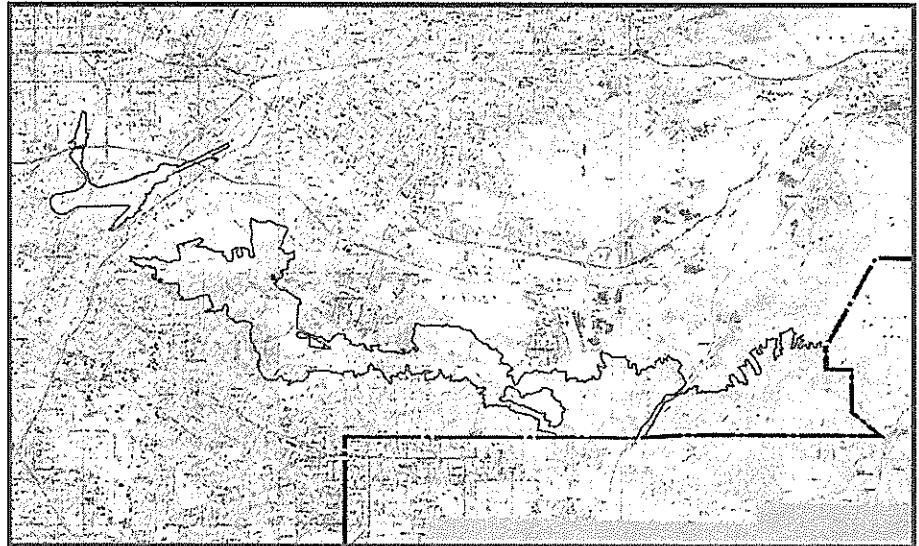


BIOLOGICAL RESOURCES ASSESSMENT
OF THE PROPOSED
PUENTE HILLS
SIGNIFICANT ECOLOGICAL AREA



PUENTE HILLS

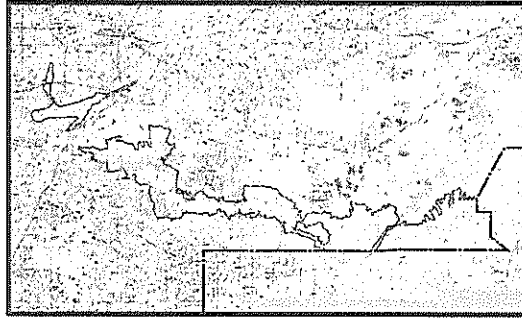
(Including Existing SEA Nos. 15, 17, 42, and 44)

Los Angeles County, California

November 2000

PCR

BIOLOGICAL RESOURCES ASSESSMENT OF THE PROPOSED PUENTE HILLS SIGNIFICANT ECOLOGICAL AREA



PUENTE HILLS

(Including Existing SEA Nos. 15, 17, 42, and 44)

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EXECUTIVE SUMMARY

Location: The proposed Puente Hills Significant Ecological Area (SEA) is located in the Puente Hills in southeastern Los Angeles County. The hills are oriented in an east-west manner and extend from the San Gabriel River on the west to the county line on the east, transitioning into the Chino Hills. The proposed Puente Hills boundaries begin in the west in and adjacent to Whittier Narrows Dam County Recreation Area and Flood Control Basin at the confluence of the San Gabriel River and Rio Hondo. Moving east, the SEA begins again along Workman Mill Road at the mouth of Sycamore Canyon. The eastern boundary of this SEA is the Los Angeles/San Bernardino County line. It incorporates existing SEA numbers 15, 17, 42, and 44.

Description: The Puente Hills SEA encompasses the major remaining habitat areas in the Los Angeles County portion of the Puente Hills. These include: Whittier Narrows, Sycamore Canyon and Turnbull Canyon in the west; Powder Canyon in the central portion of the SEA; and, Brea Canyon and Tonner Canyon in the east. Each of these areas contains relatively undisturbed examples of woodland, shrubland, grassland and wetland communities that once existed throughout the inland hills complex of the Los Angeles basin. Interconnecting these habitat areas are linkages of native, naturalized or sparsely developed land. The majority of the 13,421 acres proposed for the SEA lie within unincorporated Los Angeles County jurisdiction accounting for approximately 10,103 acres. Other jurisdictions have also been included within the SEA in order to delineate the boundaries of functioning habitat units. These include: 353 acres within the City of Diamond Bar; 8 acres within the City of Industry; 1,181 acres within the City of La Habra Heights; 63 acres within the City of Montebello; 122 acres within the City of Pico Rivera; 7 acres within the City of South El Monte; and 1,586 acres within the City of Whittier.

Existing Land Use: A variety of land uses ranging in intensity are present within the proposed SEA and represent a wide range of associated impacts on the landscape. Land uses include: relatively low intensity recreational pursuits such as hiking, riding and biking trails; periodic flood control maintenance within the Whittier Narrows Dam Flood Control Basin and associated channels; livestock grazing of varying intensities; oil extraction activities; and rural residential development.

Land Ownership: The majority of this SEA falls under private ownership. Relatively large private owners include Rose Hills Memorial Foundation, Chevron, Shell/Aera Energy LLC, Boy Scouts of America, Puente Hills Landfill Nature Conservancy, and Santa Monica Mountains Conservancy. Significant public ownerships include the Army Corps of Engineers who own, operate and maintain

the Whittier Narrows Dam Recreation Area and Flood Control Basin and the County of Los Angeles who own Schabarum Regional Park.

Vegetation: Eight major plant communities are found within the Puente Hills SEA including: oak woodland; oak riparian forest; walnut woodland; southern willow scrub; chaparral; coastal sage scrub; freshwater marsh; and non-native grassland.

Wildlife: Wildlife within the proposed Puente Hills SEA has frequently been documented to be very diverse and abundant due to the large acreage of natural open space, the diversity of habitat types, and regional connectivity.

Wildlife Movement: This SEA represents the Los Angeles County portion of a continuous series of natural open space within the Puente Hills and Chino Hills. Overall, this open space extends west from State Route 91 (SR-91) in Orange and Riverside Counties to the Whittier Narrows reach of the San Gabriel River which physically link the Puente/Chino Hills with the Santa Ana Mountains and the San Gabriel Mountains, respectively.

Sensitive Biological Resources: The proposed Puente Hills SEA supports several habitat types considered sensitive by resource agencies, due to scarcity of vegetation and provision of habitat for a number of state and federally listed endangered, threatened, and rare vascular plants, and several sensitive bird and reptile species. These communities include oak riparian woodland, walnut woodland, southern willow scrub, coastal sage scrub and freshwater marsh which occur throughout the study area.

Regional Biological Value: The proposed SEA meets several designation criteria and supports many regional biological values (see Criteria Analysis table at the end of this summary).

