

Appendix D
LAX SPECIFIC PLAN AMENDMENT STUDY

Biological Resources

July 2012

Prepared for:

Los Angeles World Airports
One World Way
Los Angeles, California 90045

Prepared by:

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Appendix D-1
LAX SPECIFIC PLAN AMENDMENT STUDY

**Floral and Faunal Compendium and
Sensitive Plants and Wildlife**

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Attachment 1
Floral Compendium

Floral Compendium¹

This compendium includes species detected during the course of biological surveys for the LAX Master Plan EIR, Bradley West Project EIR, Crossfield Taxiway Project EIR, South Airfield Improvement Project EIR, and LAX SPAS EIR.

Taxonomy follows the Jepson Manual, Second Edition²; the taxonomy of several species found on site has changed since preparation of the other EIRs for LAX.

Legend

* Non-native species

Vascular Plants	
Dicotyledones	
Common Name	Taxonomic Name
AIZOACEAE - Carpet-Weed Family	
sea fig	* <i>Carpobrotus chilensis</i>
hottentot fig	* <i>Carpobrotus edulis</i>
flowery iceplant	* <i>Drosanthemum floribundum</i>
crystalline iceplant	* <i>Mesembryanthemum crystallinum</i>
small-flowered iceplant	* <i>Mesembryanthemum nodiflorum</i>
AMARANTHACEAE - Amaranth Family	
tumbleweed	* <i>Amaranthus albus</i>
ANACARDIACEAE - Sumac Family	
lemonadeberry	<i>Rhus integrifolia</i>
Brazilian pepper tree	* <i>Schinus terebinthifolia</i>
APIACEAE – Carrot Family	
fennel	* <i>Foeniculum vulgare</i>
ASTERACEAE - Sunflower Family	
annual bur-sage	<i>Ambrosia acanthicarpa</i>
beach-bur	<i>Ambrosia chamissonis</i>
California sagebrush	<i>Artemisia californica</i>
slender aster	<i>Aster subulatus</i> var. <i>ligulatus</i>
coyote brush	<i>Baccharis pilularis</i>
mule fat	<i>Baccharis salicifolia</i>
tocalote	* <i>Centaurea melitensis</i>
Yellow star-thistle	* <i>Centaurea solstitialis</i>
yellow pincushion	<i>Chaenactis glabriuscula</i>
California aster	<i>Chorethrogynne filaginifolia</i>
cobwebby thistle	<i>Cirsium occidentale</i> var. <i>occidentale</i>
flax-leaved horseweed	* <i>Erigeron bonariensis</i>
common horseweed	<i>Erigeron canadensis</i>
fascicled tarplant	<i>Deinandra fasciculata</i>
California encelia	<i>Encelia californica</i>
mock heather	<i>Ericameria ericoides</i>
California filago or fluffweed	<i>Logfia gallica</i>
gazania	* <i>Gazania linearis</i>
crown daisy	<i>Glebionis coronarium</i>
bristly ox-tongue	* <i>Helminthotheca echioides</i>
telegraph weed	<i>Heterotheca grandiflora</i>
Fastigate golden aster	<i>Heterotheca sessiliflora</i> ssp. <i>fastigiata</i>
smooth cat's-ear	* <i>Hypochaeris glabra</i>
prickly lettuce	* <i>Lactuca serriola</i>
giant coreopsis	<i>Leptosyne gigantea</i>
bicolored cudweed	<i>Pseudognaphalium biolettii</i>
white everlasting	<i>Pseudognaphalium canescens</i> var. <i>microcephalum</i>
weedy cudweed	* <i>Pseudognaphalium luteo-album</i>

¹ This is not an exhaustive listing of the plant species occurring on site; some annual herbs or uncommon species may not have been detected by the field survey.

² Baldwin, B.G., D.H. Goldman, D.J. Keil, and R. Patterson, Ed, The Jepson Manual: Vascular Plants of California, Second Edition, 2012.

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Vascular Plants	
Dicotyledones	
Common Name	Taxonomic Name
common sow thistle	* <i>Sonchus oleraceus</i>
tall wreath plant	<i>Stephanomeria virgata</i>
common dandelion	* <i>Taraxacum officinale</i>
cocklebur	<i>Xanthium strumarium</i>
BORAGINACEAE - Borage Family	
Cleveland's large cryptantha	<i>Cryptantha clevelandii</i>
common cryptantha	<i>Cryptantha intermedia</i>
pholisma	<i>Pholisma arenarium</i>
BRASSICACEAE - Mustard Family	
black mustard	* <i>Brassica nigra</i>
wild turnip	* <i>Brassica tournefortii</i>
searocket	* <i>Cakile maritima</i>
western tansy-mustard	<i>Descurainia pinnata</i>
suffrutescent wallflower	<i>Erysimum insulare</i> ssp. <i>suffrutescens</i>
short-pod mustard	* <i>Brassica geniculata</i>
sand peppergrass	<i>Lepidium lasiocarpum</i>
sweet alyssum	* <i>Lobularia maritima</i>
common stock	* <i>Matthiola incana</i>
radish	* <i>Raphanus sativus</i>
tumble mustard	* <i>Sisymbrium altissimum</i>
CACTACEAE - Cactus Family	
coastal prickly pear	<i>Opuntia littoralis</i>
CARYOPHYLLACEAE - Pink Family	
four-leaved allseed	* <i>Polycarpon tetraphyllum</i>
common catchfly or windmill pink	* <i>Silene gallica</i>
salt-marsh sand spurry	<i>Spergularia marina</i>
CHENOPODIACEAE - Goosefoot Family	
fourwing saltbush or shad scale	<i>Atriplex canescens</i>
big saltbush	<i>Atriplex lentiformis</i>
blue green saltbush	* <i>Atriplex nummularia</i>
Parish's brittle scale	<i>Atriplex parishii</i>
Australian saltbush	* <i>Atriplex semibaccata</i>
lamb's quarters or pigweed	* <i>Chenopodium album</i>
California goosefoot	<i>Chenopodium californicum</i>
nettle-leaved goosefoot	* <i>Chenopodium murale</i>
cut-leaved goosefoot	* <i>Dysphania multifida</i>
Russian thistle	* <i>Salsola tragus</i>
CLEOMACEAE - Spiderflower Family	
bladderpod	<i>Peritoma arborea</i>
CONVOLVULACEAE – Morning Glory Family	
California dodder	<i>Cuscuta californica</i>
CRASSULACEAE - Stonecrop Family	
aeonium	* <i>Aeonium arboreum</i>
pinwheel plant	* <i>Aeonium haworthii</i>
pygmy-weed	<i>Crassula connata</i>
jade plant	* <i>Crassula ovata</i>
Chinese pine	* <i>Crassula tetragona</i>
lanceleaf live-forever	<i>Dudleya lanceolata</i>
CUCURBITACEAE - Gourd Family	
calabazilla	<i>Cucurbita foetidissima</i>
wild cucumber	<i>Marah macrocarpa</i>
CUSCUTACEAE - Dodder Family	
California witch's hair	<i>Cuscuta californica</i>
EUPHORBIACEAE - Spurge Family	
spotted spurge	* <i>Chamaesyce maculata</i>
California croton	<i>Croton californicus</i>
doveweed	<i>Croton setigerus</i>
gerardton carnation weed	* <i>Euphorbia terracina</i>
castor-bean	* <i>Ricinus communis</i>
FABACEAE - Pea Family	
acacia	* <i>Acacia cyclops</i>
everblooming acacia	* <i>Acacia retinodes</i>
Spanish lotus	<i>Lotus purshianus</i>

