Biological Assessment of Proposed Transmission Line Corridors Linking Valley and Mira Loma Substations

Prepared by
Southern California Edison Company

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Table of Contents

	Page
Introduction	1
Existing Resources	1
Vegetation	1
Riparian	2
Coastal sage scrub	3
Chamise Chaparral	4
Juniper Woodland	5
Ecotones	6
Vertebrate Fauna	6
Rare/Threatened, Endangered or Protected Species	
Vegetation	7
Fauna	9
Raptors	9
Stephens' Kangaroo Rat	10
Biologically Sensitive Areas	11
Impact Assessment	
Vegetation	12
Wildlife	13
Raptors	13
Stephens' Kangaroo Rat	13
Impact Mitigation	14
Attachment I	
Plant List	
Attachment II	
Animal List	
Bibliography	

INTRODUCTION

The purpose of this report is to present the existing biological resources of the study corridors, assess the impacts associated with and suggest mitigation for the preferred and alternate routes.

There are two transmission line corridors proposed for connecting Valley and Mira Loma substations, one of which is a preferred route, the other an alternate route (Fig. I). The preferred route proceeds directly west from Valley Substation, running between Sun City on the south, and Perris on the north, to a point almost directly north of Alberhill. From there it turns northwest and runs to a point just north of Cajalco Road, where it turns once again and runs approximately due north, through several angle points, to Mira Loma Substation.

The alternate route proceeds north from Valley Substation to a point approximately 2-1/2 miles north of Perris. From this point, the line turns west, proceeding in this direction to approximately the same point north of Cajalco Road where the preferred route turns north. The alternate route also turns north at this point, closely paralleling the preferred route into Mira Loma Substation.

I. EXISTING RESOURCES

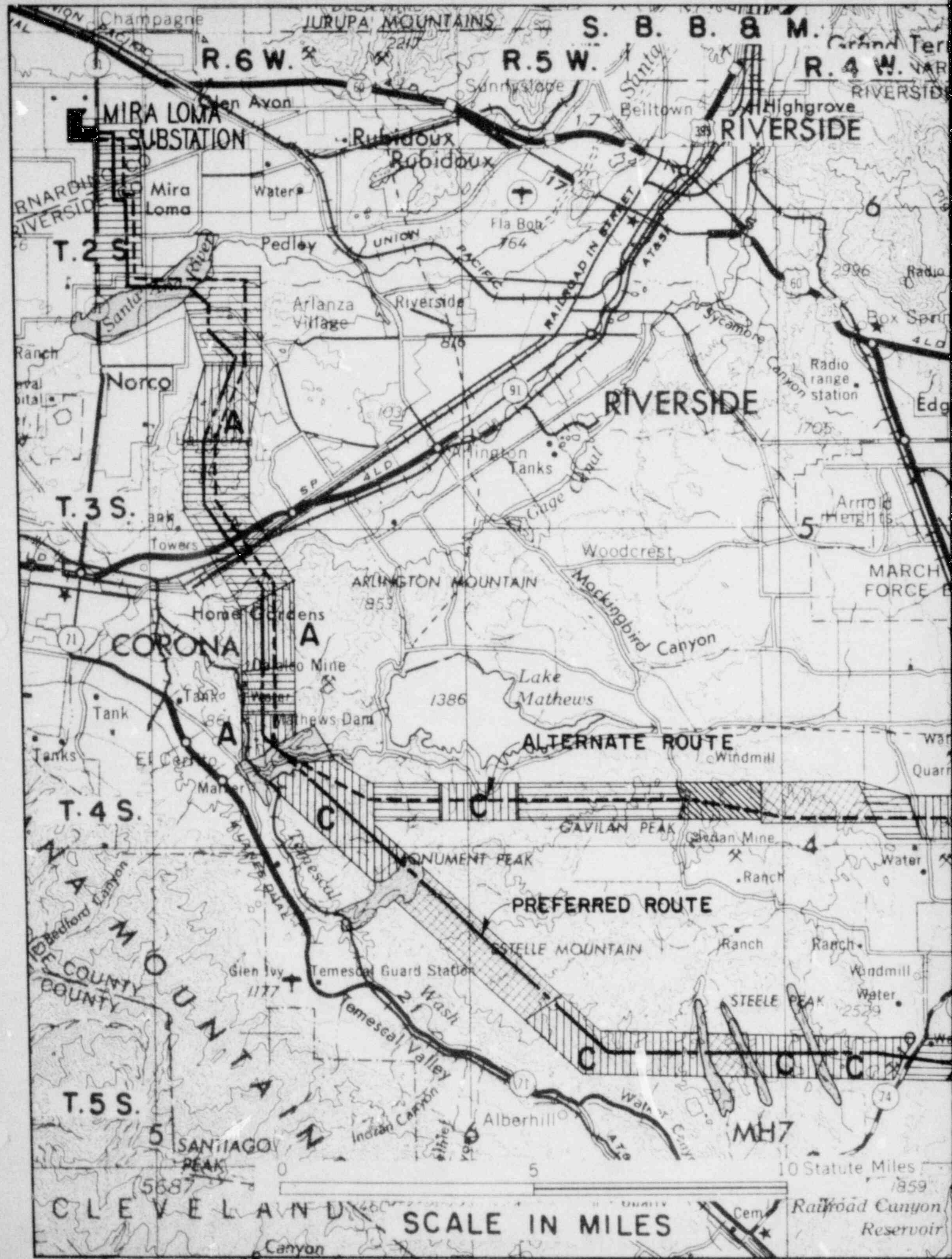
A. Vegetation

The two routes traverse several plant communities (vegetative conditions) consisting of the following:

- Disturbed conditions;
- Riparian;
- Coastal sage scrub;
- Chamaisal chaparral;
- Juniper woodland;
- Ecotones

Disturbed Conditions

Disturbed conditions are present within the defined transmission line corridors (Fig. I) and are indicated by the presence of various weedy, adventitous species, including: field mustard (Brassica geniculata), black mustard (Brassica nigra), various species of brome grass (Bromus rubens, B. mollis, and B. tectorum), wild oat (Avena fatua), Russian thistle (Salsola iberica), filaree (Erodium cicutarium), and star thistle (Centaurea spp.).



Champagne
JURUPA MOUNTAINS
S. B. B. & M.
R. 6 W.
R. 5 W.
R. 4 W.
Glen Avon
Sunnyslope
Belltown
Highgrove
MIRA LOMA SUBSTATION
Rubidoux
RIVERSIDE
Mira Loma
Pedley
Fla Bob
T. 2 S.
Arlanza Village
Norco
RIVERSIDE
Arlington
Tanks
Gage Canal
Radio range station
Sycamore Canyon
Arnold Heights
T. 3 S.
Woodcrest
ARLINGTON MOUNTAIN
Mockingbird Canyon
MARCH
Home Gardens
CORONA
A
Lake Mathews
Mathews Dam
ALTERNATE ROUTE
Windmill
El Cerrito
T. 4 S.
C
GAVILAN PEAK
MONUMENT PEAK
PREFERRED ROUTE
ESTELLE MOUNTAIN
Glen Ivy
Temescal Guard Station
Temescal Wash
Temescal Valley
STEELE PEAK
T. 5 S.
Alberhill
Indian Canyon
SANTIAGO PEAK
MH7
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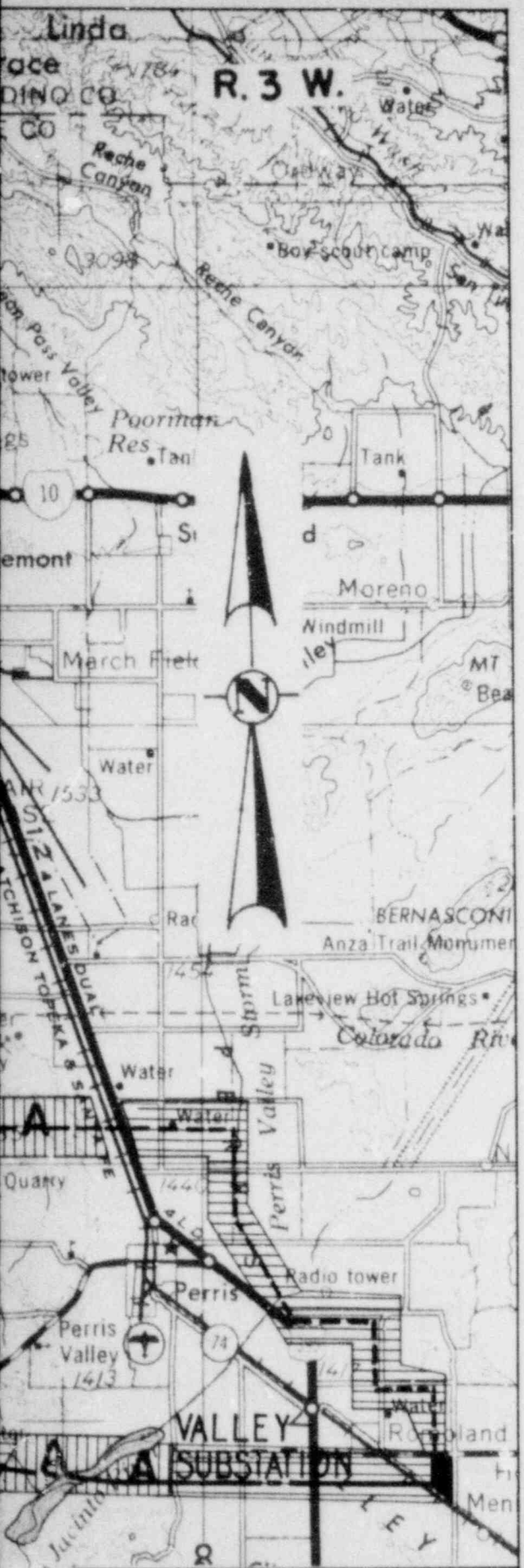
5
10 Statute Miles
SCALE IN MILES
CLEVELAND
Railroad Canyon Reservoir



MIRA LOMA - VALLEY 500 KV T/L
P. V. N. G. S. UNITS 4 & 5
WESTERN PARTICIPANT TRANSMISSION SYSTEM
RIVERSIDE & SAN BERNARDINO CO.
SOUTHERN CALIFORNIA EDISON COMPANY

LEGEND

- DISTURBED CONDITION
- A — ALTERED COASTAL SAGE SCRUB
- C — COASTAL SAGE SCRUB
- JUNIPER WOODLAND
- RIPARIAN
- CHAMISAL CHAPARRAL

* COMPONENTS OF NATIVE VEGETATION MAY BE PRESENT.

