

Appendix F
Biological Resource Assessment

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Appendix F-1
Biological Resources Assessment
(June 24, 2008)

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BIOLOGICAL RESOURCES ASSESSMENT

SITE D

City of Diamond Bar, Los Angeles County, California

June 24, 2008





BIOLOGICAL RESOURCES ASSESSMENT

SITE D

City of Diamond Bar, Los Angeles County, California

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June 24, 2008

Biological Resources Assessment

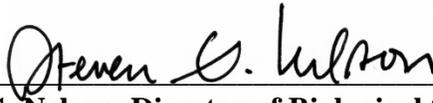
Site D City of Diamond Bar, Los Angeles County, California

The undersigned certify that this report is a complete and accurate account of the findings and conclusions of a general biological assessment for the above-referenced project.

PCR Services Corporation



Crysta Dickson, Senior Biologist



Steven G. Nelson, Director of Biological Services

June 24, 2008

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EXECUTIVE SUMMARY

BACKGROUND

TRG Land, Inc. (Applicant) is requesting administrative and discretionary action approval for the implementation of a mixed use development project at the Site D Project Site (the “study area”). The study area occupies a total of 30.4 acres at the intersection of South Diamond Bar Boulevard and South Brea Canyon Road within the City of Diamond Bar, Los Angeles County, California.

SCOPE AND METHODOLOGY

The scope of this assessment includes a description of all methods employed, survey results, and documentation of existing biological resources within the study area, and the determination of potential impacts associated with the proposed project for the purpose of complying with the California Environmental Quality Act (CEQA). Methods of study include a review of relevant literature, field surveys, and an impact analysis. This report is consistent with accepted scientific and technical standards and the requirements of the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG). While general biological resources are discussed in a summary manner, the focus of this assessment is those resources considered to be sensitive.

EXISTING CONDITIONS

The study area consists of approximately 30.4-acres located at the intersection of South Diamond Bar Boulevard and South Brea Canyon Road in the City of Diamond Bar, Los Angeles County, California. Topography within the study area consists of steep-sloping hills and ridges along the eastern section and westward sloping hills dropping in elevation to where the study area abuts South Diamond Bar Boulevard. Elevations range from approximately 800 feet above mean sea level (MSL) in the northeast to approximately 700 feet above MSL in the southwest. Surrounding land uses include residential and commercial development to the north and west and residential development to the east and south.

A majority of the study area is disturbed from routine disking activities and other human disturbances such as off-road recreational activities and localized areas of trash dumping. The study area supports a U.S. Geological Survey (USGS) designated blue-line stream and associated tributaries which are vegetated with riparian plant species. Native vegetation within the study area is limited to California walnut woodland, southern willow scrub, mule fat scrub, and

goldenbush scrub intermixed with ruderal vegetation. A portion of Brea Creek Flood Control Channel traverses the western portion of the study area.

The study area contains three jurisdictional drainages that total approximately 2,125 linear feet and support approximately 0.20 acre of U.S. Army Corps of Engineers/Regional Water Quality Control Board (ACOE/RWQCB) jurisdictional non-wetland “waters of the U.S.”/“waters of the State”, of which 0.01 acre is wetlands, and approximately 4.10 acres of California Department of Fish and Game (CDFG) jurisdictional streambed and associate riparian habitat.

Seventy five southern California black walnut (*Juglans californica* var. *californica*), California Native Plant Society (CNPS) List 4.2, two coast live oak trees (*Quercus agrifolia*), and six willow trees (*Salix* sp.) that met the size requirements of the City of Diamond Bar’s Tree Preservation and Protection Ordinance (Municipal Code, Title 22 Development Code, Article 3 Site Planning and General Development Standards, Chapter 22.38 Tree Preservation and Protection), were counted, recorded, and assessed within the study area.

IMPACTS

There is the potential for nesting birds in areas of the study area that support natural communities. Potentially significant impacts may occur to nesting birds as a result of project construction, which would violate the federal Migratory Bird Treaty Act (MBTA).

The proposed project will result in impacts to approximately 2,125 linear feet of streambed that supports approximately 0.20 acre of ACOE/RWQCB jurisdictional “waters of the U.S./waters of the State”, of which 0.01 acre is wetlands, and approximately 4.10 acres of CDFG jurisdictional streambed and associated riparian habitat. The regulatory agencies have a no-net-loss policy for wetlands. Therefore, without replacement of the loss of wetland functions and values, impacts to jurisdictional features are considered potentially significant.

Project implementation would result in the loss of 1.5 acres California walnut woodland and 0.6 acre of California walnut woodland/disturbed, both considered sensitive plant communities. In addition, the removal of two coast live oak, 75 southern California black walnut, and six willow trees may conflict with the City of Diamond Bar’s Tree Preservation and Protection Ordinance. Therefore, these impacts are considered potentially significant.

MITIGATION

Mitigation for potential impacts to nesting birds will be in accomplished through either avoidance by removing vegetation outside of the nesting season or construction monitoring by a qualified biologist to avoid disturbance to active nests if construction is to occur during the nesting season.

Mitigation for impacts to ACOE/RWQCB and CDFG jurisdictional drainages will include off-site replacement of ACOE/RWQCB jurisdictional waters and wetlands at a ratio no less than 2:1 and off-site replacement of CDFG jurisdictional streambed and associated riparian habitat at a ratio no less than 2:1.