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Vascular Plants	
Dicotyledones	
Common Name	Taxonomic Name
deerweed	<i>Acmispon glaber</i>
strigose lotus	<i>Acmispon strigosus</i>
coral tree	* <i>Erythrina caffra</i>
minature lupine	<i>Lupinus bicolor</i>
bush lupine	<i>Lupinus chamissonis</i>
grape soda lupine	<i>Lupinus excubitus</i>
succulent lupine	<i>Lupinus succulentus</i>
collar lupine	<i>Lupinus truncatus</i>
yellow trefoil	* <i>Medicago lupulina</i>
California burclover	* <i>Medicago polymorpha</i>
yellow sweet-clover	* <i>Melilotus albus</i>
annual yellow sweet-clover	* <i>Melilotus indica</i>
red clover	* <i>Trifolium pratense</i>
winter vetch or hairy vetch	* <i>Vicia villosa</i>
GERANIACEAE - Geranium Family	
long-beaked filaree	* <i>Erodium botrys</i>
red-stemmed filaree	* <i>Erodium cicutarium</i>
white-stemmed filaree	* <i>Erodium moschatum</i>
HAMAMELIDACEAE – Witch Hazel Family	
sweetgum	* <i>Liquidambar styraciflua</i>
HYDROPHYLLACEAE - Waterleaf Family	
south coast branching phacelia	<i>Phacelia ramosissima</i> var. <i>austrolitoralis</i>
LOASACEAE – Stick Leaf Family	
yellow blazing star	<i>Mentzelia affinis</i>
MAGNOLIACEAE – Magnolia Family	
magnolia	<i>Magnolia grandiflora</i>
MALVACEAE - Mallow Family	
bull mallow	* <i>Malva nicaeensis</i>
cheeseweed	* <i>Malva parviflora</i>
MONTIACEAE – Miner’s Lettuce Family	
common calyptidium	<i>Calyptidium monandrum</i>
MORACEAE – Fig Family	
fig tree	<i>Ficus</i> spp.
MYOPORACEAE – Myoporum family	
myoporum	* <i>Myoporum laetum</i>
MYRSINACEAE – Myrsine Family	
scarlet pimpernel	* <i>Anagallis arvensis</i>
MYRTACEAE – Myrtle Family	
blue gum	* <i>Eucalyptus globulus</i>
NYCTAGINACEAE – Four O’Clock Family	
beach sand verbena	<i>Abronia umbellata</i>
ONAGRACEAE – Evening Primrose Family	
beach evening primrose	<i>Camissonia cheiranthifolia</i>
Lewis’ evening primrose	<i>Camissonia lewisii</i>
California sun cup	<i>Camissoniopsis bistorta</i>
small primrose	<i>Camissoniopsis micrantha</i>
OXALIDACEAE - Wood-Sorrel Family	
yellow sorrel	* <i>Oxalis corniculata</i>
Bermuda buttercup	* <i>Oxalis pes-caprae</i>
PAPAVERACEAE - Poppy Family	
California poppy	<i>Eschscholzia californica</i>
PLANTAGINACEAE - Plantain Family	
sharp-leaved fluellin	* <i>Kickxia elatine</i>
larger blue toadflax	<i>Nuttallanthus texanus</i>
plantain	* <i>Plantago arenaria</i>
California plantain	<i>Plantago erecta</i>
English plantain	* <i>Plantago lanceolata</i>
PLUMBAGINACEAE - Leadwort Family	
Perez’s sea lavender	* <i>Limonium perezii</i>
winged sea lavender	* <i>Limonium sinuatum</i>

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Vascular Plants	
Dicotyledones	
Common Name	Taxonomic Name
POLYGONACEAE - Buckwheat Family	
grey coast buckwheat	<i>Eriogonum cinereum</i>
California buckwheat	<i>Eriogonum fasciculatum</i>
Catalina Island buckwheat	<i>Eriogonum giganteum</i>
bluff buckwheat	<i>Eriogonum parvifolium</i>
California spineflower	<i>Mucronea californica</i>
willow smartweed	<i>Persicaria lapathifolia</i>
common knotweed	* <i>Polygonum aviculare</i> ssp. <i>depressum</i>
PROTEACEAE – Protea Family	
silk oak	* <i>Grevillea robusta</i>
ROSACEAE - Rose Family	
hedge-leaved horkelia	<i>Horkelia cuneata</i>
RUBIACEAE - Madder Family	
narrow-leaved bedstraw	<i>Galium angustifolium</i>
SALICACEAE - Willow Family	
sandbar willow	<i>Salix exigua</i>
red willow	<i>Salix laevigata</i>
arroyo willow	<i>Salix lasiolepis</i>
SOLANACEAE - Nightshade Family	
jimson weed	<i>Datura wrightii</i>
tree tobacco	* <i>Nicotiana glauca</i>
black nightshade	* <i>Solanum nigrum</i>
TAMARICACEAE - Tamarisk Family	
Mediterranean tamarisk	* <i>Tamarix ramosissima</i>
ULMACEAE – Elm Family	
Chinese elm	* <i>Ulmus parviflora</i>
ZYGOPHYLLACEAE - Caltrop Family	
puncture vine	* <i>Tribulus terrestris</i>

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Monocotyledones	
Common Name	Taxonomic Name
AGAVECEAE – Agave Family	
American century plant	* <i>Agave americana</i>
ARECACEAE - Palm Family	
Canary Island date palm	* <i>Phoenix canariensis</i>
Mexican fan palm	* <i>Washingtonia robusta</i>
CYPERACEAE - Sedge Family	
tall umbrella cyperus	<i>Cyperus eragrostis</i>
common spikerush	<i>Eleocharis palustris</i>
California bulrush	<i>Schoenoplectus californicus</i>
POACEAE - Grass Family	
bent grass	* <i>Agrostis viridis</i>
giant reed	* <i>Arundo donax</i>
slender wild oat	* <i>Avena barbata</i>
wild oat	* <i>Avena fatua</i>
Arizona chess	<i>Bromus arizonicus</i>
rescue grass	* <i>Bromus catharticus</i>
ripgut grass	* <i>Bromus diandrus</i>
soft chess	* <i>Bromus hordeaceus</i>
foxtail chess	* <i>Bromus madritensis ssp. rubens</i>
southern sandbur	* <i>Cenchrus echinatus</i>
pampas grass	* <i>Cortaderia selloana</i>
Bermuda grass	* <i>Cynodon dactylon</i>
crabgrass	* <i>Digitaria sanguinalis</i>
coastal salt grass	<i>Distichlis spicata</i>
barnyard grass	* <i>Echinochloa crus-galli</i>
veldt grass	* <i>Ehrharta calycina</i>
veldt grass	* <i>Ehrharta erecta</i>
beardless wild rye	<i>Elymus triticoides</i>
lovegrass	<i>Eragrostis pectinacea</i>
hare barley	* <i>Hordeum murinum ssp. leporinum</i>
goldentop	* <i>Lamarckia aurea</i>
Italian ryegrass	* <i>Lolium multiflorum</i>
small-flowered melic grass	<i>Melica imperfecta</i>
nodding needlegrass	<i>Stipa cernua</i>
dallis grass	* <i>Paspalum dilatatum</i>
Kikuyu grass	* <i>Pennisetum clandestinum</i>
African fountain grass	* <i>Pennisetum setaceum</i>
smilo grass	* <i>Piptatherum miliaceum</i>
annual bluegrass	* <i>Poa annua</i>
annual beard grass	* <i>Polypogon monspeliensis</i>
Mediterranean schismus	* <i>Schismus barbatus</i>
bristlegrass	* <i>Setaria sp.</i>
sorghum	* <i>Sorghum bicolor</i>
foxtail fescue	<i>Festuca myuros</i>
THEMIDACEAE – Brodiaea Family	
wild hyacinth	<i>Dichelostemma capitatum</i>
TYPHACEAE - Cattail Family	
broad-leaved cattail	<i>Typha latifolia</i>
southern cattail	<i>Typha domingensis</i>

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

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Attachment 2
Faunal Compendium

Faunal Compendium³

This compendium includes species detected during the course of biological surveys for the LAX Master Plan EIR, Bradley West Project EIR, Crossfield Taxiway Project EIR, South Airfield Improvement Project EIR, and LAX SPAS EIR.

