trunks of at least 8 inches in diameter, as measured 4.5 feet above the mean natural grade (i.e., diameter at breast height [dbh]), "shall be prohibited except where no other feasible alternative exists" (Chapter 5 of the City of Malibu Local Coastal Program's Local Implementation Plan [LIP], dated September 13, 2002). If impacts to protected trees cannot be avoided, mitigation is required for native tree removal or the loss of or worsened health of native trees resulting from encroachment into the protective zone[1] of a given tree.

1 The area within the dripline of a protected tree and extending to a point at least 5 feet outside the dripline, or 15 feet from the trunk[s] of a tree, whichever distance is greater.

2.1 Purpose

As required by the City of Malibu, the purpose of this protected tree report is to provide information to the Planning Department and California Coastal Commission on any protected trees that may be removed or damaged by the development of the Crummer Project Site. The parameters used to evaluate each tree are described on the following pages under heading **3.0, METHODS**. A spreadsheet showing data collected for each protected tree surveyed is provided in **Appendix A**.

2.2 Project Description

The property at 24200 Pacific Coast Highway known as the "Crummer Site" is a 23.87 acre parcel of land located in the City of Malibu immediately east of Malibu Bluffs Park, south of Pacific Coast Highway and north of Malibu Road (**Figure 1, Site Vicinity and Project Location**). The site consists of gently sloping areas leading to steeper slopes toward Pacific Coast Highway, and a steep slope on the ocean side down to Malibu Road. There are no existing structures or development currently on the property.

The proposed project consists of creating five (5) residential parcels ranging in size from 2.59 acres to 5.79 acres, area for a new private street of approximately 1.56 acres, private open space of 1.39 acres, and proposed public open space of approximately 2 acres to be dedicated to the City of Malibu for recreational purposes and parking. A gate house is proposed to access a new 34' wide, tree-lined private street ending in a cul-de-sac that will serve as a fire department turn-around. The project includes landscape buffers and sidewalks on each side of the new road. These areas will be landscaped with appropriate street trees, lawn, and ornamental plantings conforming to the approved City of Malibu Plant list for "Zone B."

2.2 Environmental Setting

The topography of the site is generally flat, with steep downward slopes to the south and east, and moderate slopes to the north towards PCH. Soils on the site are sandy and friable. The site is considered disturbed due to previous weed abatement activities (i.e., disking). In addition, there are two ephemeral drainages that drain to the south towards Amarillo Beach.

The majority of the Crummer site has been annually disked. These disked areas consist of ruderal non-native grasses and weeds. The northern, eastern, and southern boundaries of the site containing native vegetation along the slopes and within the two drainages were scorched by the October 2007 wildfire (the project site was not burned during the January 2007 fire); however, the majority of the native vegetation within the burned areas is recovering. The northern and eastern slopes are covered with a Mixed Sage Scrub plant community, and the southern slopes are covered with a Coastal Sage Chaparral Scrub plant community. These areas containing native vegetation have not been previously disturbed by disking operations.



SOURCE: Google Earth – 2006, Impact Sciences, Inc. – June 2006

FIGURE **1**

Site Vicinity and Project Location

There are five southern California black walnut trees *(Juglans californica* var. *californica)* located at the northeastern corner of the property, all of which were scorched by the 2007 wildfire. There is also one California black walnut tree located on near the southwestern boundary of the site (See, **Figure 2 Crummer Site Plan and Location of California Black Walnut Trees**). Based on a visit to the site in February 2008, all six walnut trees are alive and have sprouted new foliage.

3.0 SURVEY METHODS

Evaluations of the California black walnut trees were conducted on March 8, 2007 and again on February 19, 2008. All California black walnut trees protected under the parameters of the City's Tree Protection Ordinance were surveyed. The project site was traversed on foot through areas where trees occur. The locations of surveyed trees were recorded from the base of the tree with a Trimble® Global Positioning System (GPS) with sub-foot accuracy. The GPS stores the spatial data, including the evaluation criteria required by the City's Tree Protection Regulations.

All trees surveyed were tagged with a unique number for identification purposes with 1-inch, non-corrosive, all-weather metal tags, and mapped on an aerial photograph using a Global Information System (GIS). An overview of the locations of all trees surveyed within the Crummer project site boundary are depicted above in **Figure 2,** which includes all protected trees surveyed within the proposed grading limits.