Measures to mitigate impacts to protected trees will be accordance with the City of Diamond Bar's Tree Preservation and Protection Ordinance. Impacts to protected trees shall be mitigated and replaced at a minimum of 3:1 for residential parcels, commercial, and industrial properties greater than 20,000 square feet at the approval Director of the City's Community and Development Services Department or Commission. In addition, no person shall remove or relocate a protected tree or develop within the protection zone of a protected tree without first obtaining a Tree Removal Permit from the Director of the City's Community and Development Services Department. Impacted trees will be mitigated by either relocating or replacing the trees on-site, replacement of trees on public property, or making a monetary donation to a Tree Replacement Fund.

Measures to mitigate impacts to California walnut woodland will be in concert with the replanting of trees protected by the City of Diamond Bar's Tree Preservation and Protection Ordinance. To the extent possible, southern California black walnut trees will be planted on manufactured slopes within the development. A mitigation plan shall be prepared that will describe the number, size, and location of walnut trees to be planted and outline success criteria and adaptive management procedures to ensure that the mitigation plan is successful. In addition, due to the temporal loss of mature trees, in-lieu fee credits shall be purchased with the Puente Hills Landfill Native Habitat Preservation Authority at the discretion of the City of Diamond Bar and the California Department of Fish and Game.

UNAVOIDABLE SIGNIFICANT IMPACTS

The proposed project, inclusive of all mitigation measures, will mitigate all potentially significant impacts to nesting birds, jurisdictional features, regulated trees, and California walnut woodland to less than significant.

1.0 INTRODUCTION

1.1 BACKGROUND AND PURPOSE

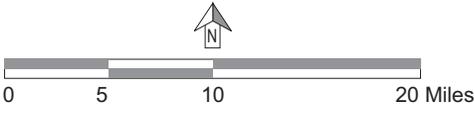
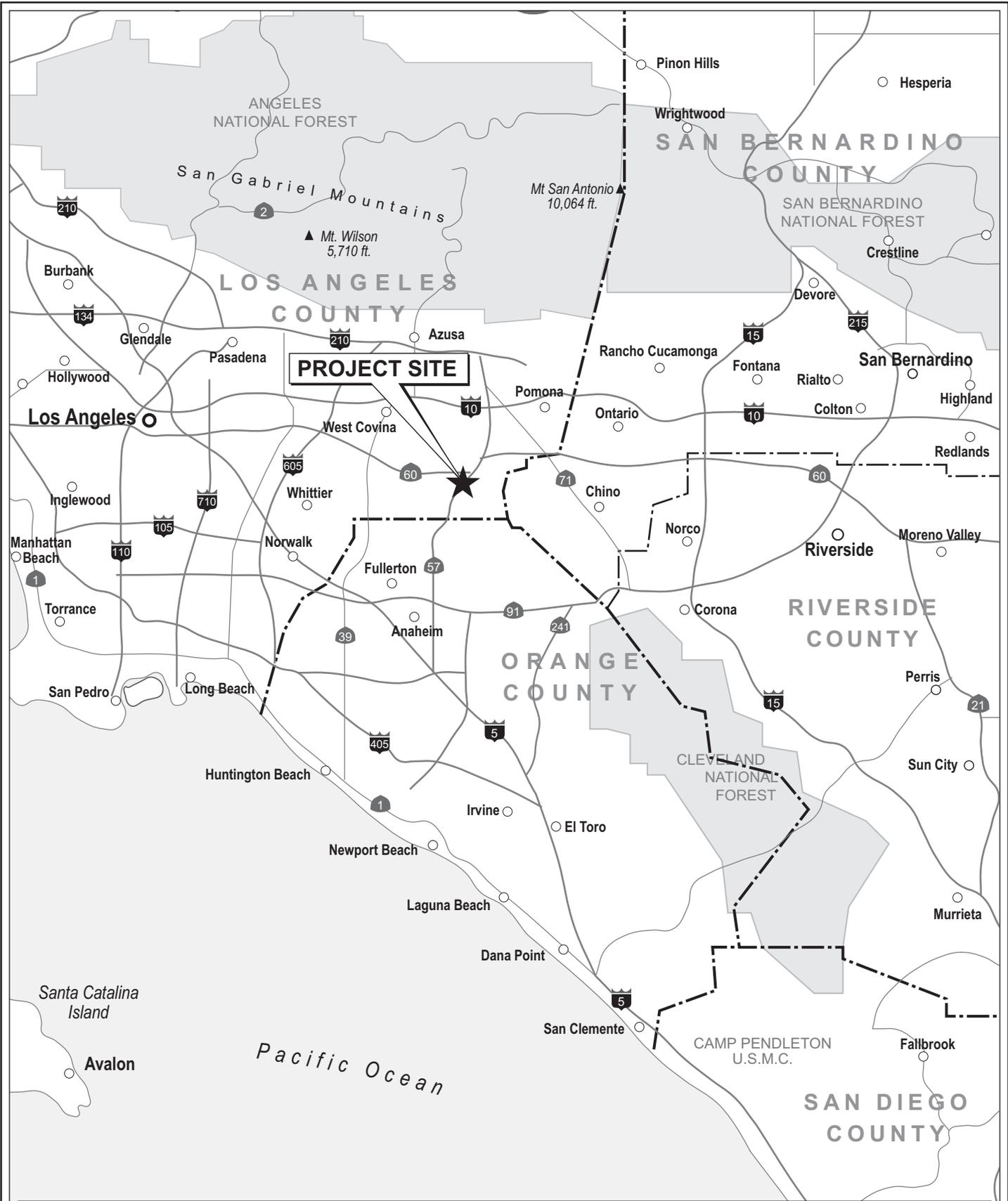
This report presents the findings of an in-depth biological resources assessment conducted by **PCR Services Corporation (PCR)** within the 30.4-acre Site D Project Site (the “study area”) located in the City of Diamond Bar, Los Angeles County, California. The submittal of this report is intended to satisfy the biological resource needs of the California Environmental Quality Act (CEQA) process. TRG Land, Inc. (Applicant) is requesting administrative and discretionary action approval for the implementation of a mixed use development project that would construct approximately 202 dwelling units on 10.1 acres of the study area, including bike and pedestrian trails, walks, and recreational facilities, and a commercial component that will include 153,985 square feet of commercial development on 10.1 acres. The remaining 10.2 acres consists of manufactured slopes and other infrastructure.