INVERTEBRATES

TAXONOMIC NAME	COMMON NAME
PHYLUM: MOLLUSCA	
CLASS: GASTEROPODA	
<i>Helix aspera</i>	
<i>Otala lactea</i>	
<i>Herminthoglypta traskei</i>	
<i>Vertigo trinitata</i>	
<i>Vertigo californica</i>	
PHYLUM: ARTHROPODA	
CLASS: DIPLOPODA	Millipedes
ORDER: SPIROBOLIDA	
2 unidentified species	
CLASS: CHILOPODA	Centipedes
ORDER: GEOPHILOMORPHA	
1 unidentified species	
ORDER: LITHOBIOMORPHA	
<i>Lithobius</i>	
CLASS: MALACOSTRACA	
ORDER: ISOPODA	Sowbugs, Pillbugs
BATHYTROPIDAE	
<i>Alloniscus peronvexus</i>	
<i>Mauritanicus littorinus</i>	
PORCELLIONIDAE	
<i>Armadillium vulgare</i>	
<i>Porcellio dillitatum</i>	
<i>P. laevis</i>	
CLASS: ARACHNIDA	
ORDER: SCORPIONES	Scorpions
VEJOVIDAE	
<i>Paraoroclonus silvestri</i>	
ORDER: PSEUDOSCORPIONES	Pseudoscorpions
<i>Garypus californicus</i>	
ORDER: SOLFUGAE	Whipscorpions
<i>Eremobates sp.</i>	
ORDER: OPILIONES	Harvestmen
<i>Protolophus nr. singularis</i>	
ORDER: ACARI	
TROMBIDIDAE	Mites & Ticks
<i>Trombidium sp.</i>	
3 unidentified species	
1 unidentified species	

³ List includes species observed or expected to occur on or in the immediate vicinity of the site.

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

ORDER: ARANEAE	Spiders
CTENIZIDAE	Trapdoor Spiders
<i>Apostichus simus</i>	
ZODARIIDAE	
<i>Lutica</i> sp.	
OONIPIDAE	
<i>Scapiella hesperus</i>	
<i>Opopaea</i> sp.	
OECOBIIDAE	
<i>Oecobius</i> sp.	
DYSDERIDAE	
<i>Dysdera crocata</i>	
CLUBIONIDAE	Sac Spiders
<i>Chiracanthium inclusum</i>	
<i>Trachelis</i> sp.	
<i>Castianeira</i>	
unidentified species	
AGELENIDAE	Sheetweb or Grass Spiders
<i>Hololena curta</i> n ssp.	
<i>Calilena angelina</i>	
<i>Calymaria</i> sp.	
<i>Agelenopsis</i> sp	
THERIDIIDAE	Cobweb Spiders
<i>Theridion</i> sp.	
<i>Tidarron</i> sp.	
<i>Steatoda grossa</i>	
<i>S. fulva</i>	
<i>Crustulina</i> sp.	
<i>Latrodectus hesperus</i>	
THOMASIDAE	Crab Spiders
<i>Misumenoides formosipes</i>	
<i>Misumenops rothi</i>	
<i>Xysticus gulosus</i>	
<i>X. montanensis</i>	
PHILODROMIDAE	Crab Spiders
<i>Ebo pepinensis</i>	
<i>Ebo</i> n. sp.	
<i>Tibellus</i> nr. <i>californicus</i>	
ARANEIDAE	Orbweaver Spiders
<i>Argiope argentata</i>	
<i>Eustala conchlea</i>	
<i>Neoscona oaxacensis</i>	
<i>Cyclosa turbinata</i>	
<i>C. conica</i>	
<i>Tetragnatha</i> sp.	
LYCOSIDAE	Wolf Spiders
<i>Allocosa</i> sp.	
<i>Alopecosa</i> sp.	
<i>Pirata</i> sp.	
SALTICIDAE	Jumping Spiders
2 unidentified species	
<i>Metacybra</i> sp.	
ANYPHAENIDAE	
<i>Anyphaena</i> sp.	
GNAPHOSIDAE	Running or Mouse Spiders
<i>Zelotes</i> unidentified	
<i>Herpyllus propinquis</i>	
<i>Trachyzelotes</i> sp.	
<i>Gnaphosa</i> sp.	
<i>Micaria</i> sp.	
<i>Mimetus hesperus</i>	
PHOLCIDAE	
1 unidentified species	
OXYOPIDAE	Lynx Spiders
<i>Oxyopes</i> sp. unidentified	

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Peucetia viridens

LINYPHIIDAE

3 unidentified species

FILISTATIDAE

Filistatinella sp.

CLASS: HEXAPODA

ORDER: COLLEMBOLA

ENTOMOBRYIDAE

Entomobrya atrocinta

E. multifasciata

E. unostrigata

E. californica

Xenylla wilsoni

ORDER: THYSANURA

LEPISMATIDAE

Lepisma saccharina

ORDER: MICROCORYPHIA

MACHILIDAE

2 unidentified species

ORDER: EPHEMEROPTERA

Family & species undet. coll. by Pierce 1939 ext. (these are probably not "extirpated" but most likely represent migrants or temp. residents - aquatic immatures)

ORDER: ODONATA

AESHNIDAE

Aeshna multicolor

Anax junius

LIBELLULIDAE

Tarnetrum illotum

Tarnetrum corruptum

Tremea lacerata

COENARGIONIDAE

1 unidentified species

ORDER: ORTHOPTERA

ACRIDIDAE

Conozoa texana

Trimerotropis californica

Trimerotropis pallidipennis

Schistocerca vaga

Melanoplus devastator

Psoloessa thamnogaea

TETTIGONIIDAE

Scudderia mexicana

Neduba morsei

Brachyinsara hemiptera

Ideostatus aequalis

GRYLLIDAE

Gryllus integer

Oecanthus argentinus

Cycloptilum distinctum

STENOPELMATIDAE

Stenopelmatus n. sp. I. *Weissman*

Stenopelmatus n. sp. II. *Weissman*

RHAPHIDOPHORIDAE

Ceuthophilus californianus

PHASMATIDAE

Parabacillus hesperus

MANTIDAE

Litaneutria minor

Stagmomantis californica

Iris oratoria

Insects

Springtails

Silverfish

Jumping bristletails

Mayflies

Dragonflies & Damselflies

(Grasshoppers, Crickets, Mantids, Cockroaches)

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

POLYPHAGIDAE	
<i>Arenivaga n. sp. Nickel</i>	
ORDER: DERMAPTERA	EARWIGS
FORFICULIDAE	
<i>Forficula auricularia</i>	
ORDER: ISOPTERA	TERMITES
RHINOTERMITIDAE	
<i>Reticulitermes hesperus</i>	
ORDER: PSOCOPTERA	PSOCIDS
1 unidentified species	
ORDER: THYSANOPTERA	THRIPS
PHLAEOTHIRIPIDAE	
<i>Haplothrips robusta</i>	
<i>Haplothrips clarisetis</i>	
THRIPIDAE	
<i>Apterothrips apteris</i>	
<i>Neohydatothrips moultoni</i>	
<i>Limothrips cerealum</i>	
<i>Aphanothrips obscurus</i>	
<i>Frankliniella minuta</i>	
<i>Frankliniella occidentalis</i>	
<i>Taeniothrips sp. 1</i>	
<i>Thrips madronii</i>	
<i>Thrips tabaci</i>	
ORDER: HEMIPTERA	BUGS
CORIXIDAE	
1 unidentified species	
REDUVIIDAE	
<i>Zelus sp.</i>	
<i>Rhinocoris ventralis</i>	
ALYDIDAE	
<i>Stachyonemus sp.</i>	
<i>Alydus sp.</i>	
LYGAEIDAE	
<i>Geocoris sp.</i>	
<i>Emblethis vicarius</i>	
<i>Lygaeus kalmii</i>	
<i>Lygaeus reclusianus</i>	
<i>Melanopleuris bicolor</i>	
<i>Nysius ericae</i>	
<i>Nysius sp.</i>	
COREIDAE	
<i>Stachyocnemus</i>	
<i>Scolopocerus sp.</i>	
<i>Narnia inornata</i>	
RHOPALIDAE	
<i>Arhyssus</i>	
<i>Liorhyssus hyalinus</i>	
MIRIDAE	
<i>Lopidea nigridea</i>	
<i>Lopidea marginata</i>	
<i>Lygus hesperius</i>	
<i>Closterocoris amoenus</i>	
<i>Darcula sp.</i>	
4 unidentified species	
LARGIDAE	
<i>Largus cinctus</i>	
PENTATOMIDAE	
<i>Petidia uhleri</i>	
<i>Petidia sayi</i>	
<i>Acrosternum hilari</i>	
<i>Banasa sp.</i>	
<i>Thyanta custator accerra</i>	
<i>Chlorochroa congrua</i>	
<i>Thyanta rugulosa</i>	

