PUENTE HILLS SIGNIFICANT ECOLOGICAL AREA

General

The Puente Hills Significant Ecological Area (SEA) is located in the Puente Hills in southeastern Los Angeles County. 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. They are the northwestern end of the group known as "Peninsular Ranges" that extends south into San Diego County and east to the San Jacinto massif. The SEA includes portions of the Whittier Narrows Dam Recreation Area and Flood Control Basin and most of the undeveloped land in the Puente Hills in Los Angeles County.

Description

The Puente Hills SEA encompasses the remaining relatively undisturbed habitat areas in the Los Angeles County portion of the Puente Hills. These include: portions of the Montebello Hills, 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 for Los Angeles County and the peninsular Ranges of Southern California.

Interconnecting these habitat areas are corridors of native vegetation, naturalized vegetation or sparsely developed land. While the last two types of areas do not represent key regional habitats, they have been recommended for inclusion in the SEA recognizing the importance of maintaining exchange between plant and animal populations throughout the Puente Hills, the Chino Hills and Santa Ana Mountains.

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. Sensitive plant species occurring or potentially occurring within the SEA are discussed below in the Sensitive Biological Resources section. Many of these species, although often different in their growth form, prefer similar habitat characteristics and are often found in recurring assemblages, forming plant communities. Eight major plant communities are found within the Puente Hills SEA. Plant communities within the SEA were classified using standard methodology and terminology. Most of the communities discussed 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. The following paragraphs give 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.

Oak woodland is a plant community dominated by species of the genus *Quercus*. Within this SEA the dominant oak is the coast live oak, which typically grows to heights of 20 to 40 feet and occurs in both closed and open tree canopy configurations, called "woodland" and "savannah" respectively. Understory vegetation varies from grassland in areas subject to grazing to shrubs where topography is steeper and/or grazing has been less intense. Oak woodlands may intergrade with shrub communities. Within this SEA, oak woodland is scattered throughout many hillsides, drainages and broad valleys. It is most prevalent on north-facing 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 differences between oak woodland and oak riparian forest are the existence of a drainage adjacent to oak riparian forest and coincidence of oaks with riparian vegetation that is found only near water. There is availability of water in riparian situations, which leads to a denser tree canopy and higher density of trees. There is also a greater number of hydrophytic (water favoring) plant species in the understory. Typical riparian trees such as western sycamore and willow commonly co-occur with the oaks. 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 Southern California black walnut which grows 10 to 30 feet high. More often than not, the Southern 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 walnut woodland 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 dense, nearly monotypic stands. 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 buckwheat, California encelia, white sage, and black sage. Coastal sage scrub sometimes 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. This vegetation is even common in 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. As is 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.

Wildlife

Wildlife within the 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. Thus, diversity may also be a function of the high level of biodiversity found in the Peninsular Ranges. While a few wildlife species are entirely dependent on a single vegetative community, the entire mosaic of all the vegetation communities within the 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 and woodland 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 support a wide variety of reptilian species.

The scrubland, woodland, riparian, and grassland habitats in the SEA provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. The SEA encompasses many year-round water sources and includes 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 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 and connected enough to support relatively stable large mammal populations, despite the urban surroundings.

Wildlife Movement

Evidence of significant wildlife movement throughout the Puente Hills SEA has 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. The Puente/Chino Hills are a natural, physical link between the Santa Ana Mountains and the San Gabriel River. The San Gabriel River flows from and links to the San Gabriel Mountains. 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 diverse and abundant 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 SEA.

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 distribution or 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 Puente Hills SEA, that have been afforded special recognition.

Sensitive Plant Communities/Habitats

This report/description supports several habitat types considered sensitive by resource agencies, namely the CDFG [California Natural Diversity Database (CNDDB), 2005], because of their scarcity and because they are 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 Puente Hills SEA 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.

Sensitive Species

Sensitive species include those listed, or candidates for listing by the USFWS, CDFG, and CNPS. These species include, but are not limited to, Plummer's mariposa lily, western spadefoot, southwestern pond turtle, San Diego coast horned lizard, Cooper's hawk, Swainson's hawk, white-tailed kite, coastal cactus wren, California gnatcatcher, loggerhead shrike, least Bell's vireo, and Southern California (ashy) rufous-crowned sparrow. In addition, the SEA identifies other species observed, recorded in the CNDDB, or reported in previous documentation as observed within or in the immediate vicinity of the SEA.

Ecological Transition Areas (ETAs)

The designated ETA represents a relatively small portion of this SEA, identifying an area of disturbance, which is associated with large lot development. It is located in the center portion of the SEA, primarily within the City boundaries of La Habra Heights. This area is important to the maintenance of the region wide wildlife movement linkage that connects the Puente and Chino Hills.