1.2 STUDY AREA

The study area consists of approximately 30.4 acres located in the City of Diamond Bar, Los Angeles County, California (Figure 1, *Regional Map*, on page 2). The study area is situated east of State Route 57 (SR 57) where South Diamond Bar Boulevard and South Brea Canyon Road intersect. The study area can be found on the U.S. Geological Survey (USGS) 7.5-minute topographic Yorba Linda quadrangle map, Section 29, T. 2 S., R. 9 W. (Figure 2, *Vicinity Map*, on page 3). Topography within the study area consists of steep-sloping hills and ridges along the eastern section and westward sloping hills dropping in elevation to where the study area abuts South Diamond Bar Boulevard. Elevations range from approximately 800 feet above mean sea level (MSL) in the northeast to approximately 700 feet above MSL in the southwest. Surrounding land uses include residential and commercial development to the north and west and residential development to the east and south. Refer to Figure 3, *Aerial Photograph*, on page 4, for an aerial view of the study area.

1.3 SCOPE OF STUDY

The scope of this assessment encompasses the comprehensive documentation of existing biological resources within the study area. An extensive literature review initialized the study. The results of the literature review provided information on species and habitat occurrences within the vicinity, laws and regulations pertaining to these resources, and additional background information. A biological constraints analysis followed which included a site visit. The biological constraints analysis determined the study area supported walnut woodlands and areas



Source: PCR Services Corporation, 2007.