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

<p><i>Eurygaster alternata</i></p> <p style="text-align: center;">SCUTELLARIDAE</p> <hr/> <p><i>Acanthoma</i> sp. 2 unidentified species <i>Euptychodera corrugata</i></p> <p style="text-align: center;">CYDNIDAE</p> <hr/> <p><i>Pangaeus bilineatus</i> 1 unidentified species</p> <p style="text-align: center;">NABIDAE</p> <hr/> <p><i>Nabis</i> sp.</p> <p style="text-align: center;">VELIIDAE</p> <hr/> <p>1 unidentified species</p> <p style="text-align: center;">ORDER: HOMOPTERA</p> <hr/> <p style="text-align: center;">DICTYOPHORIDAE</p> <hr/> <p><i>Orgerius triquestra</i> complex</p> <p style="text-align: center;">CICADELLIDAE</p> <hr/> <p><i>Aceratagallia pallida</i> <i>Alconeura necopinata</i> <i>Amblysellus</i> grex <i>Amphigonalia bispinosa</i> <i>Blaclutha</i> sp. <i>Ballana sera</i> <i>Ballana</i> sp. <i>Carneocephala fulgida</i> <i>Circulifertenellus</i> <i>Calladonis geminatus</i> <i>Dikrania carneola</i> <i>Empoasca cerea</i> <i>Exitianus exitiosus</i> <i>Friscanus friscanus</i> <i>Giprus angulata</i> <i>Lystidea nuda</i> <i>Momoria rufoscutella</i> <i>Osbornellus</i> n.sp <i>Osbornellus</i> sp. <i>Penestrangania robusta</i> <i>Ponana punctipennis</i> <i>Prairiana</i> sp <i>Scaphytopius</i> sp. <i>Texananus</i> sp. <i>Tiaja interrupta</i> <i>Xerophloea brunnea</i> <i>Xerophloea vanduzeei</i> <i>Xerophloea peltata</i></p> <p style="text-align: center;">CIXIIDAE</p> <hr/> <p><i>Oliarus</i> sp.</p> <p style="text-align: center;">MEMBRACIDAE</p> <hr/> <p><i>Stictocephala bubalis</i> <i>Tortistylus albidosparsus</i></p> <p style="text-align: center;">DELPHACIDAE</p> <hr/> <p><i>Stobaera</i> sp. <i>Stobaera muiri</i> <i>Toya propinqua</i></p> <p style="text-align: center;">CERCOPIDAE</p> <hr/> <p><i>Clastoptera brunnea</i></p> <p style="text-align: center;">MARGARODIDAE</p> <hr/> <p><i>Icerya purchasi</i></p> <p style="text-align: center;">COCCIDAE</p> <hr/> <p><i>Pulvinaria</i> sp. <i>Saissetia hemispherica</i> <i>Saissetia oleae</i> <i>Odonapis ruthae</i> 1 unidentified species</p> <p style="text-align: center;">PSYLLIDAE</p> <hr/> <p><i>Calophya californica</i> <i>Paratrioza lavaterae</i></p>	<hr/> <p>Cicadas, Leafhoppers, Aphids, Scales, Whiteflies</p> <hr/>
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Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

FLATIDAE	
Mistharnophantia sonorana	
ISSIDAE	
<i>Danepteryx robusta</i>	
PSEUDOCOCCIDAE	
<i>Pseudococcus maritimus</i>	
<i>Pseudococcus eriogoni</i>	
<i>Pseudococcus citri</i>	
<i>Pseudococcus aurilanatus</i>	
ERIOSOMATIDAE	
1 unidentified species	
APHIDIDAE	
<i>Uroleucon katankae</i>	
<i>Uroleucon rudbeckiae</i>	
<i>Acrythosiphon kondoi</i>	
<i>Acrythosiphon pisum</i>	
<i>Myzus persicae</i>	
<i>Cryptomyzus ribis</i>	
<i>Aphis eriogoni</i>	
<i>Aphis helichrysi</i>	
<i>Aphis medicaginis</i>	
<i>Brevicoryne brassicae</i>	
<i>Macrosiphon albifrons</i>	
<i>Macrosiphon ambrosiae</i>	
<i>Macrosiphon</i> sp.	
<i>Rhopalosiphon lactucae</i>	
<i>Capitophrus glandulosis</i>	
<i>Lipaphis pseudobrassicae</i>	
<i>Myzus convolvulae</i>	
<i>Myzus persicae</i>	
ORDER: NEUROPTERA	Lacewings, Antlions
MYRMELEONTIDAE	
<i>Myrmeleon arizonicus</i>	
<i>Brachynemurus brunneus</i>	
HEMEROBIIDAE	
2 unidentified species	
CHRYSOPIDAE	
<i>Chrysoperla floribunda</i>	
<i>Eremochrysa punctinervis</i>	
ORDER: COLEOPTERA	Beetles
<i>Cicindella hirticollis</i> gravida	
CARABIDAE	
<i>Calosoma semilaeve</i>	
<i>Pterostichus californicus</i>	
<i>Amarara californica</i>	
<i>Calathus ruficollis</i>	
<i>Tanystoma maculicolle</i>	
<i>Agonum crenistrictum</i>	
<i>Agonum californicum</i>	
<i>Bembidium</i> nr. <i>quadrulum</i>	
<i>Tachys corax</i>	
<i>Anisodactylus californica</i>	
<i>Bradycellus</i> sp.	
<i>Stenolophus</i> sp.	
<i>Apristus laticollis</i>	
HISTERIDAE	
<i>Xerosaprinus fimbriatus</i>	
<i>Geomysaprinus pasminosus</i>	
<i>Spilodiscus sellatus</i>	
<i>Hypocaeus lucidolis</i>	
<i>Saprinus discoidalis</i>	
SCARABAEIDAE	
<i>Parathyce palpalis</i>	
<i>Diplotaxis</i> sp.	
<i>Serica</i> sp.	
<i>Aegialia convexa</i>	

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Psammodytes mcclayi
Aphodius rugatus
Aphodius militaris
Aphodius fuscus
Aphodius lividus
Ligyris gibbosus
Dichromina dimidiata

HETEROCERIDAE

Heterocerus gnatho

BUPRESTIDAE

Acmaeodera fenyessi
Agrilus lacustris

ELATERIDAE

Hypolithus sp.
Anchastus cineripennis
3 unidentified species

CANTHARIDAE

Cantharis consors

DERMESTIDAE

Dermestes sp.
Anthrenus lepidus

ANOBIIDAE

Megorhina viduum

PTINIDAE

Ptinus fur

MELYRIDAE

Collops cribrosus
Collops marginicollis
Attalus lobulatus
1 unidentified species
Trichochrous squalidus
Trichochrous antennatus
Dasytastes bicolor
Eschatocrepis constrictus

COCCINELLIDAE

Rodolia cardinalis
Cryptolaemus montrouzieri
Olla v-nigrum
Psyllobora taedata
Cycloneda munda
Cycloneda polita
Coccinella californica
Hippodamia convergens
2 unidentified species
Scymnus marginicollis