Recommended Management Practices: Proposed new development within the proposed Puente Hills SEA should be designed to be highly compatible with the continued ecological function of the component biological resources described above; retention of existing natural biotic resources should be ensured. Although a comprehensive evaluation of all possible future land uses within this SEA cannot be made here, a general approach is outlined below which follows the guidelines and is recommended for use on a project specific basis. In order to preserve the integrity of the SEA, the proposed comprehensive management practices described in the *Los Angeles County SEA Update Study 2000 Background Report* are recommended. These practices address:

- Core habitat
- Habitat linkages and wildlife corridors

- Fire management
- Public access and recreation
- Infrastructure
- Wetlands, riparian habitats, and streambeds
- Non-riparian/upland woodlands

In addition to the comprehensive management practices the following proposed management practices are recommended specifically for the proposed Puente Hills SEA:

- Limit development densities to one residential unit per ten acre parcel, and constrain development design, where feasible, to cluster dwelling configuration along existing roadways in order to minimize clearing associated with fuel management, and to reduce the need for grading, fencing, and other habitat disturbances.
- Retain rare communities with adequate buffers so as to allow for the long term viability and integrity of plant communities as a whole. Rare communities include: oak riparian woodland, walnut woodland, southern willow scrub, coastal sage scrub and freshwater marsh.
- Retain connectivity and linkage values between major canyons of the SEA and especially at choke points such as between the Chino Hills and the Puente Hills, and major road crossings.
- Require oil extraction activities to employ the best management practices recognized in the industry; avoid unnecessary direct impacts to habitat, and conform to legal standards for all procedures used.
- Require mitigation through restoration and revegetation where the loss of small and/or isolated habitat patches is proposed. This would prevent a cumulative net loss in the functions and values of these habitats within any one of the Puente Hills SEA habitat units.

**CRITERIA ANALYSIS
OF THE PROPOSED PUENTE HILLS SEA**

<u>Criterion</u>	<u>Status</u>	<u>Justification</u>
A) The habitat of core populations of endangered or threatened plant or animal species.	Not met	Although the proposed SEA does support populations of listed species, they are not known to be core populations, therefore, this criterion is not met.
B) On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	Several plant communities within this SEA are CDFG highest inventory priority communities due to their restricted distribution in the Southern California region. These communities include: walnut woodland which are scattered throughout this SEA; oak riparian woodland which is best developed in the major drainages of Sycamore Canyon, Turnbull Canyon, Powder Canyon, Brea Canyon, Brea Canyon and Tonner Canyon but is found elsewhere; stands of southern willow scrub along many of the drainages; scattered freshwater marsh; and coastal sage scrub, found in scattered patches over hillsides throughout.
C) Within Los Angeles County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	All of the plant communities and habitats mentioned above as being restricted in distribution on a regional basis are also restricted in distribution within Los Angeles County.
D) Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in Los Angeles County.	Met	This SEA represents the only large complex of multiple, relatively undisturbed habitats in southeastern Los Angeles County. As such, it is regionally important to many resident species as well as migrating species which would otherwise not be able to meet their habitat requirements here. In particular, large mammal and overwintering bird of prey and songbirds make use of this area.
E) Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Not met	The proposed SEA does not contain biotic resource that are clearly an extreme in physical/geographical limitations, or represent unusual variation in a population or community and therefore does not meet this criterion.
F) Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in Los Angeles County.	Met	Both the oak woodlands and walnut woodlands within this SEA represent excellent relatively undisturbed examples of their type. The walnut woodlands in this area are reported to be the best remaining stands of these trees south of Ventura County.

SIGNIFICANT ECOLOGICAL AREA UPDATE STUDY

1. LOCATION

1.1 GENERAL

The proposed Puente Hills Significant Ecological Area (SEA) is located in the Puente Hills in southeastern Los Angeles County as shown in Figure 1, *Regional Map*, on page 2. The Puente Hills are an inland topographical feature separating the San Gabriel Valley to the north and the coastal plain to the south. The hills are oriented in an east-west manner and stretch from the San Gabriel River on the west approximately to the county line on the east where they transition into the Chino Hills. The SEA itself includes portions of the Whittier Narrows Dam Recreation Area and Flood Control Basin and much of the undeveloped land throughout the Puente Hills. The SEA encompasses portions of the El Monte, Baldwin Park, Whittier, La Habra and Yorba Linda United States Geological Survey (USGS) 7.5' California Quadrangles as shown in Figure 2, *Existing and Proposed Boundaries* on page 3. The majority of this SEA lies within unincorporated area and it incorporates existing SEA numbers 15, 17, 42, and 44.

1.2 BOUNDARY DESCRIPTION

The proposed Puente Hills boundaries begin in the west in and around the Whittier Narrows Dam County Recreation Area and Flood Control Basin at the confluence of the San Gabriel River and Rio Hondo. The manicured recreation areas have been omitted from the SEA. It is intended that the SEA encompass only natural areas of the basin and portions of the San Gabriel River and Rio Hondo, which includes approximately three quarters of a mile upstream of State Route 60 (SR-60). Whittier Narrows is not physically connected to the remainder of the SEA due to urban development on either side of Interstate 605 (I-605).

Moving east, the SEA begins again along Workman Mill Road at the mouth of Sycamore Canyon. From this point the northern boundary essentially follows the edge of developed portions of the Rose Hills Memorial Park, the Puente Hills Landfill and rural residential and suburban developments of the Hacienda Heights area to meet Schabarum Regional Park. Continuing east the northern boundary crosses the park including its undeveloped portions to again meet and skirt along the edge of residential development within unincorporated Rowland Heights. The northern boundary continues east of Harbor Boulevard but turns south along the watershed boundary of an unnamed canyon just east of Powder Canyon. The boundary then runs south to meet the Los Angeles/Orange County line. The northern boundary continues to follow a north-south trending ridgeline marking the western edge of the Brea Canyon watershed. At the point the ridgeline meets