Figure 1
Site D
Regional Map

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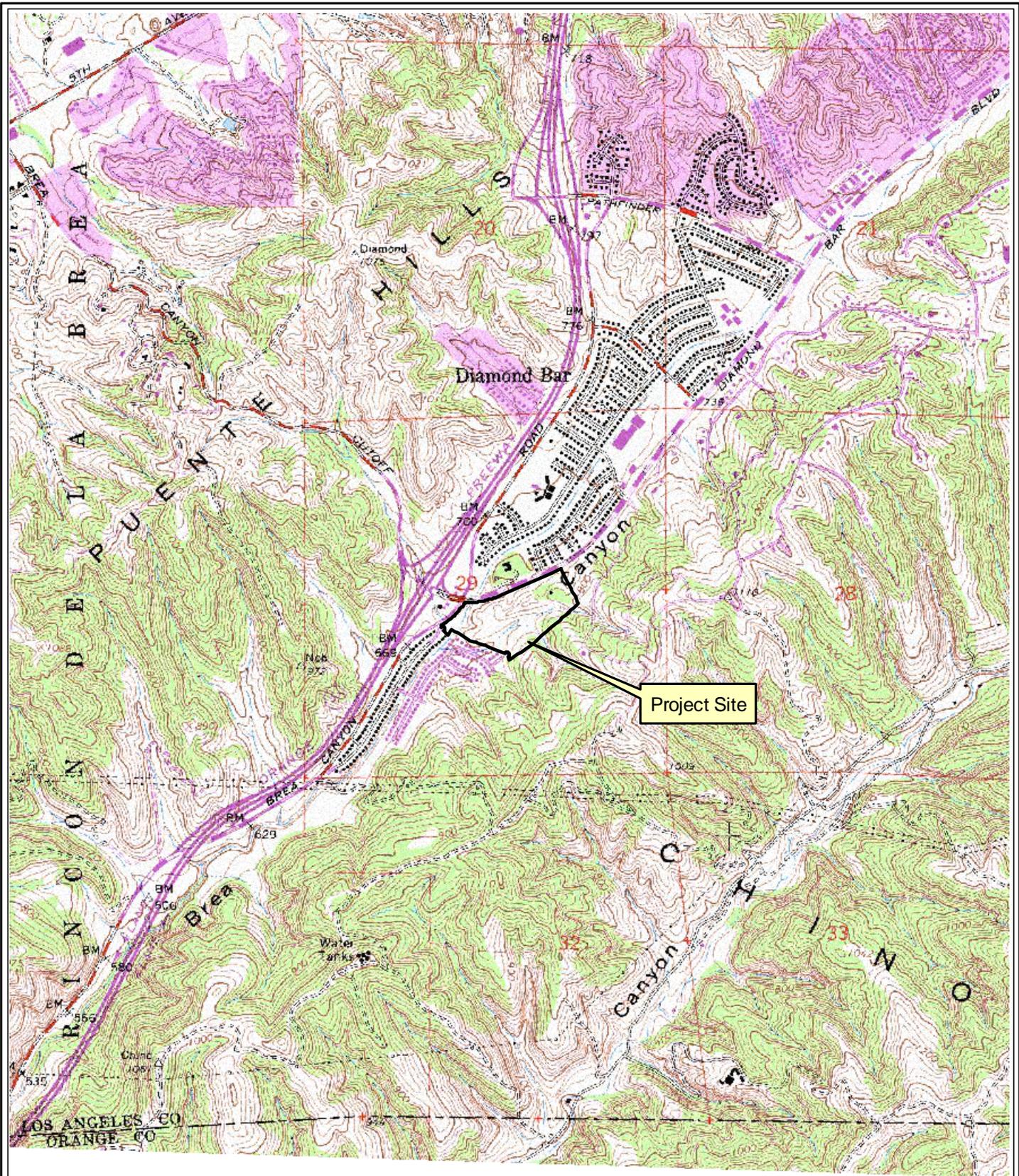
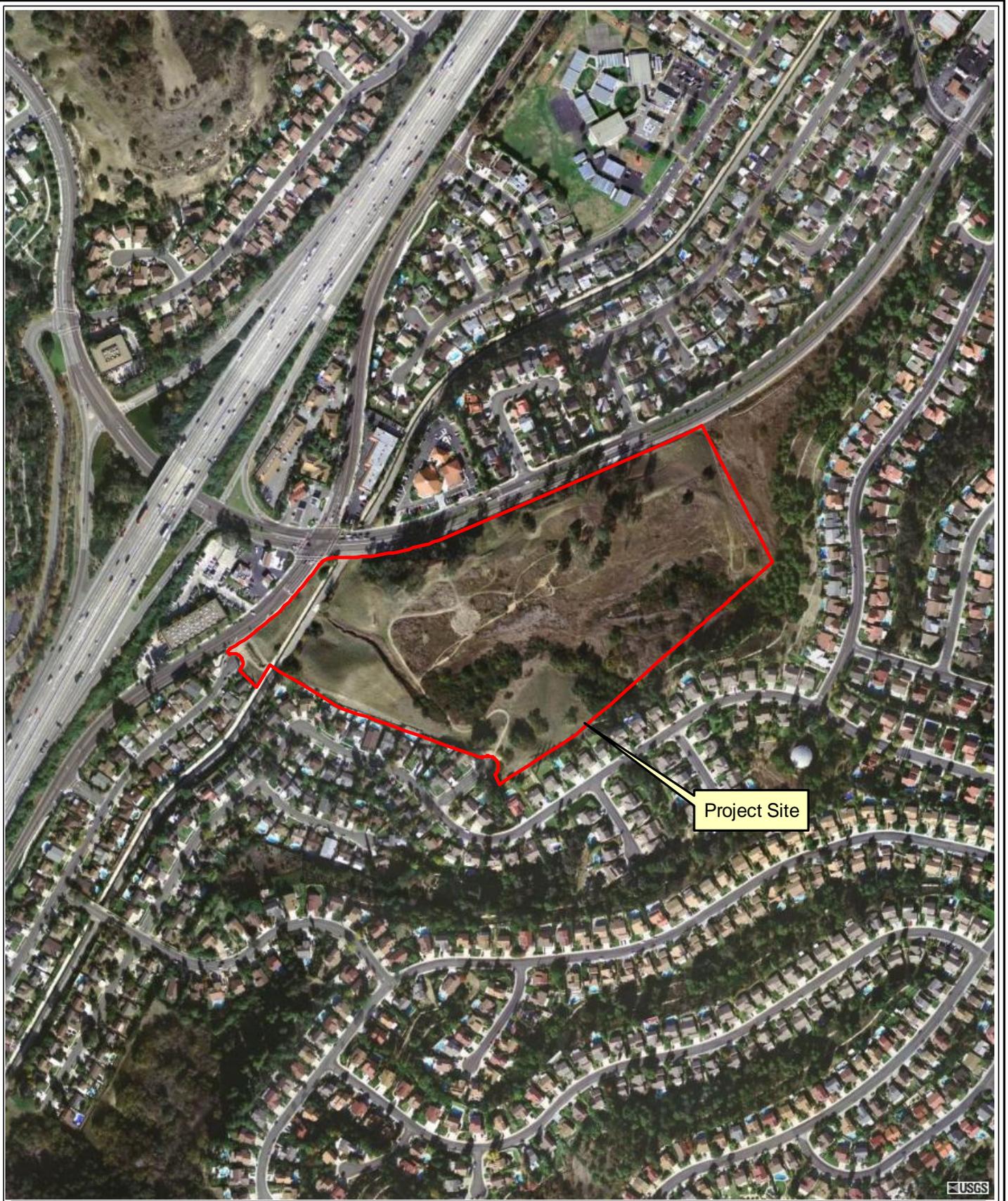


Figure 2
Site D
Vicinity Map

Source: USGS Topographic Series (Yorba Linda, CA); PCR Services Corporation, 2007.



Source: USGS DOQQ, 2004; PCR Services Corporation, 2007.