COLYDIIDAE

Anchomma costatum
Rhagothrips tuberculata

TENEBRIONIDAE

Metaponium convexicollis
Eleodes omis
Eleodes gracilis
Eleodes nigropilosa
Eleodes littoralis
Blapstinus sp.
Nyctoporis carinata
Cratidus osculans
Helops blaisdelli
Stenotrichus rufipes
Coelus globosus
Coelus ciliatus
Coniontis affinis
Hydrocrinus longulus

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

STAPHYLINIDAE	
Sepedophilus sp. 4 unidentified species	
ALLECULIDAE	
Isomira sp.	
MORDELLIDAE	
1 unidentified species	
CERAMBYCIDAE	
Ipochus fasciatus	
BRUCHIDAE	
Stator limbratus Stator pruininus	
CHRYSOMELIDAE	
Exema conspersa Lema trilineata daturiphila Diabrotica undecimpunctata Diabrotica soror (Curcubita) Cryptocephalus sanguinicollis Cryptocephalus sprucus Cryptocephalus confluentus Altica obliterata Altica sp. no. 1 Diachus auratus Microrhopala rubrolineata	
CURCULIONIDAE	
Cleonus cristatus Cleonus sparsus Cleonidius pericollis Apion proclive Pantomorus cervinus Rhigopsis effracta Listeroderes obliquua Sitona cylindricollis Trigonoscuta dorothea Trichobaris compacta Onychobaris langei Smicronyx calaenus Smicronyx cuscutiflorae Smicronyx elsegundis Baris sp. Cylindrocopturus sp. Pselaphorhynchites aeratoides	
SCOLYTIDAE	
Phloeosinus sp. Chaetophloeus hystrix	
UNIDENTIFIED	
Octinodes sp. Dinocleus albovestitus	
ORDER: LEPIDOPTERA	
PAPILIONIDAE	
Papilio zelicaon Papilio rutulus Battus philenor philenor	
PIERIDAE	
Pieris rapae Pieris protodice Anthocharis sara sara Colias eurytheme Colias hardfordii Phoebis sennae marcellina Eurema nicippe Nathalis iole Coenonympha tullia californica Danaus gilippus strigosus Danaus plexippus Agraulis vanillae incarnata	

Butterflies and Moths

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Chlosyne gabbii gabbii
Vanessa atalanta rubria
V. cardui
V. anabella
V. virginiensis
Nymphalis antiopa
Precis coenia
Apodemia mormo nr. vigulti
Strymon melinus
Incisalia augustus iroides
C. perplexa
Brephidium exilis
Leptotes marina
Everes amyntula
Plebejus acmon acmon
Glaucopsyche lygdamus australis
Euphilotes battoides allyni

HESPERIIDAE

Polites sabuleti sabuleti
Hylephila phyleus
Pyrgus albescens
Erynnis funeralis
Panaquina errans
Paratrytone melane
Lerodea eufala
Atalopetes campestris

GEOMETRIDAE

Elpiste marcesaria
Semiothisa californiaria
S. napensis
S. irrorata
Animomyia morta
Pero macdunnoughi
Anacamptodes fragilaria
Neoterpes edwardsata
Sabulodes aegrotata
Nemoria leptalea
Dichorda illustraria
Synchlora aerata liquoraria
Chlorochlamys appellaria
Cheteoscelis faseolaria
Cyclophora nanaria
Idaea microphysa
Archiroe neomexicana
Perizoma custodiata
Sparganita magnoliata
Euphyia implicata multilineata
Zenophleps lignocolorata
Orthonama obstipata
Eupithecia misturata
E. miserulata zela
E. maestosa

SPHINGIDAE

Manduca sexta
Hyles lineata

ARCTIIDAE

Apantesis proxima
Estigmene acrea
Arachnis picta
Leptarctia californiae

NOTODONTIDAE

Furcula scolopendrina
F. cinerea cineriodes

LYMANTRIDAE

Orgyia magna

NOCTUIDAE

Tetanoleta palligera

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Hemeroplanis finitima
Caenurgia togataria
Zalelunata
Autographa californica
A. biloba
Trichoplusia ni
Nola apera
Eumicremma minima n. ssp.
Tarachidia candefacta
Heliothis virescens
H. zea
H. phloxiphagus
Schinia scarletina
S. pulchripennis
Agrotis ipsilon
A. subterranea
Peridroma saucia
Copeblepharon sanctaemonicae
Xestia adela
Hermieuxoa rudens
Spaelotis havilae
Euxoa messoria
E. septentrionalis
E. riversii
Lacinipolia stricta ssp.
L. leucogramma
L. quadrilineata
L. vicina acutipennis
Zosteropoda hirtipes
Leucania oaxacana
Protorthodes alkfeni
P. melanopsis ssp.
P. rufula
Pseudaletia unipuncta
Dargida procincta
Stylopoda cephalica
Platypergia extima
P. mona
Apamea cinefacta
Spodoptera exigua
Prodenia Ornithogalli
Catabena esula

PYRALIDAE

Psammobotys fordii
Abegesta remellalis
Stega salutaris riparialis
Dicymolomia metaliferalis
Hellula rogatalis
Uresiphita reversalis
Loxostege immerans
Udea profundalis
Pyrausta laticlava
Lineodes integra
Nomophila nearctica
Diastichtis fracturalis
Achyra occidentalis
Tehama bonifatella
Crambus sperryellus
Euchromius ocellus ocellus
Arta n. sp. nr. *epicornallis*
Jocara trabis
Alphaias transferrans
Etiella zinckenella
unident. genus nr. Etiella n sp.
Adelphia ochripunctella
Heterographis morrisonella
Staudingeria albipenella

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Hulstia undulatella

Phycitodes albatella mucidella

Ephesiodes gilvescentella

Vitula edmondsii bombylicolella

Elasmopalpus lignosellus

PTEROPHORIDAE

Platyptilia williamsi

Anstenoptilia marmarodactyla

Oidaematophorus nr. grisescens

TINEIDAE

Opogona omoscopa

Opogona sp.

Amydria sp.

Tinea sp.

SESSIIDAE

Synanthedon polygoni

COSSIDAE

Comadia intrusa

BLASTOBASIDAE

Holcocera sp.

COLEOPHORIDAE

1 unidentified species

OECOPHORIDAE

Pressariodea gracillis

MOMPHIDAE

Mompha sp.

COSMOPTERIGIDAE

Walshia miscecolorella

Pyroderces badia

Telodoma helianti

SCYTHRIDIDAE

2 unidentified species

GELECHIIDAE

Gelechia paraplutella

Anacampsis lacteusocrella

Aristotelia argentifera

Chionodes mediofuscella

C. lophocella

Syncopacma nr. nigrella

1 unidentified species

Arogo nr. unifascilla

Rifseria fuscotaenirella

Dichomeris baxa

ORDER: STREPSIPTERA

HALICTOPHAGIDAE

Diozocera comstocki

ORDER: DIPTERA

TIPULIDAE

Tipula sp. 1

Tipula beatula

Gonomyia flavibasis

Limonia communis

PSYCHODIDAE

1 unidentified species

CULICIDAE

Culex sp.

Culiseta sp.

Aedes squamiger

CHIRONOMIDAE

Chironomus stigmaterus

Crictopus sp.

Dicrotendipes sp.