FIGURE I

VEGETATION MAP

R/W-6022-D

Other plants commonly associated with disturbed conditions and indicative of its occurrence are jimson weed (Datura meteloides), pigweed (Chenopodium spp.), amaranth (Amaranthus spp.), saltbush (Atriplex canescens), and bermuda grass (Cynodon dactylon).

The disturbed conditions present result from residential and commercial development, agriculture (including livestock grazing), road and trail construction, off-road-vehicle (ORV) activity, and fire.

The degree of disturbance varies, and is dependent upon the severity of the original perturbation and its time of occurrence. Sometimes, the native vegetation is not completely removed. The amount, density and relative frequency of native vegetation remaining in these disturbed areas is dependent upon the intensity and duration of impact.

Disturbed conditions generally support fewer native plant and animal species. Therefore, impact to them is not considered as significant as impact to native communities. The alternate route traverses more land exhibiting disturbed conditions than does the preferred route (approximately 23.4 versus 12.3 linear miles, respectively).

A more complete list of plant species found in the disturbed areas, as well as the study corridors, is contained in Attachment I.

Riparian

There are several riparian areas present along each of the study corridors (Fig. I). Riparian conditions present range from ephemeral water and principally herbaceous vegetation to more typically riparian habitats with permanent water. The latter habitats contain herbaceous vegetation, but also contain significant amounts of phreatophytic, hardwood trees. The most significant riparian habitats are the Santa Ana and San Jacinto Rivers, both support a variety and mixture of woody and herbaceous vegetative species which are typically associated with the physiographic conditions found along such water courses. These include: cottonwood (Populus fremontii), white alder (Alnus rhombifolia), sycamore (Platanus racemosa), elderberry (Sambucus mexicana), various species of willow, including

arroyo (Salix lasiolepis) and red willow (Salix lasiandra), seep-willow (Baccharis glutinosa), mule fat (B. viminea), and arrowweed (Pluchea sericea). Some of the herbaceous species include: Yerba mansa (Anemopsis californica), various species of wire grass (Juncus spp.) and cat-tail (Typha spp.). A more complete list of plant species found in riparian areas may be found in the master plant list (Attachment I).

Smaller riparian communities exist in the canyons with a north-south orientation south of Lake Mathews. The more notable of these being Arroyo del Toro and Cajalco Canyon.

Coastal Sage Scrub

The dominant plant community present along each of the transmission corridors is coastal sage scrub. Coastal sage scrub (or soft chaparral) is a drought-deciduous, vegetative type characterized by California sage brush (Artemisia californica), white sage (Salvia apiana), black sage (Salvia mellifera), California buckwheat (Eriogonum fasciculatum), California encelia (Encelia californica), brittle-bush (E. farinosa) matchweed (Guitierrezia bracteata), wishbone bush (Mirabilis californica), telegraph weed (Haplopappus venetus) and H. squarrosus, golden-yarrow (Eriophyllum confertiflorum), lemondadeberry (Rhus integrifolia), sugar bush (Rhus ovata), sometimes laurel sumac (Rhus laurina), and elderberry (Sambucus mexicana), and clonal clumps of prickly pear cactus (Opuntia spp.).

Generally, coastal sage scrub occurs on the lower, ocean-facing slopes of mountains (cismontane), interrupted by chaparral on the higher, more mesic slopes. A reoccurrence of coastal sage on the rain shadow lower slopes of the mountain interior (transmontane), (Barbour and Major, 1977) is common.

Islands of coastal sage are common within the chaparral community; usually on disturbed areas, barren rocky slopes, road cuts, or particular soil types, such as heavy clays.

There are two physiognomic conditions in the coastal sage scrub worthy of note, particularly as they may pertain to the preferred habitat and distribution of Stephens' kangaroo rat (Dipodomys stephensi), a species listed as rare by the California State Department of Fish and Game. (Please refer to Rare or Endangered Species).

The physiognomic conditions noted refer to a differential in perennial species diversity within areas of the coastal sage scrub plant community. A typical coastal sage scrub has many perennial species present, including: California buckwheat, white and black sage, California sage brush, brittle bush, wishbone bush, etc. There are, however, segments of this plant community, within the corridors, not exhibiting this typical perennial species diversity. Instead, these latter segments are composed almost entirely of only one or two species, with California buckwheat invariably being one of the species. This atypical coastal sage scrub community may represent a successional situation (sere), resulting from past disturbances (e.g., grazing, agriculture, fire, etc.), or it may be a manifestation of particular edaphic or micro-climatological characteristics. Areas of this coastal sage scrub, lacking of perennial species diversity, may be found on Fig. I, and is referred to as altered coastal sage scrub (A.CSS).

Chamaisal Chaparral

Present within the two proposed transmission corridors are elements of the chaparral plant community (Fig. I).

The dominant chaparral type throughout the study area is chamise chaparral. It is dominated by chamise (Adenostoma fasciculatum), an ubiquitous species, sometimes found in pure stands (80% or more in cover). Chamise chaparral is a thick-growing, interwoven vegetation 7-10 feet high at maturation, without understory and with scanty litter. Associated species of low frequency (10% or less) are manzanita (Arctostaphylos spp.), California lilac (Ceanothus spp.), perennial rye grass (Elymus condensatus), California buckwheat, scrub oak (Quercus dumosa), sugar bush, lemonadeberry, white sage, black sage, and Whipple's yucca (Yucca whipplei).

The distribution of chamise chaparral is extensive throughout the study area. It is associated with hot, xeric sites, which are usually the south and west facing slopes and mountain ridges. It occurs in an elevational range of ca. 1000-2900 ft. (Barbour and Major, 1977).

Physiognomic complexity is low in this chaparral type as it lacks vertical structure and diversity. Furthermore, shrub cover (up to 90%), plus the accumulation of plant produced toxins (phyto-toxins, allelopaths) in the soil and litter inhibit germination of a significant understory of grasses, forbs or seedlings.

Like coastal sage scrub, the chamise chaparral has undergone severe disturbance due to natural and man-caused perturbations. When disturbances occur, chamise chaparral is often temporarily replaced by components of coastal sage scrub vegetation, which has been found to be pre-climax as well as successional to chaparral.

Significant disturbance and degradation of this community is not anticipated as a result of the construction of a transmission line.

Juniper Woodland

Within very specific areas of each corridor, particularly the alternate route, vegetative elements consistent with a Juniper Woodland are present (Fig. I).

California juniper (Juniperus californica) is often associated with pinyon pine (Pinus monophylla) as a pinyon-juniper woodland community. In southern California, this community occurs on the transmontane slopes of the peninsular and transverse mountain ranges, usually between 5,000 to 8,000 feet.

Within the study area, juniper occurs as isolated individuals in conjunction with coastal sage scrub. This very spotty distribution of juniper occurs south of Lake Mathews and east of Temescal Valley, as far east as the San Jacinto River. However, a few miles east of Gavilan Road, a definite stand of juniper tree woodland has become established. In this locality, juniper tree is the dominant species with associated understory species. Surrounding this stand are species typical of coastal sage scrub and chamisal chaparral.

Ecotones

Wherever there are two adjacent plant communities, there exists an ecotone. An ecotone represents a transition zone between plant communities (biomes), areas in which there is a gradiation of vegetative and faunal species from adjacent biomes. They are interesting and important components of the ecosystem, characterized by vegetative and animal components from each of the plant communities present. They generally possess a higher floral species diversity than either of the two plant communities alone.

Within the corridor study areas there are two major ecotones--those that exist between agriculture and coastal sage scrub, and a coastal sage scrub-chamise chaparral ecotone.

Ecotones are represented by fairly narrow zones. Significant impact to these areas are not anticipated.

B. Vertebrate Fauna

Within each of the plant communities previously described, there is associated a characteristic assemblage of verebrate fauna.

The density and diversity of the fauna within each plant community is directly related to the complexity (i.e., the amount of open and closed areas (patchiness), vertical stratification of vegetation, etc.) and diversity of the plant community with which it is associated. Thus, an area exhibiting low plant species diversity, closed vegetative canopies, and vegetation of approximately the same height would have associated with it a fauna of low species diversity and density.