Evaluation criteria of the protected trees surveyed included the following:

Tree Characteristics

- Measuring the diameter of the trunk of each (ordinance size) tree using a forester's steel diameter-equivalent tape measure. Trees with multiple trunks were measured at breast height and measurements for every trunk were inputted in the field.
- Measuring crown height and radius for each tree in eight directions (north, northwest, west, southwest, south, southeast, east, and northeast);
- Characterizing the balance or symmetry of each tree based on the crown radius measurements and whether or not the tree was leaning or unstable; and



SOURCE: PSOMAS - 2007, GlobeXplorer - 2007, Impact Sciences, Inc. - August 2008

FIGURE **2**

California Black Walnut Locations on the Project Site

856-002•08/08

FILE: \\Prometheus\GIS-Data\856-002_Malibu_Bluffs\MXD\Trees\trees_8x11_022108.mxd

Physical Condition

- Identification of damage caused by pathogens or insect pests, by natural causes such as lightning, or from human activity;

- Evaluation of vigor based on such parameters as amount of new growth, leaf color, abnormal bark, dead wood, evidence of wilt, excessive necrosis or leaf necrosis, thinning of crown, etc.; and

- Assessment of overall health based on the evaluation of vigor, presence of damage, and comparison of archetype tree of same species.

Recommended Measures

- Identification of whether the tree requires safety pruning, such as the removal of dead or weak branches, and if a cable or brace should be installed if the tree is to be saved and would not be impacted by proposed development.

Grade

- A subjective alphabetical ranking ("A" being best and "F" being worst) was assigned for vigor, overall health, aesthetic value, and balance for each tree based on the criteria described above.

  "A" = Excellent: A healthy and vigorous tree characteristic of its species and reasonably free of any visible signs of stress, disease, or pest infestation.

  "B" = Good: A healthy and vigorous tree with minor visible signs of stress, disease, or pest infestation. Some maintenance measures may need to be implemented, such as pruning of dead wood or broken branches.

  "C" = Fair: Although healthy in overall appearance, there is abnormal amount of stress or disease/insect infestation, and a substantial amount of maintenance may be needed.

  "D" = Poor: A tree that may be exhibiting an amount of stress, disease, or insect damage greater than is expected for the species. The tree may be in a state of rapid decline, which may vary greatly in signs of dieback, necrosis, or other symptoms caused by pathogens or insect pests.

  "E" = Nearly Dead: An unhealthy tree in which mortality is inevitable. Examples of such trees include those that may show signs of disease and/or pest infestation, have a substantial amount of defoliation, and appear to be a safety hazard.

  "F" = Dead: This tree has no foliage and exhibits no sign of life or vigor.

4.0 RESULTS

California black walnut trees are the only City-recognized protected tree located on the Crummer site. As depicted in **Figure 2**, a total of 6 California black walnut trees (subject to the City of Malibu's Native Tree Protection Ordinance) occur on the Crummer project site boundary, none of which would be impacted or

removed as a result of the Crummer residential development project. A summary of the field data collected from the 2007/2008 tree survey is provided in **Appendix A**.

5.0 SUGGESTED MITIGATION MEASURES

Provided below are suggested development standards, mitigation, and monitoring measures to implement into the project to ensure that the conditions outlined in Chapter 5 of the City's LCP Local Implementation Plan are fulfilled.

5.1 Development Standards

Protective Fencing

- Protective fencing shall be used around the outermost limits of the protected zones of the native trees within or adjacent to the construction area that may be disturbed during construction or grading activities. Before the commencement of any clearing, grading, or other construction activities, protective fencing shall be placed around each applicable tree. Fencing shall be maintained in place for the duration of all construction. No construction, grading, staging, or materials storage shall be allowed within the fenced exclusion areas, or within the protected zones of any on site native trees. Installation of protective fencing shall be verified by a qualified arborist prior to the initiation of ground disturbing activities.

Grading Restrictions Near Protective Zones

- Care must be taken to limit grade changes near the protective zone of any protected tree. Grade changes can lead to plant stress from oxygen deprivation. Minor grade changes further from the trunk are not as critical but can negatively affect the health of the tree if not carefully monitored by a City-approved arborist.

Equipment Storage

- No storage of equipment, supplies, vehicles, or debris shall be permitted within the protective zone of a protected tree.

- No dumping of construction wastewater, paint, stucco, concrete or any other cleanup waste shall occur within the protective zone.

- No temporary structures shall be placed within the protective zone of any remaining protected tree.