SIMULIIDAE

1 unidentified species

Twister-winged insects

Flies

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

	BIBIONIDAE
<i>Bibio hirtus</i> 2 unidentified species	
	SCIARIDAE
1 unidentified species	
	CECIDOMYIIDAE
<i>Asphondylia</i> sp. 1 unidentified species	
	STRATIOMYIDAE
<i>Nemotelus</i> sp.	
	TABANIDAE
<i>Brennania belkini</i>	
	THEREVIDAE
<i>Cromolepidia</i> sp. <i>Psilocephala aldrichi</i> <i>Thereva</i> sp. 1 <i>Thereva</i> sp. 2 1 unidentified species	
	SCENOPINIDAE
<i>Scenopinus</i> sp.	
	APIOCERIDAE
<i>Rhaphiomidas terminatus terminatus</i>	
	MYDIDAE
<i>Nemomydas pantherinus</i>	
	ASILIDAE
<i>Metapogon pictus</i> <i>Ablautus coquilleti</i> <i>Stenopogon brevisculus</i> <i>Cophura clausa</i> <i>Mallophora faultrix</i> <i>Protocantha coquilleti</i> <i>Asilus</i> sp. <i>Nicocles</i> sp. <i>Leptogaster</i> sp. <i>Saropogon luteus</i>	
	ACROCERIDAE
<i>Opsebius diligens</i> <i>Ogcodes</i> sp.	
	BOMBYLIIDAE
<i>Conophorus collinius</i> <i>C. fenestratus</i> <i>C. cristatus</i> <i>Villa atrata</i> <i>V. lateralis</i> <i>V. molitor</i> <i>Ligyra gazophylax</i> <i>Poecilanthrax arethusa</i> <i>Thyridanthrax hugator</i> <i>Lepidanthrax homologus</i> <i>L. oribates</i> <i>L. agrestis</i> <i>Neodiplocampta mira</i> <i>Bombylius flavipilosus</i> 3 unidentified species <i>Paravilla syrtis</i> <i>Poecilognathus loewi</i> <i>Acreophthiria similis</i> <i>Phthiria</i> sp. no. 1 <i>Phthiria</i> sp. no. 2 <i>Geron nigripes</i> <i>Geron n. unidentified species</i> <i>Mythicomyia pictipes</i> <i>Mythicomyia</i> sp. <i>Anastoechus melanohalteralis</i>	
	DOLICHOPODIDAE
5 unidentified species	

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	PHORIDAE
2 unidentified species	
	PIPUNCULIDAE
<i>Pipunculus</i> sp.	
	SYRPHIDAE
<i>Copestylum mexicana</i>	
<i>Volucella tau</i>	
<i>Syrphus</i> sp.	
<i>Metasyphus</i> sp.	
<i>Eristalis tenax</i>	
<i>Sphaerophoria</i> sp.	
<i>Syritta pipiens</i>	
<i>Allograpta micrura</i>	
<i>A. obliqua</i>	
<i>Scaeva pyrastris</i>	
<i>Eupeodes volucris</i>	
<i>Baccha clavata</i>	
<i>Paragus</i> sp.	
<i>Carposcalis</i> sp.	
	CONOPIDAE
<i>Physocephala texana</i>	
	OTITIDAE
2 unidentified species	
	TEPHRITIDAE
<i>Euaresta bellula</i>	
<i>Proceidochaes minuta</i>	
<i>Trupanea signata</i>	
<i>T. jonesi</i>	
<i>Tephritis</i> sp.	
	LAUXANIIDAE
2 unidentified species	
	CHAMAEMYIIDAE
<i>Leucopis</i> sp.	
	PIOPHILIDAE
1 unidentified species	
	LONCHAEIDAE
1 unidentified species	
	EPHYDRIDAE
1 unidentified species	
	DROSOPHILIDAE
<i>Drosophila melanogaster</i>	
	CHLOROPIDAE
2 unidentified species	
	AGROMYZIDAE
<i>Melanagromyza</i> sp. 1	
1 unidentified species	
	HELEOMYZIDAE
2 unidentified species	
	TRIXOSCELIDIDAE
1 unidentified species	
	ASTEIIDAE
1 unidentified species	
	ANTHOMYIIDAE
7 unidentified species	
	MUSCIDAE
<i>Musca domestica</i>	
<i>Stomoxys calcitrans</i>	
1 unidentified species	
	CALLIPHORIDAE
<i>Calliphora</i> sp. no. 1	
<i>Calliphora</i> sp. no. 2	
1 unidentified species	
	SARCOPHAGIDAE
3 unidentified species	
<i>Eumacronychia</i> sp.	
<i>Miltogrammini</i>	

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

1 unidentified species

TACHINIDAE

Ptilodexia sabroskyi
Archytas californica
Peleteria texensis
Deopalpus gemminatus
Chaetogaedia vilis
Eriathririni sp. no 1
Gonia sp.
Microglossa hesperidarum
 7 unidentified species

ORDER: HYMENOPTERA

BRACONIDAE

Apanteles thurberi
Apanteles nr. *aristoteliae*
Diadegma sp.
Opius sp.
Agathis sp.
 3 unidentified species

UNIDENTIFIED

7 unidentified species

ICHNEUMONIDAE

Ichneumona sp. no 1
 13 unidentified species

TRICHOGRAMMATIDAE

Trichogramma minutum
Trichogramma sp.

EULOPHIDAE

Necremnus sp.
Chrysocharis sp.

ENCYRTIDAE

Homalotylus sp.
Anysotylus sp.

EUELMIDAE

Anastatus

BRADYNOBAENIDAE

Chyphotes petiolatus

TORYMIDAE

Podagrion sp.
Megastigmus sp.
Torymus sp.

PTEROMALIDAE

1 unidentified species

EURYTOMIDAE

Eurytoma sp.

CHALCIDIDAE

Spilochaclis sp.

FIGITIDAE

1 unidentified species

CYNIPIDAE

1 unidentified species

SCELIONIDAE

1 unidentified species

DRYINIDAE

1 unidentified species

FORMICIDAE

Pogonomyrmex californicus
Iridomyrmex humilis
Conomyrma sp.
Formica piliformis
Monomorium minimum

TIPHIIDAE

2 unidentified species

MUTILLIDAE

Dasymutilla californica
Sphaerophthalma sp. 1

WASPS, BEES, ANTS, SAWFLIES

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Sphaerophthalma sp. 2

SCOLIIDAE

Campsomeris totera

Crioscolia alcione

POMPILIDAE

Ageniella blaisdelli

Aporus hirsutis

A. luxus

A. sp.

Episyron snowi

E. quinquenotatus hurdi

E. conterminus posterus

Pepsis chrysothemis

Evagetes hyacinthus

Tachypompilus unicolor

Aproenellus medianus

A. yucatanensis

Pompilus angularis

VESPIDAE

Polistes aurifer

SPHECIDAE

Tachysphex amplus

T. ashmeadi

T. texanus

T. sp.

Clypeadon californicus

Larropsis tenuicornis

Sphex ichneumoneus

Isodontia elegans

Ammophila azteca

A. pruinosa

A. cleopatra

A. aberti

Microbembix californica

Bembix americana comata

Steniola duplicata

Plenoculus sp.

Mimesia calruilla

Mimesia sp.

Miscophis sp. no. 1

Miscophis sp. no. 2

Tachytes distinctus

Prionyx parkeri

Astata sp.

COLLETIDAE

Colletes angelica

C. slevini

C. hyalinus gaudialus

HALICTIDAE

Lasioglossum sisymbrii

L. Pavonotum

Agapostemon texanus

A. femoratus

Dialictus pilosicaudis

D. microlepoides

D. perichlarum

D. brunneventis

1 unidentified species

ANDRENIDAE

Andrena oenothera

MELITTIDAE

Hesperaspis fuchsi

MEGACHILIDAE

Anthidium palliventre

Megachile lippiae

Osmia intera

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Osmis sp.

ANTHOPHORIDAE

Habropoda tristissima
Micranthophora curta
Peponapsis pruinosa
Anthrophora urbana
Melissodes lupina
M. moorei
Emphoropsis sp.