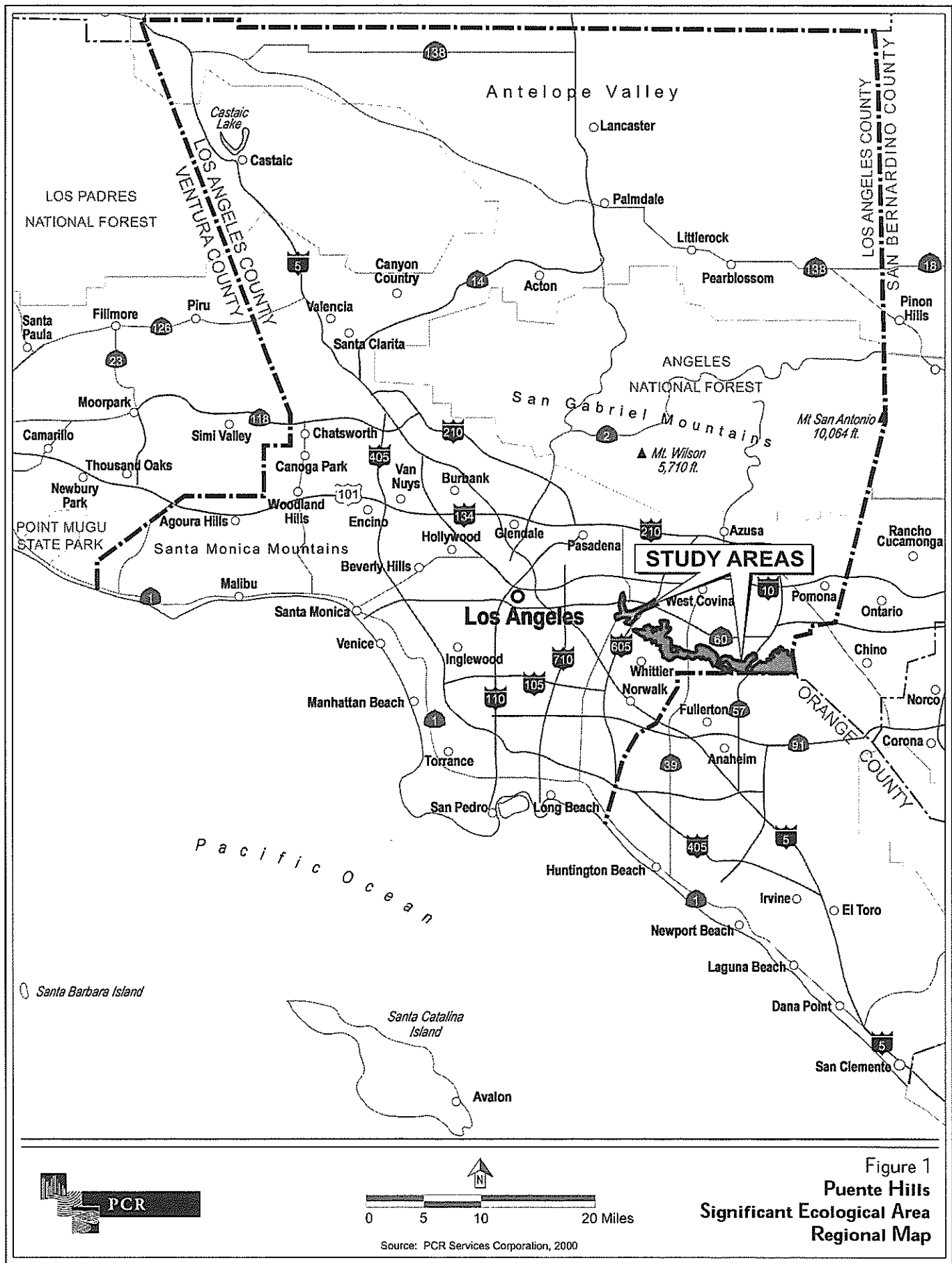
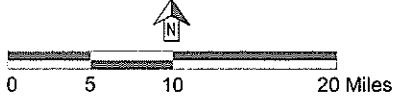
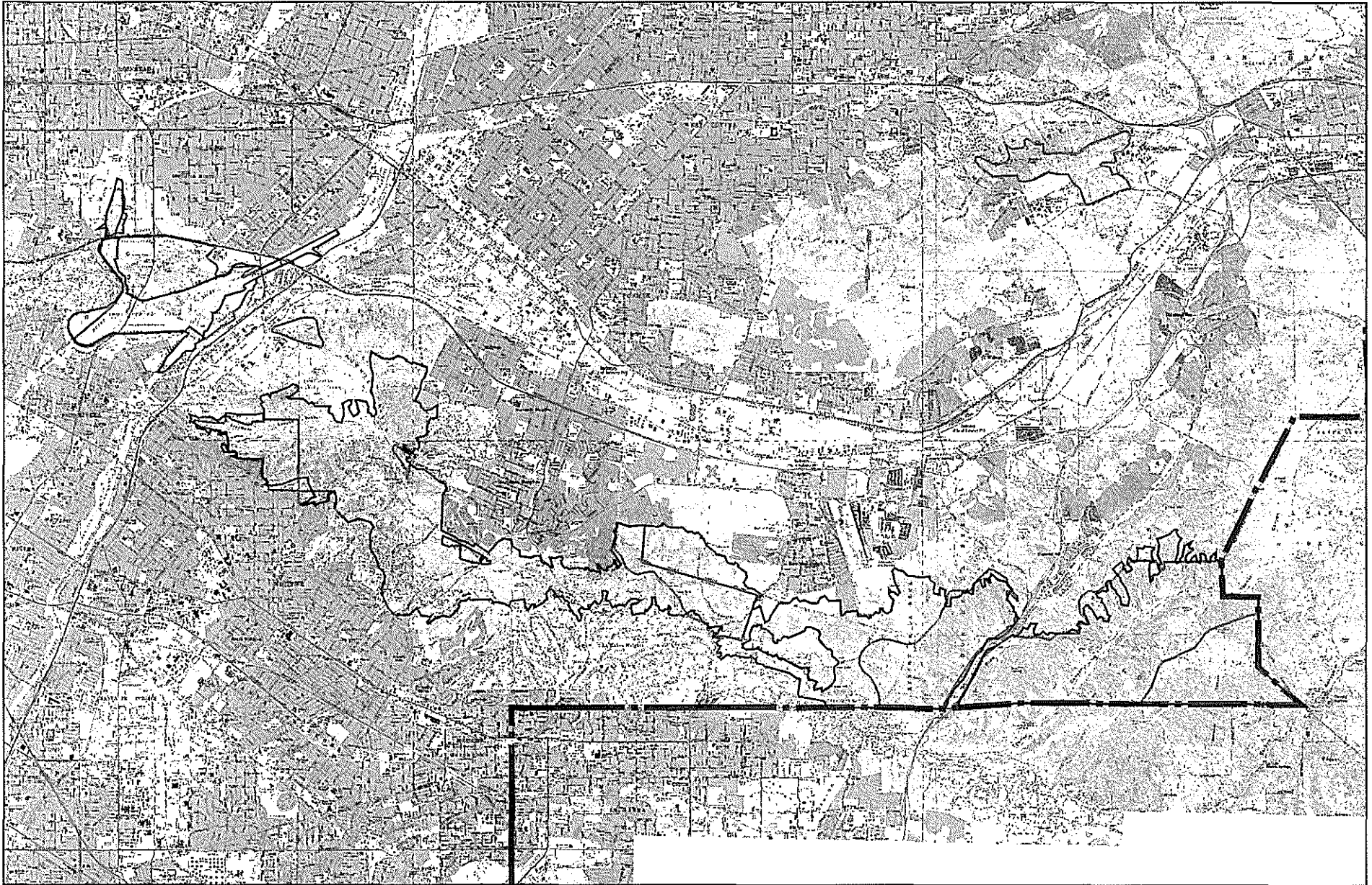


Figure 1
 Puente Hills
 Significant Ecological Area
 Regional Map



Source: PCR Services Corporation, 2000



- Proposed SEA Boundary
- - Existing SEA Boundary
- - Angeles National Forest

Figure 2
Puente Hills
Significant Ecological Area
Existing and Proposed Boundaries

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development within the City of Diamond Bar, it turns east to continue along the edge of development until it ends at the Los Angeles/San Bernardino County line.

The eastern boundary of the SEA is the Los Angeles/San Bernardino County line. In the east, the southern boundary begins at the point where Los Angeles, Orange and San Bernardino Counties all meet in Carbon Canyon. The boundary proceeds west along the Los Angeles/Orange County line, across State Route 57 (SR-57) to meet the westerly ridgeline defining the Brea Canyon watershed. Continuing west, the southern boundary resumes within an active oil field and proceeds in two directions, northwest and north, around an enclave of residential development. The boundaries here are intended to loosely define two linkage corridors. The easterly of these generally follows an unnamed tributary to Brea Creek and connects the unnamed canyon just east of Powder Canyon with Brea Canyon. The westerly of these also generally follows unnamed drainages to connect Brea Canyon with the SEA proper to the west of Harbor Boulevard. From Harbor Boulevard the southern boundary proceeds west along the edge of development in the cities of La Habra Heights and Whittier until it reaches Colima Road. At this point the boundary crosses Colima Road and turns north through an area of oil fields to encompass La Canada Verde Creek. Further to the west the boundary continues along the edge of development in Whittier to where it meets Workman Mill Road in Sycamore Canyon.

It should be noted that the Puente Hills SEA boundaries include areas disturbed and developed for rural residential and oil extraction. Generally, these conditions are found in Brea Canyon, La Habra Heights, and the hills above Whittier.