Within the transmission corridors, plant communities that have an associated vertebrate fauna of low diversity would be chaimsal chaparral, coastal sage scrub, and disturbed conditions. Plant communities exhibiting high faunal species diversity would be the riparian areas, juniper woodland and ecotones. These latter plant communities, because of their complexity and uniqueness, are most sensitive to disturbances and perturbations, whereas the earlier mentioned communities are least sensitive.

Animal species expected to occur in the study area and their respective habitat types are contained in Attachment II.

Some of the species exhibit very specialized habitat requirements and are thus restricted to certain plant communities (e.g., D. stepheni-coastal sage scrub; wrentit (Chamaea fasciata) chaparral). Other species are less specialized in habitat preference and are thus wider-ranging (e.g., red-tail hawk (Buteo jamaicensis), blacktail hare (Lepus californicus)).

C. Rare/Threatened, Endangered or Protected Species

Vegetation

Efforts to protect plants have only recently been initiated. Three documents are currently available describing the plant species, its proposed status (i.e., rare, threatened, or endangered) and in some cases its recorded locality(s). These are the Smithsonian list which appeared in the Federal Register (July 1, 1975), the Fish and Wildlife Service list of endangered and threatened species of plants (Federal Register, June 16, 1976), and the California Native Plant Society listing by Powell (1974). These documents include plants considered to be rare or endangered species but have not yet officially been adopted as such. Presently, they are useful only as planning documents.

In addtion, Assembly Bill 131 was passed by the California State Legislature and signed by the Governor in 1977. The primary intent of this legislation is to prohibit the wholesale merchandizing of native California desert plants. Two species covered under AB-131 occur within the study area. They are: toyon (Heteromeles arbutifolia) which occurs in the Santa Ana Mountains, and Whipple yucca which is found in chaparral and coastal sage scrub stands.

Special consideration should be given to those species listed on either of three previously mentioned lists. The following table presents the plant species included on these lists and are reported to occur within the study area (Powell 1974, and Munz 1976).

Species	CNPS	Smithsonian	FWS
Thread-leafed brodiaea (*Brodiaea filifolia*)	x	x	x
Slender-horned chorizanthe (*Chorizanthe leptoceras*)	x	x	x
California orcuttia (*Orcuttia californica*)	x	x	x
San Miguel satureja (*Satureja chandleri*)	x	x	
Bleeding heart yellow (*Dicentra ochroleuca*)	x	x	x
Pennyroyal (*Monardella macrantha* ssp. *hallii*)	x	x	x

Broadiaea occurs in clay soils below 2,000 feet in coastal sage scrub and chaparral near Perris, California. It has been recorded as historically occurring one mile east of Perris and in the San Jacinto River bottom (Niehaus, 1971). A recent search in the area failed to disclose its presence (Wirth, 1977).

Chorizanthe leptoceras is found in sandy places within coastal sage scrub near Elsinore. (Munz, 1974) and might be anticipated in sandy river bottoms.

The California orcuttia occurs in dry mud flats of western Riverside County, most notably near Murrieta Hot Springs. Its habitat requirements are not satisfied within the study area.

San Miguel satureja occupies rocky canyons in the Santa Ana Mountains below 2,600 feet in chaparral. It could also possibly occupy areas near Estelle Mountain.

Bleeding heart and pennyroyal occur in the Santa Ana Mountains in chaparral. Similar to *S. chandleri* in habitat requirements, they may also occur further east, near Estelle Mountain.

Other sensitive or unique plants on the previously mentioned lists, that may occur within either study corridor, although with less probability, include:

- Orcutt's quillwork
  Isoetes orcutti (Smithsonian)

- Broad-horned prickly poppy
  Argemone munita ssp. robusta (Smithsonian)

- Fibrillose lip-fern
  Cheilanthes fibrillosia (Smithsonian, CNPS)

- Black fritillary
  Fritillaria biflora (CNPS)

- Scarlet gaura
  Gaura coccinea (CNPS)

- Nuttall's sunflower
  Helianthus nuttallii spp. parishii (CNPS, FWS)

- California loeflingia
  Loeflingia squarrosa ssp. artemisia (CNPS)

Field work conducted for this study failed to detect any protected plant species within the effected corridor areas.

Fauna

Within the corridor study area, the animals of primary concern are raptors, which are fully protected by state and federal law, and Stephens' kangaroo rat (Dipodomys stephensi), listed as rare, and thus afforded protective status, by the California State Department of Fish and Game.

Raptors

Raptors observed and/or expected to occur in the area are:

Red-tailed hawk (Buteo jamaicensis)
American kestrel (Falco sparverius)
White-tailed kite (Elanus leucurus)
Prairie falcon (Falco mexicanus)
Golden eagle (Aquila chrysaetos)
Barn owl (Tyto alba)
Bald eagle (Haliaeetus leucocephalus)
Burrowing owl (Speotyto cunicularia)
Great-horned owl (Bubo virginianus)

Two raptor nesting sites were observed in the study area during field studies (Fig.II.) and others are expected.

Stephens' Kangaroo Rat

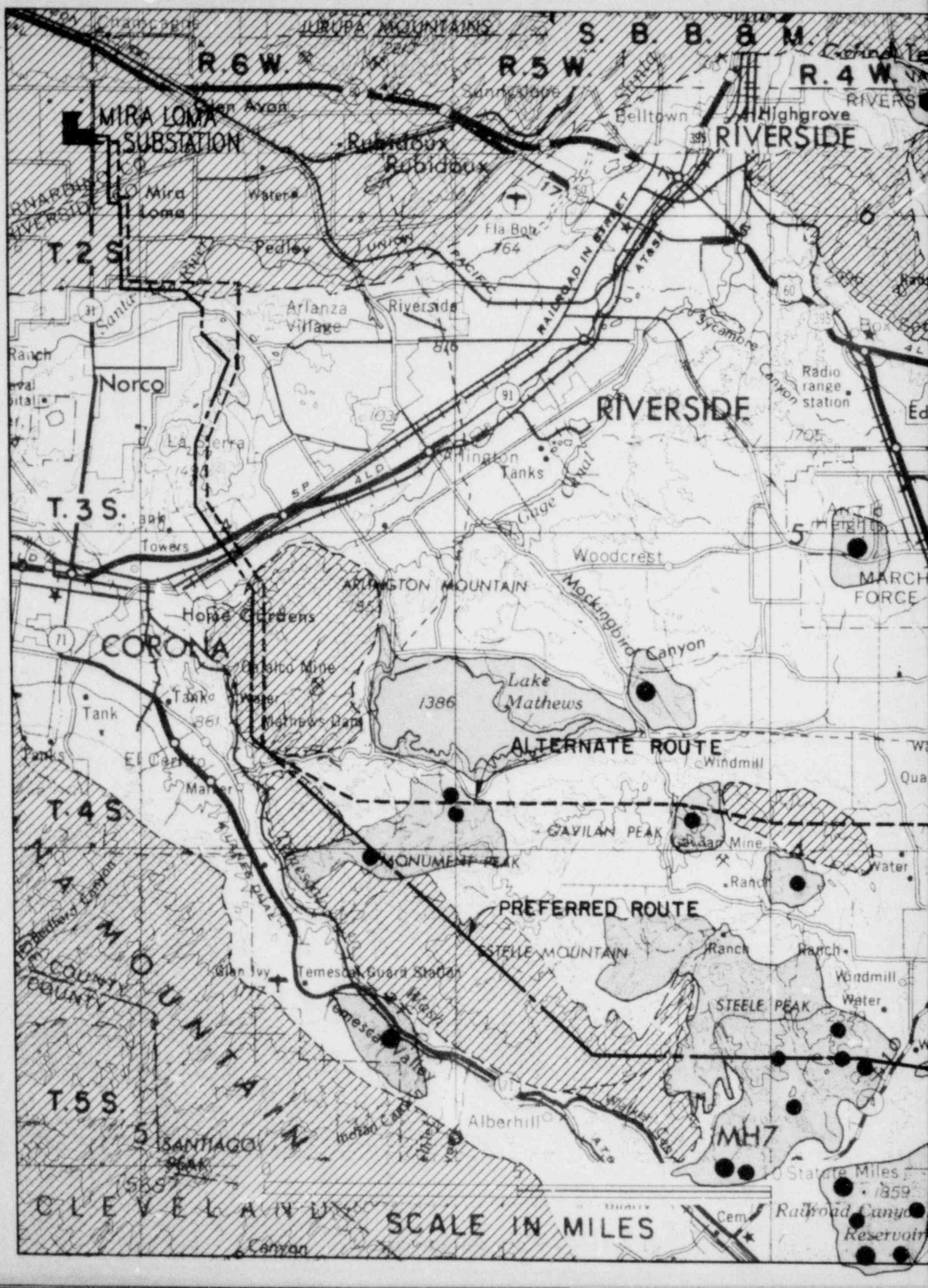
The Stephens' kangaroo rat is perhaps the most important biological sensitivity in the study area. This animal occupies areas of coastal sage scrub or annual grasslands exhibiting light to moderate vegetative disturbances. Formerly, the species was apparently quite numerous within the San Jacinto Valley. Now, however, due to urban development, agricultural expansion and other man-related habitat alterations, the species has a disjunct distribution, occurring as isolated populations in northern San Diego County and southwestern Riverside County.