APIDAE

Apis mellifera
Bombus sonorus
B. crotchii
B. californicus
B. vosnesenskii

Terrestrial Vertebrates

Common Name	Taxonomic Name
AMPHIBIANS	
PLETHODONTIDAE	
garden slender salamander	<i>Batrachoseps pacificus major</i>
BUFONIDAE	
western toad	<i>Bufo boreas</i>
HYLIDAE	
Pacific treefrog	<i>Hyla regilla</i>
bullfrog	<i>Rana catesbeiana</i>
REPTILES	
IGUANIDAE	
San Diego horned lizard	<i>Phrynosoma coronatum blainvillii</i>
western fence lizard	<i>Sceloporus occidentalis</i>
side-blotched lizard	<i>Uta stansburiana</i>
ANGUIDAE	
southern alligator lizard	<i>Gerrhonotus multicarinatus</i>
ANNIELLIDAE	
silvery legless lizard	<i>Anniella pulchra pulchra</i>
COLUBRIDAE	
common kingsnake	<i>Lampropeltis getulus</i>
gopher snake	<i>Pituophis melanoleucus</i>
BIRDS	
ANATIDAE	
mallard	<i>Anas platyrhynchos</i>
domestic goose	<i>Anser "domesticus"</i>
PHALACROCORACIDAE	
double-crested cormorant	<i>Phalacrocorax auritus</i>
PELECANIDAE	
brown pelican	<i>Pelecanus occidentalis</i>
ARDEIDAE	
great blue heron	<i>Ardea herodias</i>
great egret	<i>Ardea alba</i>
CATHARTIDAE	
turkey vulture	<i>Cathartes aura</i>
ACCIPITRIDAE	
white-tailed kite	<i>Elanus leucurus</i>
sharp-shinned hawk	<i>Accipiter striatus</i>
Cooper's hawk	<i>Accipiter cooperii</i>
red-shouldered hawk	<i>Buteo lineatus</i>
red-tailed hawk	<i>Buteo jamaicensis</i>
FALCONIDAE	
American kestrel	<i>Falco sparverius</i>

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Terrestrial Vertebrates

Common Name	Taxonomic Name
prairie falcon peregrine falcon	<i>Falco mexicanus</i> <i>Falco peregrinus</i>
CHARADRIIDAE	Plovers
killdeer	<i>Charadrius vociferus</i>
SCOLOPACIDAE	Sandpipers
willet	<i>Tringa semipalmata</i>
LARIDAE	Gulls & Terns
ring-billed gull California gull western gull	<i>Larus delawarensis</i> <i>Larus californicus</i> <i>Larus occidentalis</i>
COLUMBIDAE	Pigeons & Doves
rock dove spotted dove mourning dove	<i>Columba livia</i> <i>Streptopelia chinensis</i> <i>Zenaida macroura</i>
TYTONIDAE	Barn Owls
barn owl	<i>Tyto alba</i>
STRIGIDAE	True Owls
burrowing owl	<i>Athene cunicularia</i>
APODIDAE	Swifts
white-throated swift	<i>Aeronautes saxatalis</i>
TROCHILIDAE	Hummingbirds
Anna's hummingbird Costa's hummingbird black chinned hummingbird	<i>Calypte anna</i> <i>Calypte costae</i> <i>Archilochus alexandri</i>
PICIDAE	Woodpeckers
northern flicker	<i>Colaptes auratus</i>
TYRANNIDAE	Tyrant Flycatchers
western wood-pewee Pacific-slope flycatcher black phoebe Say's phoebe ash-throated flycatcher Cassin's kingbird western kingbird	<i>Contopus sordidulus</i> <i>Empidonax difficilis</i> <i>Sayornis nigricans</i> <i>Sayornis saya</i> <i>Myiarchus cinerascens</i> <i>Tyrannus vociferans</i> <i>Tyrannus verticalis</i>
LANIIDAE	Shrikes
loggerhead shrike	<i>Lanius ludovicianus</i>
HIRUNDINIDAE	Swallows
purple martin violet-green swallow northern rough-winged swallow cliff swallow barn swallow	<i>Progne subis</i> <i>Tachycineta thalassina</i> <i>Stelgidopteryx serripennis</i> <i>Hirundo pyrrhonota</i> <i>Hirundo rustica</i>
CORVIDAE	Jays & Crows
black-billed magpie American crow common raven	<i>Pica pica</i> <i>Corvus brachyrhynchos</i> <i>Corvus corax</i>
AEGITHILADAE	Bushtits, Long-Tailed Tits
bushy tit	<i>Psaltriparus minimus</i>
TROGLODYTIDAE	Wrens
house wren Bewick's wren	<i>Troglodytes aedon</i> <i>Thryomanes bewickii</i>
MIMIDAE	Thrashers
northern mockingbird	<i>Mimus polyglottos</i>
STURNIDAE	Starlings
European starling	<i>Sturnus vulgaris</i>
PARULIDAE	New World Warblers
common yellowthroat yellow-rumped warbler Townsend's warbler Wilson's warbler	<i>Geothlypis trichas</i> <i>Setophaga coronata</i> <i>Setophaga townsendi</i> <i>Cardellina pusilla</i>

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Terrestrial Vertebrates

Common Name	Taxonomic Name
EMBERIZIDAE	Sparrows and Buntings
California towhee chipping sparrow savannah sparrow song sparrow white-crowned sparrow	<i>Melospiza crissalis</i> <i>Spizella passerina</i> <i>Passerculus sandwichensis</i> <i>Melospiza melodia</i> <i>Zonotrichia leucophrys</i>
CARDINALIDAE	Cardinals and Grosbeaks
black-headed grosbeak	<i>Pheucticus melanocephalus</i>
ICTERIDAE	Blackbirds and Orioles
red-winged blackbird Brewer's blackbird western meadowlark brown-headed cowbird hooded oriole northern oriole Bullock's oriole	<i>Agelaius phoeniceus</i> <i>Euphagus cyanocephalus</i> <i>Sturnella neglecta</i> <i>Molothrus ater</i> <i>Icterus cucullatus</i> <i>Icterus galbula</i> <i>Icterus bullockii</i>
FRINGILLIDAE	Finches
house finch lesser goldfinch	<i>Carpodacus mexicanus</i> <i>Spinus psaltria</i>
PASSERIDAE	Old World Sparrows
house sparrow	<i>Passer domesticus</i>
PLOCEIDAE	Old World Sparrows
Orange Bishop	<i>Euplectes franciscanus</i>
MAMMALS	New World Opossums
DIDELPHIDAE	<i>Didelphis virginiana</i>
Virginia opossum	Pocket Gophers
GEOMYIDAE	<i>Thomomys bottae</i>
Botta's pocket gopher	New World Rats & Mice
CRICETIDAE	<i>Peromyscus boylii</i> <i>Microtus californicus</i>
brush mouse California vole	Old World Rats & Mice
MURIDAE	<i>Rattus norvegicus</i> <i>Rattus rattus</i> <i>Mus musculus</i>
Norway rat black rat house mouse	Squirrels
SCIURIDAE	<i>Spermophilis beecheyi</i>
California ground squirrel	Wolves & Foxes
CANIDAE	<i>Canis familiaris</i> <i>Vulpes vulpes</i>
domestic dog red fox	Raccoons
PROCYONIDAE	<i>Procyon lotor</i>
raccoon	Weasels, Skunks & Otters
MUSTELIDAE -	<i>Mephitis mephitis</i>
striped skunk	Cats
FELIDAE	<i>Felis catus</i>
domestic cat	

Attachment 3
Sensitive Plant and Wildlife Species Evaluated for
Potential to
Occur within the SPAS Study Area