2. DESCRIPTION

The Puente Hills SEA encompasses approximately 13,421 acres including the major remaining relatively undisturbed habitat areas in the Los Angeles County portion of the Puente Hills. These include: Whittier Narrows, Sycamore Canyon and Turnbull Canyon in the west; Powder Canyon in the central portion of the SEA; and, Brea Canyon and Tonner Canyon in the east. Each of these areas contains relatively undisturbed examples of woodland, shrubland, grassland and wetland communities that once existed throughout the inland hills complex of the Los Angeles basin. Elevations range from approximately 200 to 1,476 feet above mean sea level (MSL).

Included among these habitats are excellent examples of oak woodland, oak riparian forest, southern willow scrub and walnut woodland. Intermixed with these are stands of mixed chaparral, coastal sage scrub and grasslands which, taken as a whole, form a valuable wildlife habitat unit of regional importance.

Interconnecting these habitat areas are corridors of native vegetation, naturalized vegetation or sparsely developed land. While such areas do not represent key regional habitats, they have been recommended for inclusion in the SEA in order to recognize the importance of maintaining exchange

between plant and animal populations throughout the Puente Hills, the Chino Hills and Santa Ana Mountains.

The majority of the 13,421 acres proposed for the SEA lie within unincorporated Los Angeles County jurisdiction accounting for approximately 10,103 acres. Other jurisdictions have also been included within the SEA in order to delineate the boundaries of functioning habitat units. These include: 353 acres within the City of Diamond Bar; 8 acres within the City of Industry; 1,181 acres within the City of La Habra Heights; 63 acres within the City of Montebello; 122 acres within the City of Pico Rivera; 7 acres within the City of South El Monte; and 1,586 acres within the City of Whittier.

3. EXISTING LAND USE

A variety of land uses ranging in intensity are present within this SEA and represent a wide range of associated impacts on the landscape. Relatively low intensity recreational pursuits are prevalent throughout much of the area. These include hiking, riding and biking trails which are both authorized within park areas and presumably unauthorized within private lands. Periodic flood control maintenance is practiced within the Whittier Narrows Dam Flood Control Basin and associated channels. Livestock grazing of varying intensities and duration also takes place throughout most privately held lands.

More intense disturbances have occurred in portions of the hills above Whittier and Brea Canyon where oil extraction activities have a long history. In addition, rural residential development occurs in a small portion of this SEA in the area between La Habra Heights and Hacienda Heights.

4. LAND OWNERSHIP

The overwhelming majority of this SEA falls under private ownership. Relatively large private owners include Rose Hills Memorial Foundation, Chevron, Shell/Aera Energy LLC, Boy Scouts of America, Puente Hills Landfill Nature Conservancy, and Santa Monica Mountains Conservancy.

Significant public ownerships include the Army Corps of Engineers who own, operate and maintain the Whittier Narrows Dam Recreation Area and Flood Control Basin and Los Angeles County who owns Schabarum Regional Park. Also of note, an unnamed canyon just east of Powder Canyon has been designated as a permanent conservation area.

5. VEGETATION

The variety of topography, soil types, slope aspects and water availability within this SEA creates a range of physical habitats which support numerous plant species. All plant species observed or recorded in previous documentation within the study area are indicated in the

Comprehensive Floral & Faunal Compendium of the Los Angeles County SEA Update Study 2000 Background Report. Sensitive plant species occurring or potentially occurring within the proposed SEA are discussed in the Sensitive Biological Resources section of this document. Many of these species, although often different in their growth form, prefer similar habitat characteristics and are often found in recurring assemblages to form plant communities. Eight major plant communities are found within the Puente Hills SEA. Plant communities within the proposed SEA were classified using standard methodology and terminology. Most of the communities discussed in this study correspond directly with those listed in Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (1986 and 1992 update). Other communities are named based on dominant species within them and/or commonly used terminology. Descriptions and general locations of each plant community present within the SEA including oak woodland, oak riparian forest, walnut woodland, southern willow scrub, chaparral, coastal sage scrub, freshwater marsh, and non-native grassland follow.

Oak woodland is a plant community dominated by species of the genus *Quercus*. Within this SEA this species is the coast live oak which typically grows to heights of 20 to 40 feet and forms either closed or open tree canopies. Understory vegetation varies from grassland in areas subject to grazing to shrubs where topography is steeper and/or grazing has been relaxed. It may also intergrade with shrub communities. Within this SEA oak woodland is scattered throughout many hillsides, drainages and broad valleys, it is most prevalent on northfacing slopes and in drainage bottoms. Particularly large complexes of oak woodland are found in Powder Canyon, Brea Canyon, and Tonner Canyon.

A highly related community found in this SEA is **oak riparian forest**. This community is also dominated by coast live oak. The primary difference between oak woodland and oak riparian forest is the greater availability of water in riparian situations which is expressed in a denser tree canopy and higher density of trees. There is also a greater number of hydrophytic (moister favoring) plant species in the understory. Typical riparian trees such as western sycamore and willow commonly occur as well. Oak riparian forest is best developed within the Sycamore Canyon, Turnbull Canyon, Powder Canyon, Brea Canyon, and Tonner Canyon drainages. It is also scattered in other drainages throughout the SEA.

Walnut woodland often intergrades with oak dominated woodlands or develops as a distinct community. This community is dominated by the California walnut which grows 10 to 30 feet high. More often than not, the California walnut grows in open stands; however, closed tree canopies are not uncommon. In similar fashion to oak woodlands its understory varies from grasses to shrubs. Thus, it forms stands ranging from savannahs to forests throughout the Puente Hills SEA. It is most common on the hillsides of Brea Canyon and Tonner Canyon where it forms some of the best developed examples of their type south of Ventura County in Southern California.

Well developed **southern willow scrub** communities are found along several major canyon bottoms in this SEA, particularly Brea Canyon and Tonner Canyon. Smaller patches of this

community are also found scattered along smaller drainage and tributaries, as well as, at seeps and around artificially created impoundments used for livestock watering. This community is dominated by species of *Salix* which form nearly monotypic stands, due to their dense growth. These stands generally reach 10 to 20 feet in height with little understory vegetation.

Mixed **chaparral** is a shrub community composed of robust species. Within this SEA these species include laurel sumac, toyon, lemonadeberry and Mexican elderberry. These and other shrub species form dense vegetation covers growing five to ten feet in height. The development of chaparral is most pronounced and extensive within Sycamore Canyon, Turnbull Canyon, Brea Canyon and Tonner Canyon.

A shrubland community exhibiting less robust structure found in this SEA is **coastal sage scrub**. This plant community is dominated by California sagebrush, California encelia, white sage, black sage, and California buckwheat. Coastal sage scrub also forms dense stands which grow three to four feet in height. Within this SEA it is generally found in scattered patches which are highly integrated with mixed chaparral including areas being used for oil extraction where, despite disturbance, coastal sage scrub persists.

Non-native grassland is dominated by non-native annual grasses and forbs. These opportunistically growing species include brome grasses, wild oats and mustards. Characteristic in other parts of Southern California, this community became established as a result of livestock grazing, whereby native vegetation is removed (sometimes by mechanical means) and replaced by more adventitious species. Non-native grassland is found throughout all areas of this SEA.

Small areas supporting **freshwater marsh** are found at scattered locations in the broader valleys along major drainages. This community may also exist at other locations in and around artificially created impoundments used to water livestock. Freshwater marsh requires perennially shallow water or saturated soils. Dominant plants are emergent species including cattails and bulrushes.