Specifically, D. stephensi is found on level to gently rolling topography with elements of coastal sage scrub, grassland and chaparral occurring singularly or in associations. The density of vegetative cover appears to be an important habitat factor. Thomas (1975), reported stephensi occurrence in areas where the percent cover of perennial plant species ranged from 3.6 to 10.5%. However, field work conducted by Southern California Edison indicated a higher percent cover (16-44%).

Plant species common to inhabited areas include: California buckwheat, California sagebrush, brittlebush, white and black sage, and various species of Haplopappus and Opuntia .

Figure II indicates the known populations of D. stephensi in proximity to the corridors of the subject project. Nine of these have recently been determined by Edison biologists. These finds would tend to indicate that the species may be more common than formerly recognized.

It is important to note that the estimated current distribution is based on the field data available (i.e, recent population confirmations and suitable habitat available), and is not intended to be absolute without error. Rather, it represents an approximation based on best available data.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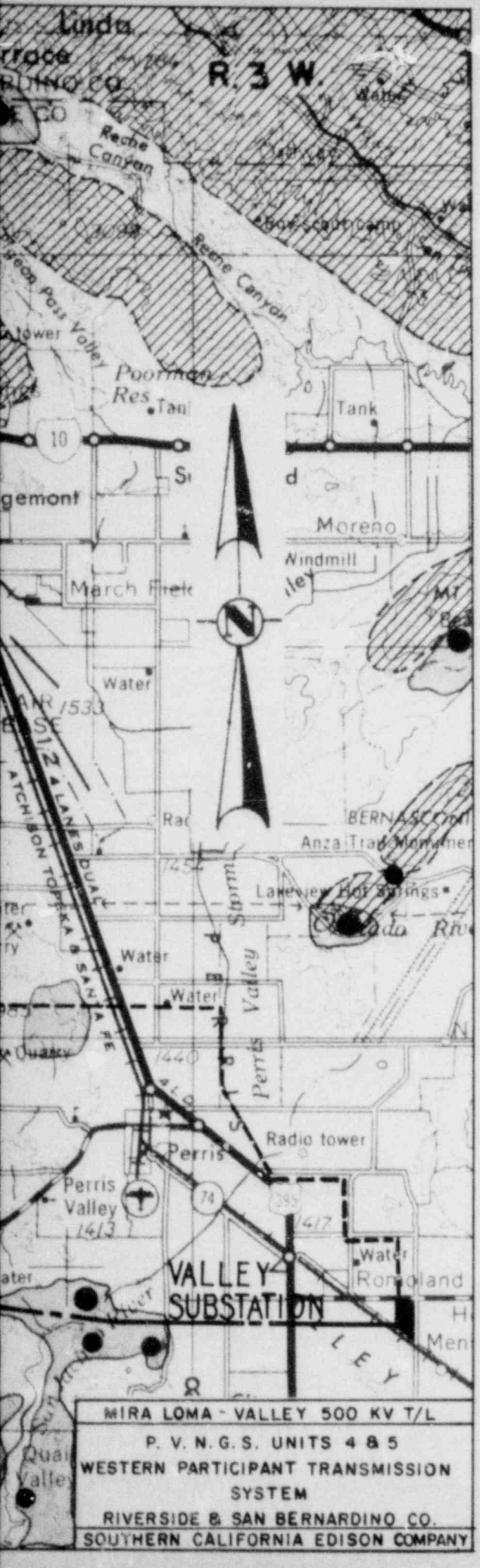


LEGEND

APPROXIMATE AREAS OF UNSUITABLE D. STEPHENSI HABITAT

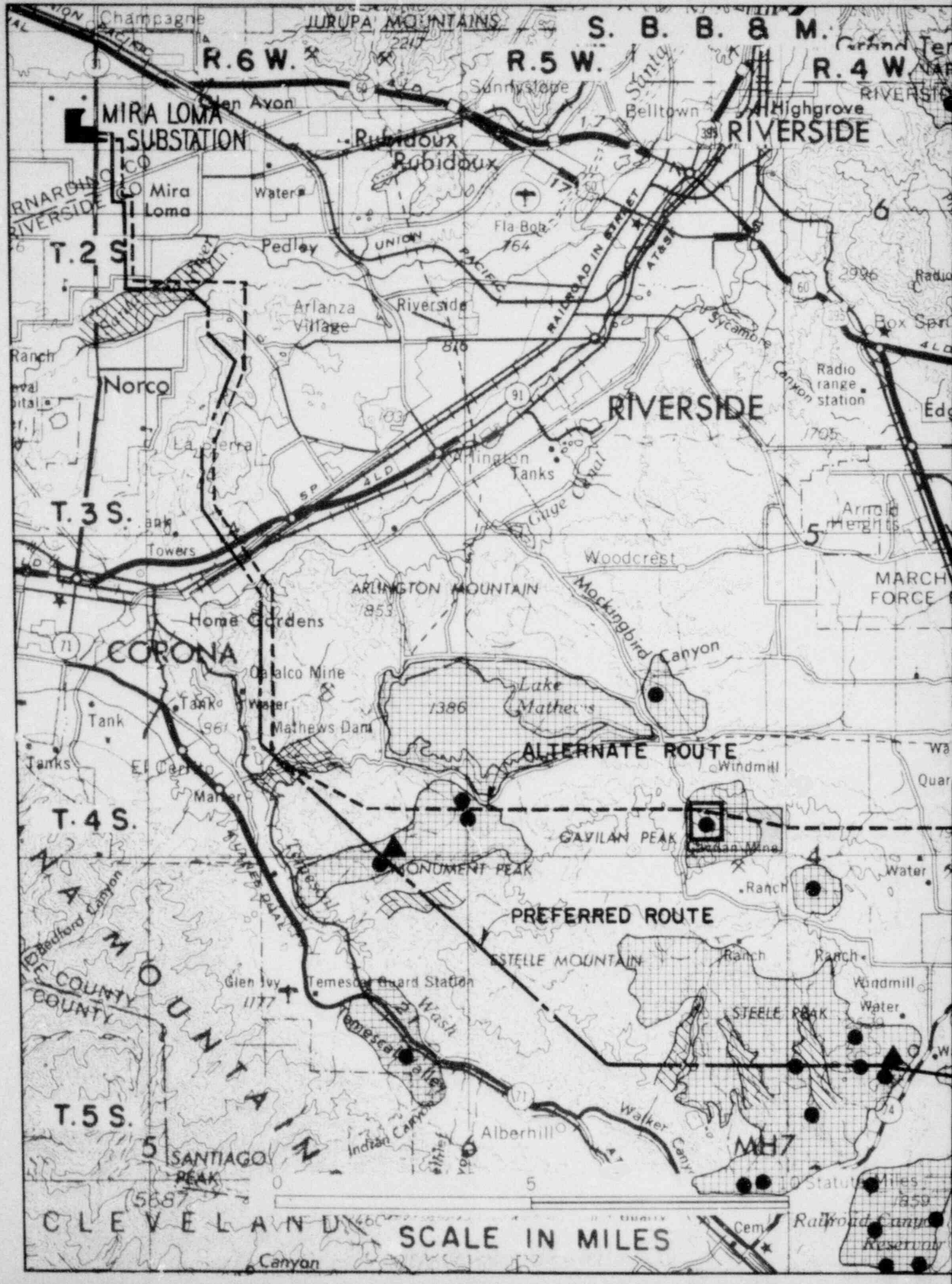
ESTIMATED AREAS IN WHICH D. STEPHENSI IS EXPECTED TO OCCUR

CONFIRMED DIPODOMYS STEPHENSI OCCURRENCE

FIGURE II

STEPHENS KANGAROO RAT DISTRIBUTION

R/W-6024-D



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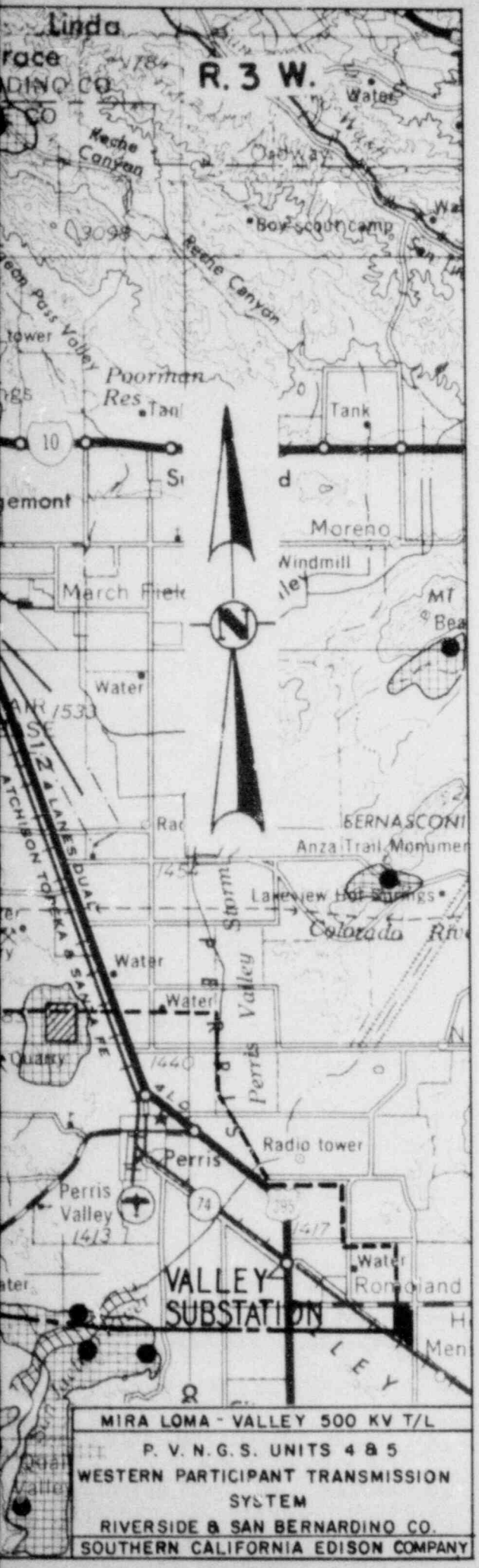