Figure 3
Site D
Aerial Photograph

potentially under the jurisdiction of the U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Game (CDFG) and concluded the potential for the study area to support sensitive plant species. A series of focused field investigations were conducted including plant community mapping, sensitive plant surveys, a jurisdictional delineation, and a tree survey. All biological work was conducted by PCR between April 2004 and October 2007.

This document also addresses project-related impacts associated with the proposed project as well as recommendations regarding measures to alleviate any resulting significant adverse impacts. This documentation is consistent with accepted scientific, technical, and professional standards pursuant to the CEQA, U.S. Fish and Wildlife Service (USFWS), CDFG, and ACOE, where appropriate. While general biological resources are discussed in a comprehensive manner, the focus of this assessment is on those resources considered to be sensitive.

2.0 METHODS OF STUDY

2.1 APPROACH

This assessment of biological resources is based on information compiled through field reconnaissance, focused surveys, and appropriate reference materials. The study area was first visited by PCR biologists on April 27, 2004 to conduct the biological constraints analysis. Subsequent to the constraints analysis, a formal jurisdictional delineation was conducted on July 13, 2005 and October 4 and 31, 2007; a tree survey was conducted on March 16, 2005 and October 4, 2007; sensitive species habitat assessments on February 6, 2007; and focused sensitive plant surveys were conducted June 29, and August 29, 2007.

2.2 LITERATURE REVIEW

The study began with a review of relevant literature on the biological resources within the study area and the surrounding vicinity. Initially, the California Natural Diversity Database (CNDDDB), a CDFG sensitive resources account database, was reviewed for all pertinent information regarding the locations of known observations of sensitive species and habitats in the vicinity of the study area. Federal register listings, protocols, and species data provided by the USFWS and CDFG were reviewed in conjunction with anticipated federally and state listed species potentially occurring within the vicinity. In addition, numerous regional flora and fauna field guides were utilized to assist in the identification of species and suitable habitats. These and all pertinent references used are listed in Section 7.0, References. Combined, the sources reviewed provided an excellent baseline from which to inventory the biological resources potentially occurring within the study area, as well as the surrounding area.

2.3 FIELD INVESTIGATIONS

Field investigations were completed between 2004 and 2007 by PCR biologists Crysta Dickson, Jason Berkley, Stephanie Picha, Ryan Henry, Joanna Nigro, Susan Anon, Rick Haywood, and Erin Hardison. Resumes of all biologists participating in the survey work can be found in Appendix A, *Resumes*. Survey coverage of the entire study area, with special attention to sensitive habitats or those areas potentially supporting sensitive flora or fauna, was ensured using a color aerial photograph (1"=200'), site-specific topography, and a USGS topographic map. During all survey dates, anywhere from two to eight hours were spent on the study area during daylight hours under wind and weather conditions that did not hinder the surveyor's ability to survey the targeted species.

2.3.1 Plant Community Mapping

Plant communities were mapped directly in the field utilizing a 200-scale (1"=200') aerial photograph and 7.5' USGS topographic map. The classification of plant communities follows the CDFG *List of California Terrestrial Natural Communities Recognized by the Natural Diversity Database* (September 2003). Descriptions are based on PCR's findings, Sawyer and Keeler-Wolf (1995), and/or Holland (1986). After completing the fieldwork the plant community polygons were digitized using Geographic Information System (GIS) technology to calculate acreages.

2.3.2 General Plant Inventory

All plant species observed during surveys were either identified in the field or collected and later identified using taxonomic keys. Plant taxonomy follows Hickman (1993). Common plant names were taken from Hickman (1993), Munz (1974), or McAuley (1996). Because common names vary significantly between references, scientific names are included upon initial mention of each species; common names consistent throughout the report are employed thereafter. All plant species observed are included in Appendix B, *Floral and Faunal Compendium*. Sensitive plant species are discussed below in Section 2.3.3.

2.3.3 Tree Survey

A tree survey was conducted in accordance with the City of Diamond Bar's Tree Preservation and Protection Ordinance (Municipal Code, Title 22 Development Code, Article 3 Site Planning and General Development Standards, Chapter 22.38 Tree Preservation and Protection) (hereafter referred to as tree ordinance). The tree survey was based on information compiled through field reconnaissance, previous documentation, and appropriate reference materials. Such reference materials include aerial photography, a USGS topographic map, digital ortho quarter quadrangle data, and a literature search. PCR biologists Stephanie Picha and Crysta Dickson conducted a tree survey on March 16, 2005. PCR biologists Joanna Nigro and Erin Hardison conducted a subsequent tree survey on October 4, 2007 to verify and update the 2005 survey. Ms. Picha and Ms. Nigro are also International Society of Arboriculture (ISA) Certified Arborists. The tree survey consisted of walking the study area and locating trees protected under the tree ordinance. The precise location of each protected tree was collected in the field using a Global Positioning System (GPS) hand-held unit providing sub-meter accuracy. The diameter at breast height (DBH), tree height, and canopy width was measured for each protected tree on-site. An assessment was made on each tree's overall health, structure, and aesthetics, and each tree was provided a rating of very good, good, fair, poor, very poor, or dead. In addition, each assessed tree was tagged with an identification number in consecutive numeric order. Additional details on the methodology of the tree survey can be found in the *Tree Survey Report* (PCR 2007a).