6. WILDLIFE

Wildlife within the proposed Puente Hills SEA has been frequently documented to be very diverse and abundant due to the large acreage of natural open space, the diversity of habitat types, and regional connectivity. While a few wildlife species are entirely dependent on a single vegetative community, the entire mosaic of all the vegetation communities within the study area and connected areas constitutes a functional ecosystem for a wide variety of wildlife species. This includes areas both within the SEA as well as the regional ecosystem.

Analysis of invertebrates on any given site generally is limited by a lack of specific data; however, the size of the SEA and diversity of habitats present is considered sufficient to encompass healthy populations of a large number of invertebrate species. Amphibian populations are generally

restricted in semi-arid and arid habitats but may be particularly abundant where riparian areas occur. The SEA is likely to support a variety of amphibians in abundance within wetland areas along the major canyon bottoms and the moister oak woodland areas. Many essential reptilian habitat characteristics are present within the SEA. These include open habitats that allow free movement and high visibility and small mammal burrows for cover and escape from predators and extreme weather. These characteristics as well as the variety of habitat types present are likely to support a wide variety of reptilian species.

The scrubland, woodland, riparian, and grassland habitats in the proposed SEA provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. In addition, the SEA encompasses many year-round water sources, abundant raptor foraging, perching, and nesting habitat. The combination of these resources as well as the mosaic of many community types provides for a high diversity of bird species. Several of these species may use this SEA as their only consistent occurrence in the southeastern portion of the county.

Not unlike other taxonomic groups, mammal populations within the proposed SEA are diverse and reflective of the unique combination of several habitat types. Unlike many other inland hills within the Los Angeles Basin, this SEA is large enough to support relatively stable large mammal populations despite the urban surroundings.

All wildlife species previously recorded, as well as those expected to occur, within the study area are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEA Update Study 2000 Background Report*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section of this document.

7. WILDLIFE MOVEMENT

Evidence of significant wildlife movement throughout the Puente Hills SEA has recently been documented in a two year carnivore study commissioned by the Santa Monica Mountains Conservancy as part of a multi jurisdictional effort to establish a region wide wildlife movement linkage. This SEA represents the Los Angeles County portion of a continuous series of natural open space within the Puente Hills and Chino Hills. Overall, this open space extends north and west from State Route 91 (SR-91) in Orange and Riverside Counties to the Whittier Narrows reach of the San Gabriel River which physically link the Puente/Chino Hills with the Santa Ana Mountains and the San Gabriel Mountains, respectively. By virtue of these linkages and a complex of interconnected habitat units throughout the hills, the Puente/Chino Hills function as both an important wildlife linkage and resident habitat area for regional wildlife populations.

Within the SEA itself several habitat units, well defined by major canyons, exist. These include Sycamore Canyon, Turnbull Canyon, Powder Canyon, Brea Canyon and Tonner Canyon. Each of these, in and of themselves, is capable of supporting a diversity and abundance of wildlife.

More importantly, however, these habitat units are connected by a series of open space corridors which allows population exchange to occur. Thus, maintenance of biological diversity and population viability is afforded throughout the SEA and the chance of local species extinctions due to isolation is minimized. This function is acutely important for wide ranging species which meet their breeding and/or habitat requirements over broad areas.

Although several major arterial roads and highways cross the hills, continued use of undercrossings and surface crossings by wildlife has been documented. This movement is largely east-west trending between large habitat blocks located in the western, central and eastern portions of the proposed SEA.

8. SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources are habitats or individual species that have been granted special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise sensitive, this is due to the species' declining or limited population sizes, usually resulting from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the proposed Puente Hills SEA, that have been afforded special recognition.

8.1 SENSITIVE PLANT COMMUNITIES/HABITATS

The proposed Puente Hills SEA supports several habitat types considered sensitive by resource agencies, namely the CDFG [California Natural Diversity Database (CNDDDB), 2000], because of their scarcity and their being habitat for a number of state and federally listed endangered, threatened, and rare vascular plants, as well as several sensitive bird and reptile species. These communities include **oak riparian woodland, walnut woodland, southern willow scrub, coastal sage scrub and freshwater marsh** which occur throughout the study area. These communities, or closely related designations, are considered highest-inventory priority communities by the CDFG, indicating that they are experiencing a decline throughout their range. The distribution and floral composition of these communities has been discussed earlier in this report (see Section 5, Vegetation, above).

8.2 SENSITIVE SPECIES

Sensitive species include those listed, or candidates for listing by the USFWS, CDFG, and CNPS (particularly List 1A, 1B, and 2 as defined in the Sensitive Species Table). The Sensitive Species Table on page 11 lists those species which have been recorded within the proposed SEA as well as those reasonable expected to occur. The table includes locations of sensitive species observed, recorded in the CNDDDB, or reported in previous documentation as observed within or in the immediate vicinity of the proposed SEA. Additional species, such as native oak or sycamore trees, may be protected under local ordinances but are not included in this table.

**SENSITIVE SPECIES
OCCURRING OR POTENTIALLY OCCURRING
WITHIN THE PROPOSED PUENTE HILLS SEA**

VASCULAR PLANTS

<u>Scientific Name</u>	<u>Common Name</u>	<u>Agency Listing Status</u>	<u>CNPS Listing Status</u>	<u>Preferred Habitat</u>	<u>Location</u>
ANGIOSPERMS (Dicotyledons)					
Asteraceae		Sunflower Family			
<i>Brickellia nevinii</i>	Nevin's bricklebrush		4	Chaparral, coastal sage scrub; steep slopes.	Potential where habitat occurs
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter goldfields	FSC	1B	Saline places: coastal salt marsh, playas, vernal pools in foothill/valley grassland.	Historic record (1935) in valley west of Coyote Hills
<i>Senecio aphanactis</i>	rayless ragwort		2	Cismontane woodland, coastal scrub, drying alkaline flats	Puddingstone Dam, San Jose Hills (1932)
Boraginaceae		Borage Family			
<i>Harpagonella palmeri</i>	Palmer's grappling hook	FSC	2	Sage scrub; clay soils; below 2,500 feet.	Potential where habitat occurs
Brassicaceae		Mustard Family			
<i>Caulanthus simulans</i>	Payson's jewelflower	FSC	4	Burned areas, streambeds, rocky, steep slopes and other disturbed sites, below 6,500 feet.	Potential where habitat occurs
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper grass		1B	Chaparral, coastal scrub.	Chino, Ontario Quad (1936)

Legend

Agency Lists

FE	Federally Listed as Endangered	SE	State Listed as Endangered
FT	Federally Listed as Threatened	ST	State Listed as Threatened
FSC	Federal Special Concern Species	SCE	State Candidate for Endangered
FPE	Federally Proposed as Endangered	SCT	State Candidate for Threatened
FPT	Federally Proposed as Threatened	SP	State Protected
FPD	Federally Proposed for Delisting	SFP	State Fully Protected
		SR	State Rare
		CSC	California Special Concern Species

California Native Plant Society (CNPS) Lists

1A	Presumed extinct in California.
1B	Rare, threatened, or endangered throughout their range.
2	Rare, threatened, or endangered in California, but more common in other states.
3	Plant species for which additional information is needed before rarity can be determined.
4	Species of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat.