LEGEND

- ESTIMATED PRESENT DISTRIBUTION OF D. STEPHENSI
- HARTFORD SPRINGS WILDLIFE SANCTUARY
- CALIFORNIA NATURAL AREA — MOTT PROPERTY
- JUNIPER WOODLAND
- RAPTOR NESTING SITES
- RIPARIAN HABITAT
- CONFIRMED OCCURRENCE OF D. STEPHENSI

FIGURE III

BIOLOGICALLY SENSITIVE AREAS

R/W-6023-D

Biologicaly Sensitive Areas

In addition to potential D. stephensi habitat, and raptor nest sites, there are other biologically sensitive areas. These include the Hartford Springs Wildlife Sanctuary and Mott Property, a California Natural Area.

The Hartford Springs Wildlife Sanctuary (Fig.III) was established by the Riverside County Parks Department 7-8 years ago. It is located immediately east of Gavilan Rd., and is traversed by the alternate route. It is considered to be floristically unique, containing large segments of a juniper woodland plant community. At least one comfirmed population of D. stephensi has been identified as occurring within the park.

The Mott Property, a California Natural Area, also occurs along the alternate route (Fig.III). It is located approximately 1/2 mile west of highway 395. A California Natural Area is an area identified and cataloged by the California Natural Areas Coordinating Council as possessing particular scientific, educational, historical or aesthetic interest. The primary goal of the Council in identifying these unique areas is to have private firms and government agencies involved in land use and land management and consider these factors when making any decisions that might adversely affect these areas.

The Mott Property natural area covers approximately 570 acres of private land. Vegetation in the area is characteristic of a typical coastal sage scrub plant community. D. stephensi is thought to occur on the property.

Other biologically sensitive areas within the corridors include the various riparian areas and the juniper woodland. The riparian areas are sensitive because of unique habitat diversity, productivity and availability of water and the diversity of the associated fauna.

The juniper woodland is unique in its location. Because of its limited distribution and the age of the stands, the juniper tree woodland is considered highly sensitive; recovery from impact is expected to be relatively slow.

II. IMPACT ASSESSMENT

A. Vegetation

Coastal sage scrub and chaparral communities, are well-suited to successional recovery from impact. This, plus their wide distribution indicates the potential impact resulting from construction of a transmission line is expected to be moderate.

There are, however, sensitive areas, possessing to potential for significant environmental impact. They are:

- Riparian areas
- Juniper woodland
- Hartford Springs Wildlife Sanctuary
- California Natural Area

Because riparian areas, are generally relatively narrow, potential impact may be prevented or minimized by spanning the area. Thus, any impact to these areas is expected to be nonexistant or insignificant at most.

There is one substantial stand of juniper woodland (within which is situated the Hartford Springs Wildlife Sanctuary) within the study corridors. It and the California Natural Area (Mott Property) represent areas too large to span. Impact to these areas are expected to result from the following activities: actual construction of the towers (including tower placement, tower construction areas, conductor stringing areas, etc.) and the construction of access roads.

The loss of vegetation and habitat are the most serious of impacts that may result from the construction of the transmission line. Associated secondary impact such as new access, ORV use, etc. add to the primary impact of the project construction.

Wildlife

o Bald Eagles and Other Raptors

Bald eagles (Haliaeetus leucocephalus) are known to occur at Lake Mathews as seasonal (winter) visitors (DFG, 1975). They are listed as rare by the California State Department of Fish and Game and as threatened by the U.S. Fish and Wildlife Service. The only anticipated impact the transmission line (alternate route) may have upon the eagles is the increased potential for collision with the towers or conductors. This is not, however, anticipated to be more than a very rare cause of eagle mortality and thus is not significant. Moreover, Nelson (1974) has demonstrated that the steel lattice towers may actually enhance raptor populations, providing additional perching and roosting sites and affording suitable sites for nest construction. While the bald eagles are not known to nest in the area, it is reasonable to expect the eagles may derive some benefit (as perching sites) from the towers.

Impact to raptor nesting sites may be avoided by altering the construction schedule to avoid conflict with the nesting season.

o Stephens' Kangaroo Rat

The loss of Stephens' kangaroo rate habitat is particularly significant. Previous, extensive habitat loss throughout its range has resulted in relatively small, isolated populations of the animal. Additional habitat loss may result in extirpation of individual populations, further reducing the status and surviability of this animal.

It is estimated that the preferred route traverses approximately 9.1 linear miles of potential stephensi habitat. While the alternate route traverses approximately 3.6 linear miles of potential habitat. Allowing a 100 foot right of way on each side of the transmission line, it is estimated that 221 and 88 acres of suitable habitat are traversed respectively. Of this, it is anticipated that approximately 16 acres (7.2% of suitable habitat

traversed) along the preferred route and 6.4 acres (7.2% of suitable habitat traversed) along the alternate route will be permanently lost through direct impacts (tower and access road construction). Loss of habitat resulting from secondary activities reasonably may be expected to result in further habitat loss.

A summary of the biological sensitivities encountered by either of the proposed transmission corridors is contained in Table I.

III. IMPACT MITIGATION

The primary and unavoidable impacts expected to result from the construction of the transmission line are: loss of vegetation and habitat in general, and possible loss of D. stephensi habitat and populations in particular. These impacts, although unavoidable may be somewhat ameliorated through prudent planning of construction activities.

The amount of general habitats and vegetation lost may be minimized by:

- o utilizing existing access roads whenever possible; and
- o minimizing the area utilized for tower construction and stringing locations.

Impacts to D. stephensi populations may be minimized by selectively placing towers, situated within potential suitable habitat, in rocky areas where the animal does not occur. Impacts may be further minimized by limiting or preventing access roads within suitable habitat. It may also be possible to span an entire population, if the area in which it occurs is small enough (e.g. canyons, washes, etc.).

Additional mitigative measures may consist of acquiring and protecting D. stephensi habitat in an amount equal to, or greater than, the amount distrubed as a result of transmission line construction.

TABLE I. SUMMARY OF BIOLOGICAL SENSITIVITIES AS ENCOUNTERED BY EITHER TRANSMISSION CORRIDOR

Biological Sensitivity	Transmission Corridor Preferred Route	Alternate Route
o Estimated amount of suitable *Dipodomys stephensi* habitat traversed.	9.1 linear miles	3.6 linear miles
o Estimated amount of suitable *D. stephensi* habitat subject to loss via transmission line construction.	16 acres	6.4 acres
o Number of confirmed *D. stephensi* populations directly within proposed corridors.	5	2
o Potential and confirmed raptor nesting sites located within one mile of proposed corridor.	8 potential; 2 confirmed	4 potential; 0 confirmed
o Wildlife sanctuary traversed.	No	Yes (1 mile)
o California Natural Area traversed.	No	Yes (.75 mile)
o Juniper woodland traversed.	No	Yes (1.5 mile)
o Anticipated impact on riparian areas.	None to minimal	None to minimal
o Estimated amount of native vegetation traversed.	20 linear miles	12.4 linear miles

ATTACHMENT I

SOME COMMON PLANTS EXPECTED TO OCCUR ALONG THE TRANSMISSION CORRIDORS

Family Scientific Name	Common Name	Plant Community
Seloginellaceae		
Selaginella bigelovii	spike moss	CSS, CC
Cupressaceae		
Juniperus californica	California juniper	JW, CSS
Amaranthaceae		
Amaranthus albus	tumbleweed	D, A/U
Amaranthus spp.	amaranth	D, A/U
Anacardiaceae		
Rhus laurina	laurel sumac	CSS, CC
Rhus trilobata	squaw bush	CSS
Schinus molle	pepper tree	CSS, D, A/U
Toxicodendron diversilobum	poison-oak	CSS, CC
Apiaceae		
Foeniculum vulgare	sweet fennel	D, A/U
Asteraceae		
Ambrosia psilostachya var. *californica*	western ragweed	CSS, CC
Artemisia californica	coastal sagebrush	CSS
Aster spp.		
Baccharis glutinosa	seep willow	
B. viminea	mule fat	
Bebbia juncea	sweet bush	CSS
Centaurea spp.	star thistle	D, A/U
Conyza spp.	horseweed	D, A/U
Encelia californica	California encelia	CSS, CC
E. farinosa	brittle-bush	CSS
Gutierrezia bracteata	matchweed	CSS, CC
Haplopappus spp.	golden fleece	CSS, CC, D
Helianthus annum	sunflower	R, D, A/U
Heterotheca grandiflora	telegraph weed	CSS, CC