2.3.4 Sensitive Plant Surveys

Sensitive plants include those listed by the USFWS, CDFG, and California Native Plant Society (CNPS) (particularly lists 1A, 1B, and 2). A literature review was conducted to determine the sensitive plant species that have the potential to occur within the study area. Sources included the CNDDDB species data provided by USFWS, and the CNPS Online Inventory of Rare and Endangered Plants.

Sensitive plant species documented within the CNDDDB and CNPS from the nine quadrangle area surrounding (and including) the Yorba Linda quadrangle that have the potential to occur in the study area include Malibu baccharis (*Baccharis malibuensis*) (CNPS List 1B.1), white-rabbit tobacco (*Pseudognaphalium leucocephalum*) (CNPS List 2.2), San Bernardino aster (*Symphyotrichum defoliatum*) (CNPS List 1B.2), Nevin's barberry (*Berberis nevinii*) (Federally and State Endangered and CNPS List 1B.1), Palmer's grapplinghook (*Harpagonella palmeri*) (CNPS List 4.2), small-flowered morning-glory (*Convolvulus simulans*) (CNPS List 4.2), many-stemmed dudleya (*Dudleya multicaulis*) (CNPS List 1B.2), Braunton's milk-vetch (*Astragalus brauntonii*) (Federally Endangered, CNPS List 1B.1), round-leaved filaree (*California macrophyllum*) (CNPS List 1B.1), Parish's gooseberry (*Ribes divaricatum* var. *parishii*) (CNPS List 1A), Fish's milkwort (*Polygala comuta* var. *fishiae*) (CNPS List 4.3), long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*) (CNPS List 1B.2), and California muhly (*Muhlenbergia californica*) (CNPS List 4.3).

Sensitive plant surveys were conducted within the study area on June 29 and August 29, 2007 by PCR biologists Susan Anon and Erin Hardison. Methods employed included slowly walking over all accessible portions of the study area. Surveys were conducted in accordance with the CNPS botanical survey guidelines (CNPS 2001). If detected, the UTM coordinates corresponding to the location of the sensitive plant was collected with a GPS unit. The number of individuals in each population was estimated and information on habitat type and associated species was recorded.

2.3.5 General Wildlife Inventory

All wildlife species observed during the field surveys by sight, call, tracks, nests, scat (fecal droppings), remains, or other sign were recorded. Binoculars and regional field guides were utilized for the identification of wildlife, as necessary. All wildlife species observed within the study area, as well as diagnostic sign, were recorded in field notes. In addition, to species actually detected, expected use of the study area by other wildlife was derived from the analysis of habitats within the study area combined with known habitat preferences of regionally-occurring wildlife species.

Wildlife taxonomy follows Stebbins (2003) for amphibians and reptiles, the American Ornithologists' Union (1998) for birds, and Jameson and Peeters (1988) for mammals. Scientific names are used during the first mention of a species; common names only are used in the remainder of the text. A list of all wildlife species detected within the study area is included in Appendix B, *Floral and Faunal Compendium*. Sensitive wildlife species are discussed below in Section 2.3.5.

Invertebrate Surveys

A general survey for invertebrate species was not conducted for this assessment due to the inherent difficulty in identifying the multitude of species potentially present within the study area. In addition, based on the habitat assessment of the study area, no invertebrate species considered sensitive by the resource agencies were deemed likely to occur.

Amphibian Surveys

A general survey for amphibians was conducted in appropriate habitat during diurnal activity periods. The intent of this survey was not to extensively search for individual amphibians, but to ascertain the presence of potential amphibian habitat and the location of amphibians within the study area. The discussions in this document of amphibians potentially present within the study area are based on the habitats used by the species and their geographic ranges. The survey was conducted on foot in suitable habitat types concurrently with all other surveys of the study area. The survey was conducted on foot in suitable habitat types within the study area. Habitats were examined for diagnostic amphibian sign; such as egg masses, larvae, vocalizations, and direct observations. Surface litter, stones, fallen bark, tree branches, and cracks in mud were examined. Observed amphibian species, as well as diagnostic sign, were recorded in field notes.

Reptile Surveys

A general survey for reptiles was conducted in appropriate habitat only during diurnal activity periods. The intent of this survey was not to extensively search for individual reptiles, but to ascertain the presence of potential reptile habitat and the location of reptiles within the study area. The discussions in this document of reptiles potentially present within the study area are based on the habitats used by the species and their geographic ranges. The survey was conducted on foot in suitable habitat types within the study area. Habitats were examined for diagnostic reptile sign; such as eggs, shed skins, scat, tracks, snake prints, lizard tail drag marks, and direct observations. All areas containing potentially suitable habitat were surveyed. While searching for resting reptiles, surface litter, stones, fallen bark, tree branches, and cracks in mud were examined. Observed reptile species, as well as diagnostic sign, were recorded in field notes.

Avian Surveys

A general survey for birds was conducted in appropriate habitat only during diurnal activity periods. The intent of these surveys was not to extensively search for individual birds, but to ascertain the presence of potential bird habitat and the location of birds within the study area. The discussions in this document of birds potentially present within the study area are based on the habitats used by the species and their geographic ranges. The survey was conducted on foot in suitable habitat types concurrently with all other surveys within the study area. Birds were detected both by direct observations and by vocalizations. All areas containing potentially suitable habitat were surveyed. Bird species observed were recorded in field notes.