**SENSITIVE SPECIES
OCCURRING OR POTENTIALLY OCCURRING
WITHIN THE PROPOSED PUENTE HILLS SEA
(CONTINUED)**

VASCULAR PLANTS

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Convolvulaceae		Morning-Glory Family			
<i>Calystegia peirsonii</i>	Pierson's morning glory	FSC	4	Sage scrub, chenopod (saltbush) scrub, chaparral, cismontane woodland, lower montane coniferous forest, rocky slopes.	Potential where habitat occurs
Crassulaceae		Stonecrop Family			
<i>Dudleya multicaulis</i>	many-stemmed dudleya	FSC	1B	Sage scrub, valley and foothill grassland; heavy clay soils or rock outcrops; below 2,000 feet.	Way Hill (1987); San Jose Hills, Elephant Hill
Fabaceae		Legume Family			
<i>Astragalus brauntonii</i>	Braunton's milk-vetch	FE	1B	Sage scrub, chaparral, valley and foothill grassland, closed cone coniferous forest; limestone endemic, carbonate soils, recent burns and disturbed areas.	Potential where habitat occurs

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OCCURRING OR POTENTIALLY OCCURRING
WITHIN THE PROPOSED PUENTE HILLS SEA
(CONTINUED)**

VASCULAR PLANTS					
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Grossulariaceae		Gooseberry Family			
<i>Ribes divaricatus</i> var. <i>parishii</i>	Parish's gooseberry	FSC	1B	Willow thickets, coastal sage scrub, riparian woodland. Perennial shrub.	San Gabriel River at Whittier Narrows (1980); 0.5 mi. W of Peck Rd. (1979)
Hydrophyllaceae		Waterleaf Family			
<i>Phacelia stellaris</i>	Brand's phacelia		1B	Sage scrub, coastal dunes.	San Gabriel River 2 mi. E of El Monte (1935); known to occur in area of Downey (1959)
Juglandaceae		Walnut Family			
<i>Juglans californica</i> var. <i>californica</i>	Southern California black walnut		4	Sage scrub, chaparral, cismontane woodland; often in association with oaks/oak woodland; frequently found on steep hillsides with northern exposures; deep alluvial soils.	Common throughout SEA

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(CONTINUED)**

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<u>Scientific Name</u>	<u>Common Name</u>				
Lamiaceae	Mint Family				
<i>Lepechinia cardiophylla</i>	heart-leaved pitcher sage	FSC	1B	Open areas (especially slopes) in chaparral, sage scrub, valley and foothill grasslands; vernal pools, topographic depressions; heavy clay soils; below 2,700 feet.	Potential where habitat occurs
<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	felt-leaved monardella		1B	Chaparral between 980 and 3,280 feet.	Potential where habitat occurs
<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	southern skullcap		1B	Chaparral, cismontane woodland, lower montane coniferous forest; elevation approximately 300 feet.	El Monte, San Gabriel Valley (1932)
Malvaceae	Mallow Family				
<i>Sidalcea neomexicana</i>	Salt spring checkerbloom		2	Alkali playas, brackish marshes, chaparral, coastal scrub, lower montane coniferous forest, desert scrub.	Historic record, Claremont, Ontario Quad (1909)

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Scrophulariaceae Figwort Family					
<i>Fremontodendron mexicanum</i>	Mexican flannelbrush	FE, SR	1B	Closed-cone coniferous forest, chaparral, cismontane woodland, creeks or dry canyons, gabbro soils.	Potential where habitat occurs
ANGIOSPERMS (Monocotyledons)					
Liliaceae Lily Family					
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	FT, SE	1B	Sage scrub, valley/foothill grassland, cismontane woodland; vernal pools (clay soils).	Potential where habitat occurs
<i>Calochortus catalinae</i>	Catalina mariposa lily		4	Openings in chaparral, valley and foothill grassland, cismontane woodland; heavy soils.	Potential where habitat occurs
<i>Calochortus clavatus</i> var. <i>gracilis</i>	slender mariposa lily	FSC	1B	Chaparral, especially in foothill canyons; generally found in shade.	Potential where habitat occurs

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<i>Calochortus plummerae</i>	Plummer's mariposa lily	FSC	1B	Sage scrub, valley and foothill grassland, yellow pine forest; dry, rocky or sandy sites, granitic or alluvial soil; to 4,800 feet.	Historically recorded in Claremont Live Oak Cyn., along Mill Ave.
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate flowered mariposa lily	FSC	1B	Chaparral, coastal scrub, valley and foothill grasslands.	Elephant Hill in western Pomona, near bldg. of Rancho Santa Ana Botanic Garden
Poaceae	Grass Family				
<i>Muhlenbergia californica</i>	California muhly		1B	Coastal sage, chaparral, lower montane coniferous forest, meadows near streams or seeps.	Growing along creek under trees near Red Hill (1916)

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VERTEBRATES

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AMPHIBIANS				
Pelobatidae		Spadefoot Toad Family		
<i>Scaphiopus hammondi</i>	western spadefoot	FSC, CSC, SP	Prefers relatively open areas in lowland grasslands, chaparral, and pine-oak woodlands, areas of sandy or gravelly soil in alluvial fans, washes, and floodplains.	Workman Hill in Puente Hills (1998); Puente Hills (1998)
REPTILES				
Emydidae		Box and Water Turtle Family		
<i>Clemmys marmorata pallida</i>	southwestern pond turtle	FSC, CSC, SFP	Ponds, marshes, rivers, streams, irrigation ditches.	El Monte quadrangle; Tonner Cyn.
Iguanidae		Iguanid Lizard Family		
<i>Phrynosoma coronatum blainvillei</i>	San Diego coast horned lizard	FSC, CSC, SP	Valley-foothill hardwood, conifer, and riparian habitats, pine-cypress, juniper and annual grassland habitats below 6,000 feet, open country, especially sandy areas, washes, flood plains, and windblown deposits.	La Puente (1986); also scattered throughout Tonner Cyn./Chino Hills
<i>Phrynosoma coronatum frontale</i>	California horned lizard	CSC, SP	Scrubland, grassland, coniferous forest, broad-leaf woodlands.	3 mi. SE of San Gabriel (1954); Sycamore Cyn. (1960); San Gabriel River (1986)

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Teiidae Whiptail Lizard Family				
<i>Cnemidophorus tigris multiscutatus</i>	coastal western whiptail	FSC	Arid and semi-arid desert to open woodlands, where vegetation is sparse.	Tentative tract no. 48380 (1989)
Anniellidae Legless Lizard Family				
<i>Anniella pulchra pulchra</i>	silvery legless lizard	CSC	Several habitats but especially in coastal dune, valley-foothill, chaparral, and coastal scrub habitats.	Potential where habitat occurs
Boidae Boa Family				
<i>Charina bottae umbratica</i>	southern rubber boa	FSC, ST, SP	Grassland, broken chaparral, woodland and forest, under rock bark of dead trees.	Potential where habitat occurs
Colubridae Colubrid Snake Family				
<i>Diadophis punctatus similis</i>	San Diego ring-neck snake	CSC, SP	Riparian woodlands, mixed chaparral, and annual grass habitats.	Potential where habitat occurs
<i>Lampropeltis zonata pulchra</i>	San Diego mountain kingsnake	FSC, CSC, SP	Moist woods, coniferous forests, woodland and chaparral.	Potential where habitat occurs

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<i>Salvador hexalepis virgultea</i>	coast patch-nosed snake	FSC, CSC	Coastal chaparral, desert scrub, washes, sandy flats, and rocky areas. Barren creosote bush desert flats. Sagebrush semi-deserts; sea level to 7,000 feet.	Potential where habitat occurs