Lepidospartum squamatum	scale-broom	CSS, CC
Lessingia grandulifera		CSS
Stephanomeria spp.		D, A/U
Brassicaceae		
Brassica geniculata	field mustard	D, A/U
B. nigra	Black mustard	D, A/U
Raphanus sativa	Wild radish	D, A/U
Cactaceae		
Opuntia littoralis	prickly pear	CSS
O. parryi	valley cholla	CSS, CC
Caprifoliaceae		
Sambucus mexicana	elderberry	R, CSS
Chenopodiaceae		
Atriplex canescens	four-wing saltbush	D, A/U
Chenopodium spp.	goosefoot/pigweed	D, A/U
Salsola iberica	Russian thistle	D, A/U
Convolvulaceae		
Calystegia spp.	morning-glory	CSS, CC
Cuscuta californica	dodder	CSS, CC
Cucurbitaceae		
Cucurbita foetidissima	calabazilla	CSS
Euphorbiaceae		
Eremocarpus setigerus	dove weed	CSS, D
Euphorbia polycarpa	spurge	CSS, D
Ricinus communis	castor-bean	R, D
Fabaceae		
Lotus scoparius	deer-weed	CSS
Fagaceae		
Quercus dumosa	scrub oak	CC
Geraniceae		
Eroduim circutarium	filaree	CSS, D, A/U
Hydrophyllaceae		
Ericdictyon spp.	yerba santa	CSS, CC

Lamiaceae		
Marrubium vulgare	horehound	CSS, D, A/U
Salvia apiana	white sage	CSS
Salvia mellifera	black sage	CSS
Trichostema lanceolatum	vinegar weed	CSS, CC, D
Malvaceae		
Malva parviflora	cheese weed	D, A/U
Myrtaceae		
Eucalyptus spp.	gum tree	D, A/U
Nyctaginaceae		
Mirabilis californica	wishbone bush	CSS, CC
Platanaceae		
Platanus racemosa	sycamore	R
Polygonaceae		
Eriogonum elongatum		CSS, CC
Eriogonum fasciculatum	California buckwheat	CSS, CC
Rumex crispus	curly dock	D, A/U
Rhamnaceae		
Ceanothus spp.	California lilac	CC
Rosaceae		
Heteromeles arbutifolia	toyon	CC
Prunus ilicifolia	holly-leaved cherry	CC
Rubiaceae		
Galium spp.	bedstraw	CSS, CC, D
Salicaceae		
Populus fremontii	cottonwood	CSS, CC, R
Salix lasiandra	red willow	R
Salix lasiolepis	arroyo willow	R
Scrophulariaceae		
Mimulus spp.	monkey flower	CSS, CC
Solanaceae		
Datura meteloides	jimsonweed	CSS, D
Lycium spp.	box-thorn	CSS, CC
Nicotiana glauca	tree tobacco	D, A/U
Tamaricaceae		
Tamarix spp.	tamarisk	R

Utricaceae		
Utrica holosericea	nettle	R
Agavaceae		
Nolina parryi	nolina	CSS, CC
Amaryllidaceae		
Allium spp.	wild onion	CSS
Brodiaea spp.	brodiaea	CSS
Juncaceae		
Juncus spp.	wire-grass	R
Liliaceae		
Calachortus spp.	Marposa-lily	CSS
Poaceae		
Arundo donax	giant reed	R, D
Avena fatua	wild oad	D, A/U
Bromus mollis	bromegrass	CSS, D, A/U
B. rubens		CSS, D, A/U
B. tectorum		CSS, D, A/U
Dactylis glomerata	orchardgrass	D
Digitaria spp.	crabgrass	D, A/U
Distichlis spicata	saltgrass	R
Hordeum vulgare	common barley	D, A/U
Lolium perenne	ryegrass	D, A/U
Stipa lepida	needlegrass	CSS, CC
Typhaceae		
Typha spp.	cat-tail	R
Betulaceae		
Alnus rhombifalia	white alder	R
Cnagraceae		
Zauschneria californica	California fuchsia	CSS, CC
Asteraceae		
Xanthuim strumarium	cocklebur	R, D
Apiaceae		
Conium maculatum	poison-hemlock	D
Asteraceae		
Eriophyllum confertiflorum	golden yarrow	CSS, CC

Poaceae		
Poa spp.	bluegrass	R
Fabaceae		
Melilotus albus	white sweetclover	R, D
Rosaceae		
Rosa californica	wild rose	R, CSS

PLANT COMMUNITY LEGEND

CSS	-	Coastal Sage Scrub
CC	-	Chamaisal chaparral
JW	-	Juniper Woodland
R	-	Riparian
D	-	Disturbed
A/U	-	Agricultural/Urban

Attachment II

COMMON MAMMALS REPORTED TO OCCUR WITHIN THE STUDY AREA

SCIENTIFIC NAME	COMMON NAME	RELATIVE ABUNDANCE(1)	HABITAT PREFERENCE(2)
RODENTIA (Rodents)			
Spermophilus beecheyi*	Beechey ground squirrel	C	A/U,CSS
Mus musculus*	House mouse	FC	A/U
Reithrodontomys megalotis	Western harvest mouse	FC	CSS,Ch
Peromyscus maniculatus*	Deer Mouse	C	CSS,Ch
Peromyscus californicus*	California mouse	FC	CSS,Ch
Peromyscus boylei	Brush mouse	FC	CSS,Ch
Perognathus fallax*	San Diego pocket mouse	FC	CSS,CH
Perognathus californicus	California pocket mouse	FC	CSS,Ch
Dipodomys agilis*	Pacific kangaroo rat	C	Ch,CSS
Dipodomys merriami	Merriam kangaroo rat	FC	CSS,Ch
Dipodomys stephensi*	Stephens kangaroo rat	R	CSS
Neotoma fuscipes*	Dusky-footed wood rat	FC	CSS,Ch,RW,JW,A/U
Neotoma lepida	Desert wood rat	FC	CSS,Ch,RW,JW
Microtus californicus	California meadow mouse	U	CSS
Thomomys bottae*	Botta pocket gopher	C	A/U,CSS,Ch,JW,RW
LAGOMORPHA (Hares & Rabbits)			
Lepus californicus*	Black-tailed hare	C	CSS,Ch,JW,RW,A/U
Sylvilagus auduboni	Audubon cottontail	C	CSS,Ch,RW,JW,A/U
Sylvilagus bachmani*	Brush rabbit	FC	Ch,CSS
CARNIVORA (Carnivores)			
Canis latrans*	Coyote	C	CSS,Ch,RW,A/U,JW
Bassariscus astutus	Ringtail cat	U	Ch
Urocyon cinereoargenteus	Gray fox	U	Ch,CSS,RW
Taxidea taxus	Badger	U	Ch,CSS
Spilogale gracilis	Spotted skunk	FC	CSS
Mephitis mephitis	Striped skunk	FC	ALL
Mustela frenata	Long-tailed weasel	U	ALL
Procyon lotor*	Racoon	FC	RW
Felis rufus	Bobcat	U	CSS,Ch
Felis concolor	Mountain lion	R	Ch
MARSUPIALIA (Marsupials)			
Didelphis virginiana	Oppossum	C	A/U
ARTIODACTYLA (Deer & Sheep)			
Odocoileus hemionus	Mule deer	U	Ch,RW

* - Animal seen or detected.

SCIENTIFIC NAME	COMMON NAME	RELATIVE ABUNDANCE(1)	HABITAT PREFERENCE(2)
INSECTIVORA (Shrews & Moles)			
Sorex ornatus	Ornate shrew	U	RW,CSS,Ch
Notiosorex crawfordi	Gray shrew	R	CSS
Scapanus latimanus	Broad-handed mole	U	CSS,Ch,RW
CHIROPTERA (Bats)			
Macrotus californicus	California leaf-nosed bat	U	CSS,Ch
Myotis californicus	California myotis	C	Ch,CSS
Lasinrus cinerens	Hoary bat	U	Ch,CSS
Lasinrus borealis	Red bat	U	Ch
Eptesicus frescus	Big brown bat	U	Ch
Pipistaellus hesperu	Western pipistrelle	FC	Ch,CSS,JW
Antrozous pallidux	Pallid bat	C	CSS,Ch,JW
Plecotus townsendii	Lump-nosed bat	U	CSS,Ch, JW
Tadarida brasilensis	Brazilian free-tailed bat	U	CSS,CH,JW
Tadarida molassa	Big free-tailed bat	U	Ch
Eumops perotis	Western mastiff bat	U	CSS

(1) C=Common; FC=Fairly Common; U=Uncommon; R=Rare
(2) CSS=Coastal Sage Scrub; Ch=Chaparral; RW=Riparian Woodland; JW=Juniper Woodland; A/U=Agriculture/Urban; R=Riparian (Lakes, Rivers, streams, etc.)