A survey for the presence of nesting raptors (birds of prey) within the study area and in the vicinity of the study area was conducted. Such efforts included directed and incidental observation of raptor nests, owl pellets, and the identification of raptor species flying over the study area. Observed raptor species, as well as diagnostic sign, were recorded in field notes.

Mammal Surveys

A general survey for mammals was conducted in appropriate habitat only during diurnal activity periods. The intent of this survey was not to extensively search for individual mammals, but to ascertain the presence of potential mammal habitat and the location of mammals within the study area. The discussions in this document of mammals potentially present within the study area are based on the habitats used by the species and their geographic ranges. The survey was conducted on foot in suitable habitat types within the study area. Many mammals are nocturnal and secretive, making daytime observations difficult. Therefore, the majority of the information on mammals within the study area comes from diagnostic sign. Habitats were examined for diagnostic mammal sign such as scat, burrows, tracks, dens, browsed vegetation or other feeding sign, hair, nests, bones, vocalizations, and direct observations. All areas containing potentially suitable habitat were surveyed. Methods employed while searching for mammals included searching the ground and adjacent vegetation, locating and following mammal trails, surveying muddy banks of small streams and pools, and noting "road kill" while traveling to from the study area. Observed or expected mammal species, as well as diagnostic sign, were recorded in field notes.

2.3.6 Sensitive Wildlife Surveys

Habitat assessments for sensitive wildlife species were conducted by PCR biologist Jason Berkley on February 6, 2007. Do to the lack of suitable habitat, focused presence/absence surveys for sensitive wildlife species were not conducted.

2.3.7 Regional Connectivity/Wildlife Movement Corridor Assessment

The analysis of wildlife movement corridors associated with the study area and its immediate vicinity is based on information compiled from the literature and analysis of aerial photographs and topographic maps. Little quantitative data exists on the movements of animals through corridors. A literature review was conducted that included documents on island biogeography (studies of fragmented and isolated habitat “islands”), reports on wildlife home range sizes and migration patterns, and studies on wildlife dispersal. Wildlife movement studies conducted in the Puente and Chino Hills were also reviewed. The relationship of the study area to large open space areas in the immediate vicinity (i.e., Puente Hills, Chino Hills) was also evaluated in terms of connectivity and habitat linkages. Relative to corridor issues, the discussions in this report are intended to focus on wildlife movement associated with the study area and the immediate vicinity.

The focus of this study is to determine if the alteration of current land use within the study area will have significant impacts on the regional movement of wildlife. This study did not include the use of track plates, camera stations, scent stations, or snares. Instead, notation was made during field visits of locations of animal sign and inspection of resource maps for the vicinity. These conclusions are based on the knowledge of desired topography and resource requirements for wildlife potentially utilizing the study area and vicinity.

2.3.8 Jurisdictional Determination of Wetlands and “Waters of the U.S./State”

An assessment of jurisdictional wetlands and “waters of the U.S./State” was conducted by PCR biologists Erin Hardison and Joanna Nigro on October 4, 2007, and Rick Haywood on October 31, 2007. This assessment was conducted to confirm the previous jurisdictional delineation conducted by PCR on July 13, 2005 and account for any changes to existing conditions which may have altered extent of jurisdictional limits. The re-assessment and the previous delineation were conducted on the approximately 30.4-acre study area to determine whether or not on-site drainages are subject to the jurisdiction of the ACOE, RWQCB, and CDFG and to determine the extent of any jurisdiction on the study area.

Prior to visiting the study area, potential and/or historic drainages and aquatic features were located based on a review of the following: a detailed 1:2,400 scale topographic map (USGS 1964), aerial photographs from the Fairchild Aerial Photograph Collection at Whittier College, and soil survey maps. Additionally, detailed digital orthophoto quarter quadrangle (DOQQ) imagery produced by the USGS National Mapping Division, Western Mapping Center was analyzed. The DOQQ data are digital images derived from aerial photography that have been ortho-rectified with a one-meter ground resolution. The DOQQ data were used with PCR’s in-house GIS as an important base layer to identify vegetation communities and drainage features. Drainage features were then “ground-truthed” during field assessment to obtain

characteristic parameters and detailed descriptions using a combination of standard measurement tools and GPS equipment. The precise location of transects, upstream and downstream extents of each feature, and sample points were collected in the field using a GPS hand-held unit providing submeter accuracy.

Following the initial data collection, the entire study area was evaluated and all areas that were identified as being potentially subject to the jurisdiction of the ACOE, RWQCB, and/or the CDFG were field verified and mapped. The potential for “waters of the U.S.” and “waters of the State” were investigated based on the absence or presence of an Ordinary High Water Mark (OHWM), or if not clearly visible, as determined by erosion, the deposition of sediment or debris, the establishment of vegetation and changes in the vegetation community. If any of these criteria were met, a series of transects were run to determine the extent of jurisdictional non-wetland “waters of the U.S.” Identified non-wetland “waters of the U.S.” were traversed within or along the channel, and the OHWM was measured. Where no accessible route led to the channel, the distance to the top of the channel was estimated by visually examining the terrain and density of vegetation. An estimated average OHWM width was then applied based on the last measurable channel width. Where channels diverged to form low, intermediate areas between the channels, the entire area between the outermost edge of each channel was considered within the OHWM. Where the intermediate area was equal to or above the height of the uppermost bank of either channel, the OHWM was recorded individually for each channel. The CDFG jurisdiction was defined to the bank of the stream/channels or to the limit of the adjacent riparian vegetation.