Viperidae Viper Snake Family

<i>Crotalus ruber ruber</i>	northern red-diamond rattlesnake	FSC, CSC	Chaparral, woodland, and arid desert habitats in rocky areas with dense vegetation.	Chino Hills (1992), between Yorba Linda and Telegraph Cyn.; Puente Hills (1998)
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BIRDS

Accipitridae Hawks, Kites, Harriers and Eagle Family

<i>Accipiter cooperi</i>	Cooper's hawk	CSC	Open woodlands especially riparian woodland.	Tonner Canyon, (1988)
<i>Accipiter striatus</i>	sharp-shinned hawk	CSC	Woodlands; forages over chaparral and other scrublands; prefers riparian habitats and north-facing slopes, with plucking perch sites.	Commonly reported as foraging throughout

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<i>Aquila chrysaetos</i>	golden eagle	CSC, SFP	Mountains, deserts, and open country; prefer to forage over grasslands, deserts, savannahs and early successional stages of forest and shrub habitats.	Known to breed within Tonner Cyn./Chino Hills region
<i>Buteo lagopus</i>	rough-legged hawk		Meadows, marshes, riparian edges, riparian habitats, and lakes.	Potential where habitat occurs
<i>Buteo regalis</i>	ferruginous hawk	CSC	Rivers, lakes, and coasts; open tracts of sparse shrubs and grasslands, and agricultural areas during winter.	Potential where habitat occurs
<i>Buteo swainsoni</i>	Swainson's hawk	ST	Plains, ranges, open hills, sparse trees.	Rose Hills, (1968)
<i>Circus cyaneus</i>	northern harrier	CSC	Coastal salt marshes, freshwater marshes, grasslands, and agricultural fields; occasionally forages over open desert and brushlands.	Recorded in Puente Hills (1998)
<i>Elanus leucurus</i>	white-tailed kite	SFP	Grasslands with scattered trees, near marshes, along highways.	Several nesting records from San Jose Hills; fairly common in Tonner Cyn./Chino Hills region

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Falconidae				
Falcon Family				
<i>Falco columbarius</i>	merlin	CSC	Coastlines, wetlands, woodlands, agricultural fields, and grasslands.	Potential where habitat occurs
<i>Falco mexicanus</i>	prairie falcon	CSC	Grasslands, savannahs, rangeland, agricultural fields, and desert scrub; often uses sheltered cliff ledges for cover.	Breeds within Tonner Cyn./Chino Hills region
Laridae				
Gulls and Tern Family				
<i>Larus californicus</i>	California gull	CSC	Seacoasts, lakes, farms, and urban centers.	Potential where habitat occurs
Cuculidae				
Cuckoos & Roadrunner Family				
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	SE	Riverine woodlands, thickets, and farms.	Artesia (1977); historic record (1951) on San Gabriel River near El Monte
Strigidae				
True Owl Family				
<i>Asio flammeus</i>	short-eared owl	CSC	Prairies, marshes (fresh and salt) dunes, tundra.	Potential where habitat occurs
<i>Asio otus</i>	long-eared owl	CSC	Riparian and live oak woodlands	Potential where habitat occurs

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<i>Athene cunicularia</i>	burrowing owl	FSC, CSC	Dry grasslands, desert habitats, and open pinyon-juniper and ponderosa pine woodlands below 5,300 feet elevation. Prefers berms, ditches, and grasslands adjacent to rivers, agricultural, and scrub areas.	Potential where habitat occurs
Apodidae				
Swift Family				
<i>Chaetura vauxi</i>	Vaux's swift	CSC	Redwood and douglas fir habitats.	Potential where habitat occurs
Tyrannidae				
Tyrant Flycatcher Family				
<i>Empidonax traillii</i>	willow flycatcher	SE	Wet meadow and montane riparian habitats, river valleys and large mountain meadows.	Potential where habitat occurs
<i>Empidonax traillii extimus</i>	southwestern willow flycatcher	FE	<u>Low elevational sites:</u> Riparian woodlands that contain water and low growing willow thickets. <u>High elevational sites:</u> Large, flat, wet meadows that contain patches of willow trees.	Potential where habitat occurs

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Alaudidae		Lark Family		
<i>Eremophila alpestris actia</i>	California horned lark	CSC	Open habitats, grasslands along the coast, deserts near sea level to alpine dwarf shrub habitat, uncommonly in coniferous and chaparral habitats.	Potential where habitat occurs
Hirundinidae		Swallow Family		
<i>Progne subis</i>	purple martin	CSC	Towns, farms, open or semi-open country.	Historic record in Monrovia (1973)
Troglodytidae		Wren Family		
<i>Campylorhynchus brunneicapillus couesi</i>	coastal cactus wren	CSC	Coastal sage scrub, vegetation with thickets of prickly pear or cholla cactus.	West Coyote Hills (1992); Yorba Linda (1987); La Habra (1988); Puente Hills (2000)
Muscicapidae		Kinglets, Gnatcatchers, Thrushes, and Babbler Family		
<i>Poliophtila californica californica</i>	California gnatcatcher	FT, CSC	Coastal sage scrub vegetation below 1,000 feet along the coastal slope; generally avoids steep slopes and dense vegetation for nesting.	10 breeding pairs in Coyote Hills area (1991); Puente Hills 1998; many additional records (CNDDB)

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**SENSITIVE SPECIES
OCCURRING OR POTENTIALLY OCCURRING
WITHIN THE PROPOSED PUENTE HILLS SEA
(CONTINUED)**

VERTEBRATES

<u>Scientific Name</u>	<u>Common Name</u>	<u>Agency Listing Status</u>	<u>Preferred Habitat</u>	<u>Location</u>
Laniidae		Shrike Family		
<i>Lanius ludovicianus</i>	loggerhead shrike	FSC, CSC	Open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches.	Puente Hills area (1992)
Vireonidae		Vireo Family		
<i>Vireo bellii pusillus</i>	least Bell's vireo	FE, SE	Perennial and intermittent streams with low, dense riparian scrub and riparian woodland habitats below 2,000 feet elevation; nests primarily in willows and forages in the riparian and occasionally in adjoining upland habitats. Associated with willow, cottonwood, and mule fat.	Near pond within Whittier Narrows Wildlife Sanctuary; Tonner Canyon 2000
Emberizidae		Wood Warblers, Tanagers, Buntings, and Blackbird Family		
<i>Aimophila ruficeps canescens</i>	Southern California (ashy) rufous-crowned sparrow	FSC, CSC	Generally, steep, rocky areas within coastal sage scrub and chaparral, often with scattered bunches of grass; prefers relatively recently burned areas.	Puente Hills, (1992)
<i>Amphispiza belli</i>	Bell's sparrow	FSC, CSC	Dense, dry chamise chaparral and coastal slopes of coastal sage scrub.	Potential where habitat occurs
<i>Dendroica petechia brewsteri</i>	yellow warbler	CSC	Riparian woodlands, montane chaparral, and mixed conifer habitats.	Potential where habitat occurs

Legend

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OCCURRING OR POTENTIALLY OCCURRING
WITHIN THE PROPOSED PUENTE HILLS SEA
(CONTINUED)**

VERTEBRATES

<u>Scientific Name</u>	<u>Common Name</u>	<u>Agency Listing Status</u>	<u>Preferred Habitat</u>	<u>Location</u>
<i>Icteria virens</i>	yellow-breasted chat	CSC	Riparian woodlands with a thick understory.	Puente Hills (1998)