AMPHIBIANS AND REPTILES REPORTED TO OCCUR

SCIENTIFIC NAME	COMMON NAME	RELATIVE ABUNDANCE(1)	HABITAT PREFERENCE(2)
AMPHIBIANS			
Frogs & Toads (Order Salientia)			
Bufo boreas	Western toad	C	A/U,RW,R,Ch,CSS
Bufo microscaphus	Southwestern toad	U	RW,R
Scaphiopus hammondi	Western spadefoot	U	R,RW
Hyla regilla*	Pacific treefrog	FC	RW,R
Rana catesbeiana*	Bullfrog	U	R
Taricha torosa	California newt	U	R,RW
Batrachoseps attenuatus	California slender salamander	FC	RW,R
Ensatina eschscholtzi	Ensatina	U	RW,R
Aneides lugubris	Arboreal salamander	U	RW,R
REPTILES			
Lizards & Snakes (Order Squamata)			
Uta stansburiana*	Side-blotch lizard	C	ALL
Sceloporus occidentalis*	Western fence lizard	C	ALL
Sceloporus orcutti*	Granite spiny lizard	FC	CSS,Ch
Phrynosoma coronatum	San Diego coast horned lizard	FC	CSS,Ch
Eumeces gilberti	Gilbert's skink	U	Ch,CSS,RW
Eumeces skiltonianus*	Western skink	U	CSS,Ch,RW
Cnemidophorus tigris *	Western whiptail	FC	CSS,Ch,JW
Cnemidophorus hyperythrus*	Orange throated whiptail	U	CSS,Ch
Gerrhonotus multicarniatus*	Southern alligator lizard	FC	Ch,RW,CSS,A/U
Anniella pulchra	California legless lizard	U	Ch,CSS,RW
Pituophis melanoleucus*	Gopher snake	C	ALL
Masticophis flagellum*	Coachwhip (Red Racer)	C	CSS,Ch
Lampropeltis getulus	Common kingsnake	FC	CSS,Ch,JW,RW,A/U
Crotalus viridis	Western rattlesnake	U	CH,CSS
Lichanura trivirgata	Rosy boa	U	Ch,CSS
Trimorphodon vandenburghi	California lyre snake	U	Ch,CSS
Crotalus mitchelli	Speckled rattlesnake	FC	CH,CSS
Salvadora hexalepis	Patch-nosed snake	U	CSS,Ch
Leptotyphlops humilis	Western blind snake	U	CSS,RW
Diadophis punctatus	Ringneck snake	R	RW,Ch,CSS,A/U
Masticophis lateralis	Striped racer	U	Ch,CSS,A/U
Arizona elegans	California glossy snake	U	Ch,CSS
Rhinoceilus lecontei	Long-nosed snake	FC	CSS,Ch
Thamnophis couchi	Western aquatic garter snake	U	R, RW
Hypsiglena torquata	San Diego night snake	U	CSS,Ch
Tantilla planiceps	California black-headed snake	R	Ch,CSS
Crotalus ruber	Red-diamond rattlesnake	FC	CSS,Ch

(1) C=Common; FC=Fairly Common; U=Uncommon; R=Rare

(2) CSS=Coastal Sage Scrub; Ch=Chaparral; RW=Riparian Woodland; JW=Juniper Woodland; A/U=Agriculture/Urban; R=Riparian (Lakes, Rivers, streams, etc.)

Birds Reported to Occur
Within the Study Area

SCIENTIFIC NAME	COMMON NAME	RELATIVE ABUNDANCE(1)	SEASONAL STATUS	HABITAT PREFERENCE(2)
GAVIIFORMES				
Gaviidae - Loons				
Gavia immer	Common loon	R	W&M	R
PODICIPEDIFORMES				
Podicipedidae - Grebes				
Podiceps nigricollis	Eared grebe	U	W&M	R
Aechmophorus occidentalis	Western grebe	C	R	R
Podilymbus podiceps	Pied-billed grebe	U	R	R
Phalacrocoracidae-Cormorants				
Phalacrocorax auritus	Double-crested cormorant	U	M	R
CICONIIFORMES				
Ardeidae - Herons and bitterns				
Ardea herodias	Great blue heron	C	R	R
Butorides virescens	Green heron	R	S	R
Bulbulcus ibis	Cattle egret	R	M	R,A/U
Casmerodius albus	Great egret	R	M	R
Egretta thula	Snowy egret	R	M	R
Nycticorax nycticorax	Black-crowned night heron	R	M	R
Botaurus lentiginosus	American bittern	R	M	R
Threskiornithidae - Ibises and Spoonbills				
Plegadis chihi	White-faced ibis	R	M	R,A/U
ANSERIFORMES				
Anatidae - Ducks, geese, and swans				
Branta canadensis	Canada geese	C	M	R,A/U
Chen Caerulescens	Snow goose	R	M	R,A/U
Anas platyrhynchos	Mallard	C	R	R
Anas strepera	Gadwall	U	W	R
Anas acuta	Pintail	C	W	R
Anas crecca	Green-winged teal	C	W	R
Anas discors	Blue-winged teal	R	W	R
Anas cyanoptera	Cinnamon teal	U	W	R
Anas americana	American wigeon	C	W	R
Anas clypeata	Northern shoveler	C	W	R
Aix sponsa	Wood duck	R	W	R
Aythya americana	Redhead	R	W	R
Aythya collaris	Ring-necked duck	C	W	R
Aythya valisineria	Canvasback	C	W	R
Aythya affinis	Lesser scaup	C	W	R
Bucephala albeola	Bufflehead	U	W	R
Oxyura jamaicensis	Ruddy duck	C	R	R
Lophodytes cucullatus	Hooded merganser	R	W	R
Mergus merganser	Common merganser	C	W	R

SCIENTIFIC NAME	COMMON NAME	RELATIVE ABUNDANCE(1)	SEASONAL STATUS	HABITAT PREFERENCE(2)
FALCONIFORMES				
Cathartidae - American vultures				
Cathartes aura*	Turkey vulture	C	M	CSS,A/U
Accipitridae - Hawks, kites, eagles and harriers				
Elanus leucurus*	White-tailed kite	R	R	CSS,AU
Accipiter striatus	Share-shinned hawk	R	W	ALL,except R
Accipiter cooperii	Cooper's hawk	C	R	SOW,OWR,RW,CF
Buteo jamaicensis*	Red-tailed hawk	C	R	ALL,except R
Buteo lineatus	Red-shouldered hawk	U	R	RW
Buteo regalis	Ferruginous hawk	R	W	
Aguila chrysaetos*	Golden eagle	R	R	CSS,AU
Haliaeetus leucocepha-lus	Bald eagle	R	W	R
Circus cyaneus*	Marsh hawk	R	R	RW,R
Pandionidae - Osprey				
Pandion haliaetus	Osprey	R	M	R
Falco mexicanus*	Prairie falcon	R	R	CSS,A/U
Falco sparverius*	American kestrel	U	R	CSS,A/U
GALLIFORMES				
Phasianidae - Quail, pheasants, and partridges				
Lophortyx californicus*	California quail	C	R	CSS,CH, RW,A/U
Phasianus colchicus	Ring-necked pheasant	U	r	A/U
GRUIFORMES				
Rallidae - Rails, gallinules, and coots				
Rallus limicola	Virginia rail	R	R	R
Porzana carolina	Sora	R	R	R
Gallinula chlorpus	Common gallinule	U	R	R
Fulica americana	American coot	C	R	R
CHARADRIIFORMES				
Charadridae - Plovers, turnstones				
Charadrius semipalmatus	Semipalmated plover	R	W,M	R
Charadrius vociferus*	Killdeer	C	R	R,A/U
Charadrius montana	Mountain plover	U	W	A/U
Scolopacidae - Snipe and sandpipers				
Capella gallinago	Common snipe	U	W	R
Numerius americanus	Long-billed curlew	U	W,M	R
Actitis macularia	Spotted sandpiper	R	M	R
Tringa melanoleucus	Greater yellow-legs	U	W,M	R
Tringa flavipes	Lesser yellow-legs	R	V	R

SCIENTIFIC NAME	COMMON NAME	RELATIVE ABUNDANCE(1)	SEASONAL STATUS	HABITAT PREFERENCE(2)
Catoptrophorus semi-palmatus	Willet	U	R,W	R
Calidris minutilla	Least sandpiper	U	W	R
Calidris alpina	Dunlin	R	V	R
Calidris mauri	Western sandpiper	U	W	R
Limnodromus scolopaceus	Long-billed dowitcher	U	W,M	R
Recurvirostridae - Avocets and stilts				
Recurvirostra americana	American avocet	R	R	R
Himantopus mexicanus	Black-necked stilt	U	S	R
Laridae - Gulls and terns				
Larus glaucescens	Glaucous-winged gull	R	V	A/U
Larus californicus	California gull	C	W,M	R,A/U
Larus occidentalis	Western gull	R	R	R,A/U
Larus delawarensis	Ring-billed gull	C	W,R	R,A/U
Larus canus	Mew gull	R	V	R
Larus philadelphia	Bonaparte's gull	U	W,M	R
COLUMBIFORMES				
Columbidae - Pigeons and doves				
Columba livia*	Rock dove	C	R	A/U
Zenaida macroura*	Mourning Dove	C	R,M	A/U
Streptopelia chinensis	Spotted dove	U	R	A/U
Columbina passerina	Ground dove	U	R	RW,A/U
CUCULIFORMES				
Cuculidae - Cuckoos and roadrunners				
Geococcyx californianus*	Roadrunner	R	R	CSS,CH,A/U
STRIGIFORMES				
Tytonidae - Barn owls				
Tyto alba*	Barn owl	R	R	RW,A/U
Strigidae - Typical owls				
Otus asio	Screech owl	R	R	SOW,RW,JW, CC,A/U
Bubo virginianus	Great-horned owl	R		RW, CSS
Speotyto cunicularia	Burrowing owl	R	R	CSS,A/U
APODIFORMES				
Apodidae - Swifts				
Aeronautes saxatalis	White-throated swift	U	R,S	CSS,CH