ACOE jurisdictional wetlands were delineated using a routine determination according to the methods outlined in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) based on hydrologic, edaphic features, and the vegetation composition of each sampling area investigated. In areas where jurisdictional wetlands were suspected, data on vegetation, hydrology, and soils was collected along transects, as described below.

Vegetation

Areal cover of vegetation was estimated along each transect by estimating coverage in two randomly placed circular plots. Tree cover was estimated using 30-foot radius circular plots; sapling, shrub, and forb cover was estimated using 10-foot radius plots. Plant species in each stratum were ranked according to their dominance. Species that contributed to a cumulative total of 50 percent of the total dominant coverage plus any species that comprised at least 20 percent of the total dominant coverage were recorded on the wetland data sheets. The wetland indicator status was assigned to each species using the *National List of Plant Species that Occur in Wetlands: California (Region 0)* (Reed 1988), as shown in Table 1, *Summary of Wetland Indicator Status*, on page 13. If greater than 50 percent of the dominant species from all strata

Table 1**Summary of Wetland Indicator Status**

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (estimated probability of >99%)
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability of 67 to 99%)
Facultative (FAC)	Equally likely to occur in wetlands/non-wetlands (estimated probability of 34 to 66%)
Facultative Upland (FACU)	Usually occur in non-wetlands (estimated probability 67 to 99%)
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability >99%)
Non-Indicator (NI)	No indicator status has been assigned

Source: Reed, 1988.

were Obligate, Facultative-wetland, or Facultative species, the criteria for wetland vegetation was considered to have been met.

Hydrology

The presence of wetland hydrology was evaluated at each transect by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil pits. In addition, indicators of wetland or riverine hydrology were recorded, including water marks, drift lines, rack, debris, and sediment deposits. The lateral extent of the hydrology indicators was used as a guide for locating soil pits for evaluation of hydric soils. In portions of the stream where the flow was divided between multiple channels with intermediate sand bars, the entire area between the outermost edge of each channel was considered within the OHWM and the wetland hydrology indicator was considered met for the entire area, assuming surface water was present.

Soils

If the criteria for wetland vegetation and hydrology were met, then an excavation of the soils was conducted to determine if the soils were hydric. Soil pits were dug to a depth of 18 inches. In areas of recent deposition of sand or other overburden material, the soil pit was dug to a depth of 18 inches below the depth of the overburden material. At each soil pit the soil texture and color were recorded by comparison with standard plates within a Munsell soil color chart (1994). Any indicators of hydric soils, such as redoximorphic features, buried organic matter, organic streaking, reduced soil conditions, gleyed or low-chroma soils, or sulfidic odor were also recorded.

Rapanos Analysis

In addition to the delineation, PCR conducted an analysis of all on-site aquatic resources to determine if a “significant nexus” exists between on-site drainage features and downstream jurisdictional resources, referred to as “Traditional Navigable Waters” (TNW) (e.g. the ocean, large perennial “navigable” rivers and lakes), in accordance with recent guidance resulting from the 2006 U.S. Supreme Court Rapanos ruling.

Methods employed during the jurisdictional delineation are also documented in the *Investigation of Jurisdictional Wetlands and Waters of the U.S.* (PCR 2007b).

3.0 EXISTING CONDITIONS

3.1 CHARACTERISTICS OF THE SITE AND THE SURROUNDING AREA

As described in Section 1.2, the study area consists of approximately 30.4 acres located in the City of Diamond Bar, Los Angeles County, California. Topography within the study area consists of steep-sloping hills and ridges along the eastern section and westward sloping hills dropping in elevation to where the study area abuts South Diamond Bar Boulevard. Elevations range from approximately 800 feet MSL in the northeast to approximately 700 feet above MSL in the southwest. Surrounding land uses include residential and commercial development to the north and west and residential development to the east and south.

A majority of the study area is disturbed from routine disking activities and other human disturbances such as off-road recreational activities and localized areas of trash dumping. The study area supports a USGS blue-line drainage feature and associated tributaries which are vegetated by riparian plant species. Native vegetation within the study area is limited to California walnut woodland, southern willow scrub, mule fat scrub, and goldenbush scrub. A portion of Brea Creek Flood Control Channel traverses the western portion of the study area. Representative photographs of the study area are included in Figure 4, *Site Photographs*, on page 16.

3.2 PLANT COMMUNITIES/HABITATS

Details of the plant communities mapped within the study area are included below and are based on the CNDDDB and PCR findings. The CNDDDB classification number is included for ease of review. If a community did not conform to any of the communities in the CNDDDB, it was named after the dominant species found within it (e.g., eucalyptus stand). Locations of each of the plant communities within the study area are shown in Figure 5, *Plant Communities*, on page 17. Table 2, *Plant Communities*, on page 18, lists each of the plant communities observed as well as the acreage within the study area.

3.2.1 Developed (N/A)

Developed areas consist of urban and suburban developments, roads, parks and golf courses, and graded or otherwise cleared areas. A total of 0.3 acre of developed was mapped within the study area and consists of the Brea Creek Flood Control Channel that traverses the western portion of the study area.

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