MAMMALS

Vespertilionidae Evening Bat Family

<i>Antrozous pallidus</i>	pallid bat	CSC	Nests in dry, rocky habitats/caves, crevices in rocks, arid habitats including deserts, chaparral, and scrublands.	Potential where habitat occurs
<i>Corynorhinus (Plecotus) townsendii pallescens</i>	pale big-eared bat	CSC	Needs caves, tunnels, or other structures for roosting, vegetation and mesic edges for feeding, extremely sensitive to roosting site disturbance, maternity roosts are in warm places.	Potential where habitat occurs
<i>Corynorhinus (Plecotus) townsendii townsendii</i>	Townsend's big-eared bat	FSC, CSC	Caves, mine tunnels, and buildings.	Potential where habitat occurs

Legend

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OCCURRING OR POTENTIALLY OCCURRING
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(CONTINUED)**

VERTEBRATES

<u>Scientific Name</u>	<u>Common Name</u>	<u>Agency Listing Status</u>	<u>Preferred Habitat</u>	<u>Location</u>
Molossidae		Free-Tailed Bat Family		
<i>Eumops perotis californicus</i>	western mastiff bat	FSC, CSC	Primarily arid lowlands, especially deserts. Open, semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban.	Potential where habitat occurs
Leporidae		Hares and Rabbit Family		
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	FSC, CSC	Open brushlands and scrub habitats between sea level and 4,000 feet elevation.	Potential where habitat occurs
Heteromyidae		Pocket Mice and Kangaroo Rat Family		
<i>Chaetodipus fallax</i>	San Diego pocket mouse	FSC, CSC	Sandy herbaceous areas, usually in association with rocks or coarse gravel, sagebrush, scrub, annual grassland, chaparral and desert scrubs.	Potential where habitat occurs
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	FSC, CSC	Coastal sage scrub, and grasslands, desert cactus, creosote bush and sagebrush habitats.	Potential where habitat occurs

Legend

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(CONTINUED)**

VERTEBRATES

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Muridae		Mice, Rats, and Vole Family		
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	FSC, CSC	Chaparral, coastal sage scrub, and pinyon-juniper woodland.	Potential where habitat occurs
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	FSC, CSC	Grasslands, desert areas, especially scrub with friable soils.	Potential where habitat occurs
Procyonidae		Raccoon Family		
<i>Bassariscus astutus</i>	ringtail cat	SFP	Mixture of forest and shrublands in close association with rocky areas or riparian habitats.	Potential where habitat occurs

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Agency Lists

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9. REGIONAL BIOLOGICAL VALUE

The proposed Puente Hills SEA meets several SEA designation criteria that consider regional biological values. Each criterion and how it is met or why not is described below.

Criterion A: The Habitat of Core Populations of Endangered or Threatened Plant or Animal Species.

Although the proposed SEA does support populations of listed species, they are not known to be core populations, therefore, this criterion is not met.

Criterion B: On a Regional Basis, Biotic Communities, Vegetative Associations, and Habitat of Plant or Animal Species that are either Unique or are Restricted in Distribution.

Several plant communities within this SEA are CDFG highest inventory priority communities due to their restricted distribution in the Southern California region. These communities include: walnut woodland which are scattered throughout this SEA; oak riparian woodland which is best developed in the major drainages of Sycamore Canyon, Turnbull Canyon, Powder Canyon, Brea Canyon, Brea Canyon and Tonner Canyon but is found elsewhere; stands of southern willow scrub along many of the drainages; scattered freshwater marsh; and coastal sage scrub, found in scattered patches over hillsides throughout.

Criterion C: Within Los Angeles County, Biotic Communities, Vegetative Associations, and Habitat of Plant or Animal Species that are either Unique or are Restricted in Distribution.

All of the plant communities and habitats mentioned above as being restricted in distribution on a regional basis are also restricted in distribution within Los Angeles County.

Criterion D: Habitat that at some point in the Life Cycle of a Species or Group of Species, Serves as Concentrated Breeding, Feeding, Resting, or Migrating Grounds and is Limited in Availability either Regionally or in Los Angeles County.

This SEA represents the only large complex of multiple, relatively undisturbed habitats in southeastern Los Angeles County. As such, it is regionally important to many resident species as well as migrating species which would otherwise not be able

to meet their habitat requirements here. In particular, large mammal and overwintering bird of prey and songbirds make use of this area.

Criterion E: Biotic Resources that are of Scientific Interest because they are either an Extreme in Physical/Geographical Limitations, or Represent Unusual Variation in a Population or Community.

The proposed SEA does not contain biotic resource that are clearly an extreme in physical/geographical limitations, or represent unusual variation in a population or community and therefore does not meet this criterion.

Criterion F: Areas that would Provide for the Preservation of Relatively Undisturbed Examples of the Original Natural Biotic Communities in Los Angeles County.

Both the oak woodlands and walnut woodlands within this SEA represent excellent relatively undisturbed examples of their type. The walnut woodlands in this area are reported to be the best remaining stands of these trees south of Ventura County.

In conclusion, the area described in this report is proposed to be an SEA because it contains: 1) habitat of core populations of endangered or threatened plant species; 2) biotic communities, vegetative associations, and habitat of plant and animal species that are restricted in distribution in Los Angeles County and regionally; 3) concentrated breeding, feeding, resting, or migrating grounds which are limited in availability in Los Angeles County; and 4) areas that provide for the preservation of relatively undisturbed examples of original natural biotic communities in Los Angeles County.

10. RECOMMENDED MANAGEMENT PRACTICES

Proposed new development within the proposed Puente Hills SEA should be designed to be highly compatible with the continued ecological function of the component biological resources described above; retention of existing natural biotic resources should be ensured. Although a comprehensive evaluation of all possible future land uses within this SEA cannot be made here, a general approach is outlined below and is recommended for use on a project specific basis. In order to preserve the integrity of the SEA, the proposed comprehensive management practices described in the *Los Angeles County SEA Update Study 2000 Background Report* are recommended. These practices address:

- Core habitat
- Habitat linkages and wildlife corridors

- Fire management
- Public access and recreation
- Infrastructure
- Wetlands, riparian habitats, and streambeds
- Non-riparian/upland woodlands

In addition to the comprehensive management practices the following proposed management practices are recommended specifically for the proposed Puente Hills SEA:

- Limit development densities to one residential unit per ten acre parcel, and constrain development design, where feasible, to cluster dwelling configuration along existing roadways in order to minimize clearing associated with fuel management, and to reduce the need for grading, fencing, and other habitat disturbances.
- Retain rare communities with adequate buffers so as to allow for the long term viability and integrity of plant communities as a whole. Rare communities include: oak riparian woodland, walnut woodland, southern willow scrub, coastal sage scrub and freshwater marsh.
- Retain connectivity and linkage values between major canyons of the SEA and especially at choke points such as between the Chino Hills and the Puente Hills, and major road crossings.
- Require oil extraction activities to employ the best management practices recognized in the industry; avoid unnecessary direct impacts to habitat, and conform to legal standards for all procedures used.
- Require mitigation through restoration and revegetation where the loss of small and/or isolated habitat patches is proposed. This would prevent a cumulative net loss in the functions and values of these habitats within any one of the Puente Hills SEA habitat units.

Additionally, proposed development should be reviewed when required by federal, state, or local laws before implementing plans which may impact biotic resources and/or sensitive species. Potential impacts to listed species or wetland areas require permitting in accordance with applicable laws.

11. SOURCES

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