SCIENTIFIC NAME	COMMON NAME	RELATIVE ABUNDANCE(1)	SEASONAL STATUS	HABITAT PREFERENCE(2)
Trochilidae - Hummingbirds				
Archilochus alexandri	Black-chinned hummingbird	U	S	CSS,CH RW,A/U
Calypte costae	Costa's hummingbird	U	S	CSS,CH
Calypte anna	Anna's hummingbird	C	R	CSS,CH
Selasphorus rufus	Rufous hummingbird	R	M	
Selasphorus sasin	Allen's hummingbird	R	M	CSS,CH
Stellula calliope	Calliope hummingbird			
CORACIIFORMES				
Alcedinidae - Kingfishers				
Megaceryle alcyon*	Belted kingfisher	R	R,M	RW,R
PICIFORMES				
Picidae - Woodpeckers				
Colaptes auratus*	Common flicker	C	R	RW,CSS
Sphyrapicus varius	Yellow-billed sapsucker	R	V	RW
Dendrocopos pubescens	Downy woodpecker	R	R	RW
PASSERIFORMES				
Tyrannidae - Flycatchers				
Tyrannus verticalis	Western kingbird	U	S	A/U
Tyrannus vociferans	Cassin's kingbird	R	V	CSS
Myiarcus cinerascens*	Ash-throated flycatcher	U	S	CH RW,JW
Sayornis nigricans*	Black phoebe	U	R	RW,R
Sayornis saya*	Say's phoebe	U	R	CSS,A/U
Empidonax wrightii	Gray flycatcher	R	W	RW
Empidonax difficillix	Western flycatcher	R	S,M	RW
Alaudidae - Larks				
Eremophila alpestris	Horned larks	C	R,W	A/U
Hirundinidae - Swallows				
Irdoprocne bicolor	Tree swallo	R	S	R
Riparia riparia	Bank swallow	R	S,M	R
Stelgidopteryx ruficollis	Rough-winged swallow	R	S,M	R
Hirundo rustica	Barn swallow	R	S,M	R
Petrochelidon pyrrhonota	Cliff swallow	R	S,M	R,A/U

SCIENTIFIC NAME	COMMON NAME	RELATIVE ABUNDANCE(1)	SEASONAL STATUS	HABITAT PREFERENCE(2)
Corvidae - Jays, magpies, and crows				
Aphelocoma coerulecens*	Scrub jay	C	E	ALL, except A/U
Corvus corax*	Common raven	C	R	CSS,A/U
Corvus brachyrhynchos*	Common crow	C	R	CSS,A/U
Paridae - Titmice, verdin, and bushtit				
Parus inornatus	Plain titmouse	C	R	JW
Psaltriparus minimus	Bushtit	C	R	CSS,CH JW
Sittidae - Nuthatches				
Sitta carolinensis	White-breasted nuthatch	R	W	RW
Certhiidae - Creeper				
Chamaeidae - Wrentit				
Chamaea fasciata*	Wrentit	C	R	CSS,CH
Troglodytidae - Wrens				
Troglodytes aedon	House wren	U	R,S	CH
Thryomanes bewickii	Bewick's wren	U	R	CSS,CH,RW,JW
Campylorhychus brunneicapillus	Cactus wren	R	R	CSS,CH
Telmatodytes palustris	Long-billed marsh wren	R	R	RW,R
Catherpes mexicanus	Canyon wren	R	R	CSS,CH
Salpinctes obsoletus	Rock wren	R	R	CSS,CH
Mimidae - Mockingbirds and thrashers				
Mimus polyglottos*	Mockingbird	C	R	CSS,A/U
Toxostoma redivivum*	California thrasher	U	R	CSS,CH,RW
Turdidae - Thrushes, bluebirds, and solitaires				
Turdus migratorius	American robin	C	R,W	RW,A/U
Ixoreus naevius	Varied thrush	R	W	CH
Catharus guttatus	Hermit thrush	U	S	CSS,CH,RW
Sialia mexicana	Western bluebird	C	R,W	RW
Sylviidae - Gnatcatchers and Kinglets				
Polioptila caerulea	Blue-gray gnatcatcher	R	R,W	CSS,CH
Regulus calendula	Ruby-crowned kinglet	C	W,M	RW

SCIENTIFIC NAME	COMMON NAME	RELATIVE ABUNDANCE(1)	SEASONAL STATUS	HABITAT PREFERENCE(2)
Motacillidae - Pippits and wagtails				
Anthus spinoletta	Water pipit	C	W	R,A/U
Ptilogonatidae - Silky flycatchers				
Phainopepla nitens	Phainopepla	R	S,M	A/U
Lanidae - Shrikes				
Lanus ludovicianus*	Loggerhead shrike	R	R	JW,A/U
Sturnidae - Starlings				
Sturnus vulgaris*	Starling	C	R	A/U
Vireonidae - Vireos				
Vireo bellii	Bell's vireo	R	S	RW
Vireo solitarius	Solitary vireo	R	S,M	RW
Vireo gilvus	Warbling vireo	R	S,M	CH,RW
Parulidae - Wood warblers				
Miniotilta varia	Black and white warbler	R	M	RW
Vermivora peregrina	Tennessee warbler	R	M	RW
Vermivora celata	Orange-crowned warbler	U	R,M	CH RW
Dendroica petechia	Yellow warbler	R	V	RW
Dendroica nigrescens	Black-throated gray warbler	R	S,M	JW
Geothlypis trichas	Common yellow-throat	R	R,S	RW
Icteria virens	Yellow-breasted chat	R	S,M	RW
Wilsonia pusilla	Wilson's warbler	U	S,M	RW
Wilsonia canadensis	Canada warbler	R	V	RW
Myioborus pictus	Painted redstart	R	M	RW
Ploceidae - Weaver finches				
Passer domesticus*	House sparrow	C	R	A/U
Icteridae - Blackbirds and orioles				
Dolichonyx oryzivorus	Bobolink	R	M	A/U
Sturnella neglecta	Western Meadow-lark	C	R	A/U
Xanthocephalus santhocephalus	Yellow-headed blackbird	R	M	RW,R,A/U
Agelaius phoeniceus	Red-winged blackbird	C	R	RW,R,A/U
Icterus spurius	Orchard oriole	R	V	RW,A/U

SCIENTIFIC NAME	COMMON NAME	RELATIVE ABUNDANCE(1)	SEASONAL STATUS	HABITAT PREFERENCE(2)
Icterus cucullatus	Hooded oriole	U	S	RW,A/U
Icterus galbula	Northern oriole			
	"Baltimore"	R	V	RW,A/U
	"Bullock's"	U	SV	RW,A/U
Euphagus cyanocephalus*	Brewer's blackbird	C	R	A/U
Molothrus ater	Brown-headed cowbird	U	S	RW,A/U
Thraupidae - Tanagers				
Fringillidae - Grosbeaks, finches, sparrows and longspurs				
Pheucticus melancephalus	Black-headed grosbeak	U	S	CH RW
Passerina amoena	Lazuli bunting	U	S	CSS,CH
Carpodacus mexicanus*	House finch	C	R	ALL
Spinus tristis	American goldfinch	C	R	RW,A/U
Spinus psaltria	Lesser goldfinch	C	R	RW
Spinus lawrenci	Lawrence's goldfinch	R	W	RW,JW
Chlorura chlorura	Green-tailed towhee	R	S,M	CSS,CH
Pipilo erythro-phthalmus	Rufous-sided towhee	C	R	CSS,CH RW
Pipilo fuscus	Brown towhee	C	R	CSS,CH RW,A/U
Passerculus sandwichensis	Savannah sparrow	C	R,S,W	CSS,RW,A/U
Ammodramus savannarum	Grasshopper sparrow	R	R,W	A/U
Pooecetes gramineus	Vesper sparrow	R	W	CSS,A/U
Chondestes grammacus	Lark sparrow	C	R	RW,A/U
Aimophila bilineata	Rufous-crowned sparrow	R	R	CSS,CH
Amphispiza belli	Sage sparrow	R	R	CSS,CH
Spizella atrogulatis	Black-chinned sparrow	R	S	CSS,CH
Zonotrichia leucophrys*	White-crowned sparrow	C	W	ALL
Zonotrichia atricapilla	Golden-crowned sparrow	C	W	CSS,CH,A/U
Passerella iliaca	Fox sparrow	U	R,W	CH,RW
Melospiza lincolnii	Lincoln's sparrow	R	M	CH,RW
Melospiza melodia	Song sparrow	C	R	RW,R
Calcarius ornatus	Chestnut-collared longspur	R	V	A/U

SYMBOLS

Relative Abundance

C	-	Common
U	-	Uncommon
R	-	Rare

Seasonal Status

R	-	Resident
W	-	Winter visitor (Oct - Mar)
S	-	Summer visitor (Apr - Aug)
M	-	Migrant (Mar - May) (Aug - Oct)
V	-	Vagrant (accidentals)

Habitat Preference

CSS	-	Coastal Sage Scrub
CH	-	Chaparral
SOW	-	Southern Oak Woodland, Savannah, Grasslands
OWR	-	Oak Woodland
RW	-	Riparian Woodland
JW	-	Juniper Woodland
CF	-	Lower Montane Conifer Forest
CC	-	Closed Cone Conifer Forest
R	-	Lakes, Streams, Rivers, Marsh, edges of water courses
AU	-	Agriculture/Urban

DCP:dcc
BDCP71.3C

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