5.2 Maintenance

- Healthy trees, if not maintained, will usually grow beyond their ability to support themselves and fail at their naturally occurring weakest point. This is typically at a branch union at or near the main crotch of a tree. Weight reduction pruning and/or cabling is important in any tree preservation

program. Pruning of protected trees within residential neighborhoods is recommended every four to six years.

- Pruning of all preserved southern California black walnut trees shall include the removal of dead wood and stubs and light pruning of branches 2 inches in diameter or less.

- In no case shall more than 20 percent of the tree canopy of any protected tree be removed. Cuts over 2 feet in diameter shall require a pruning permit from the City. After pruning, installation of support cables to prevent future main crotch failures may be necessary based on a City-approved arborist's determination.

5.3 Monitoring

- Damage to protected trees must be avoided by workers and equipment during construction activities.

- Following construction activities, a qualified biologist or City-approved arborist shall verify that grading activities did not damage any of the southern California black walnut trees that are preserved on the site.

5.4 Monitoring Report

- Following the completion of grading activities, a monitoring report shall be provided to the City indicating whether any southern California black walnut trees were impacted.

- If it is determined that any walnut tree was impacted by the grading activities, replacement trees shall be planted. All protected walnut trees removed/impacted shall be replaced by a tree of the same species at a ratio of 10:1. All replacement trees shall be seedlings less than one year old, and if feasible, planted on site within area(s) of suitable habitat. Suitable habitats include such conditions as soil type, drainage, and depth to water; or

- Where on-site mitigation through replacement trees is not feasible, off-site mitigation shall consist of tree replacement at a ratio of at least 10:1, at a suitable site that is restricted from future development. All off-site replacement trees shall be seedlings that are less than one year old and planted in areas of suitable habitat; or

- An in-lieu fee, paid into the Native Tree Impact Mitigation Fund of the Sana Monica Mountains Conservancy, shall be provided for the unavoidable impacts of the loss of native tree habitat. The fee shall be based on the type, size, and age of the tree(s) proposed for removal or encroachment.

- Where the planting of replacement trees is required as mitigation, each replacement tree shall be monitored annually for a period of not less than 10 years.

- If replacement trees are required, monitoring reports shall be provided to the City annually and at the conclusion of the 10-year monitoring period that document the success or failure of the mitigation. If performance standards are not met by the end of 10 years, the monitoring period shall be extended until the standards are met. Monitoring reports shall include the results of annual monitoring evaluation criteria for each protected California black walnut tree on the Crummer site.

APPENDIX A

Protected Tree Survey Data

Appendix A - Crummer Site Tree Survey Data

	Tree Number	1	2	3	4	5	25
Tree Characteristics	Species						
	So. CA black walnut	X	X	X	X	X	X
	Other						
	Heritage Tree						
	Trunk Diameter	9,9,3,3, 3,2,2	7,4,3.5, 3,3,3,3, 2,2,1	4,3.5,3, 2,2,1,1	4,4,3,3, 3,3,3,2. 5,2,2,1	5,5,4.5, 4,4,4,4, 3.5,3.5, 3,3,3,3, 2.5,2.5, 2,2	5,5,5,4, 4,4,3,3
	Tree Height	25	17	16	17	21	25
	Canopy North	20	6	17	18	18	17
	Canopy West	17	10	0	10	20	15
	Canopy South	17	15	20	13	23	12
	Canopy East	25	12	16	16	19	15
Physical Condition	Tree Declining						
	Broken/Dead Limbs	X		X	X	X	
	Sparse Foliage						
	Excessive Chlorosis/Necrosis						
	Mainstem Dieback						
	Poor Tip Growth						
	Cavity						
	Weak Crotch						
	Hollow Trunk						
	Trunk Exudation						
	Regrown Stump						
	Exfoliating Bark						
	Insect Damage		X				
	Diseased						
	Mistletoe						
	Leaning						
	Excessive Water Shoots						
	Surface Roots						
	Fire Damage	X	X	X	X	X	X
Measures	Safety Prune						
	Remove Deadwood	X		X	X	X	
	Cable/Brace						
Rating	Vigor	B	B	A	A	A	B
	Health	B	B	B	B	B	B
	Aesthetics	B	B	B	B	B	B
	Balance	C	B	D	B	B	B
Impact	Removal						
	Encroached						
	No Impact	X	X	X	X	X	X
Comments							