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Flora Red sand verbena <i>Abronia maritima</i>	None	None	CNPS 4.2	Not detected by focused surveys conducted in spring 1998. ¹ Not detected by focused botanical surveys for the SPAS Study Area in 2011. Does not occur based on lack of detection.	This perennial herb blooms between February and November. ² It is associated with coastal dunes and strand below 100 meters. ³ This taxa is historically known from Los Angeles, Orange, Santa Barbara, San Luis Obispo, San Diego, and Ventura Counties, the Channel Islands and Baja California. ² It was historically found on the Los Angeles/El Segundo Dunes. ⁴
Aphanisma <i>Aphanisma blitoides</i>	None	None	CNPS 1B.2	Not detected by botanical surveys conducted at the Los Angeles/El Segundo Dunes in 1995, 1996, 1997, 1998, 1999 and focused surveys in 1998. ¹ Not detected by general botanical surveys for the SPAS Study Area in 2011. Does not occur based on lack of detection.	This annual herb blooms between March and June. ² It is found on bluffs and slopes near the ocean in coastal bluff scrub, coastal dunes, and coastal scrub. ³ This taxa is historically known from Los Angeles, Orange, Santa Barbara, San Diego, and Ventura Counties as well as the Channel Islands and Baja California. ^{2,3} In Los Angeles County, the nearest extant population is located in the Palos Verdes Hills. ⁵
Marsh sandwort <i>Arenaria paludicola</i>	FE	SE	CNPS 1B.1	Does not occur due to a lack of suitable marsh/swamp habitat.	The annual herb blooms between May and August. ² It is found in bogs and fens, freshwater marshes and swamps between 3 and 170 meters. ³ Nearest known population in Cienega, Los Angeles County, but this species not seen in Los Angeles County since 1900. ⁵
Braunton's milkvetch <i>Astragalus brauntonii</i>	FE	None	CNPS 1B.1	Not detected by botanical surveys conducted at the Los Angeles/El Segundo Dunes in 1995, 1996, 1997, 1998, 1999, and focused surveys in 1998 and 2000. ¹ Does not occur due to lack of suitable limestone and sandstone soils.	This perennial herb blooms from January to August and occurring in brushy places, firebreaks and disturbed areas in chaparral below 450 meters above mean sea level. ^{2,3} Recent burns or disturbed areas in closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland. ⁵ Strong substrate preference, considered endemic to limestone or sandstone with carbonate layers. Currently known from four general areas in Ventura, Los Angeles, and Orange counties. One population in Simi Hills, one in Santa Ynez Canyon, one in Coal Canyon and one in Gypsum Canyon. Remaining population estimated at less than 100 individuals. ⁶ Documented at five sites in the Santa Monica Mountains; four out of five populations are presumed extant. ⁵ There are no limestone outcrops or limestone derived soils within the Study Area, including the Los Angeles/El Segundo Dunes.

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Ventura Marsh milkvetch <i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	FE	SE	CNPS 1B.1	Not detected by botanical surveys conducted at the Los Angeles/EI Segundo Dunes in 1995, 1996, 1997, 1998, 1999, and focused surveys in 1998 and 2000. ¹ Not detected by focused botanical surveys for the SPAS Study Area in 2011. Does not occur based on lack of detection.	This perennial herb blooms from June to October and occurs in coastal marshes or seeps below 30 meters above mean sea level. ^{2,3} Within reach of high tide or protected barrier beaches in coastal salt marsh or sandy bluffs. ⁵ Believed extinct until its rediscovery in 1997. Only known extant population on McGrath State Beach in Ventura County. ⁷ Historically known from the Ballona marshes and a meadow near the seashore in Santa Monica; presumed extirpated at both sites. Potentially suitable habitat to the species is limited to the fore dune, west of the Los Angeles/EI Segundo Dunes immediately adjacent to Vista del Mar Boulevard, which would not be impacted by any of the SPAS alternatives.
Coastal dunes milkvetch <i>Astragalus tener</i> var. <i>titi</i>	FE	SE	CNPS 1B.1	Not detected by botanical surveys conducted at the Los Angeles/EI Segundo Dunes in 1995, 1996, 1997, 1998, 1999, and focused surveys in 1998 and 2000. ¹ Not detected during general botanical surveys for the SPAS Study Area in 2011. Does not occur based on lack of detection.	This annual herb blooms from March to May and occurs in moist sandy depressions near the coast, typically coastal bluffs and dunes below 15 meters above mean sea level. ^{2,5} Historically, range was known to include Monterey, Los Angeles, and San Diego Counties. It is presumed extant at three locations, one in Monterey County and two in San Diego County. ⁵
South coast saltscale <i>Atriplex pacifica</i>	None	None	CNPS 1B.2	Not detected by surveys conducted at the Los Angeles/EI Segundo Dunes for 1995, 1996, 1997, 1998, 1999 and focused surveys in 1998. ¹ Not detected during general botanical surveys for the SPAS Study Area in 2011. Does not occur based on lack of detection.	This annual herb blooms between March and October. ² It prefers alkali soils from 1-500 meters in coastal scrub, coastal bluff scrub, playas and chenopod scrub. This taxa is historically known from Los Angeles, Orange, Riverside, San Diego, and Ventura Counties as well as the Channel Islands and Baja California. ² In Los Angeles County, it is historically known from San Pedro and Redondo Beach. ⁵
Parish's brittlescale <i>Atriplex parishii</i>	None	None	CNPS 1B.1	Not detected by surveys conducted at the Los Angeles/EI Segundo Dunes for 1995, 1996, 1997, 1998, 1999 and focused surveys in 1998. ¹ Not detected during general botanical surveys for the SPAS Study Area in 2011. Does not occur based on lack of detection and lack of suitable habitat.	This annual herb blooms between June and October. ² It is found in association with drying alkali flats in alkali meadows, vernal pools, chenopod scrub and playas. ⁵ This taxa is historically known from Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties as well as Baja California. ² Recent collections known from extant populations in Santa Monica and Redondo Beach. ⁵

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Davidson's saltscale <i>Atriplex serenana</i> var. <i>davidsonii</i>	None	None	CNPS 1B.2	Not detected by surveys conducted at the Los Angeles/El Segundo Dunes for 1995, 1996, 1997, 1998, 1999 and focused surveys in 1998. ¹ Not detected during general botanical surveys for the SPAS Study Area in 2011. Does not occur based on lack of detection.	This annual herb blooms between April and October. ² It is associated with alkali soil from 3 - 250 meters in coastal bluff scrub and coastal scrub. ³ This taxa is historically known from Los Angeles, Orange, Riverside, Santa Barbara, San Diego, and Ventura Counties as well as Santa Rosa Island and Baja California. In Los Angeles County, it is historically known from San Pedro and Temple Street Hills in Los Angeles. ⁵
Brewer's calandrinia <i>Calandrinia breweri</i>	None	None	CNPS 4.2	Does not occur due to lack of chaparral and scrub habitat.	This annual herb blooms between March and June. ² It is associated with sandy or loamy soils in disturbed sites and burn areas in chaparral and coastal sage scrub at elevations from 10 to 1220 meters. ² It is known in California from Santa Rosa in the north to Baja California in the south. ²
Plummer's mariposa lily <i>Calochortus plummerae</i>	None	None	CNPS 1B.2	Not detected by surveys conducted at the Los Angeles/El Segundo Dunes for 1995, 1996, 1997, 1998, 1999 and focused surveys in 1998. ¹ Not detected during general botanical surveys for the SPAS Study Area in 2011. Does not occur based on lack of detection and lack of suitable habitat.	This perennial bulbiferous herb blooms from May to July and occurs on rocky and sandy sites in coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, and lower montane coniferous forest. ³ This taxa is historically known from Los Angeles, Riverside, San Bernardino, and Ventura Counties. ² The nearest known historical occurrence is Mandeville Canyon in the Santa Monica Mountains. ⁵
Santa Barbara morning glory <i>Calystegia sepium</i> ssp. <i>binghamiae</i>	None	None	CNPS 1A	Does not occur due to lack of marsh habitat and because species is presumed extinct in California. ²	This perennial herb blooms between April and May. ² It is associated with coastal marshes. ³ This taxa is historically known from Los Angeles, Orange, and Santa Barbara Counties. ⁵ In Los Angeles County, historically known from the town of Cienega, northeast of Baldwin Hills. Formerly known from Southern California marshes, but presumed extinct. ^{2,5}
Lewis' evening primrose <i>Camissonia lewisii</i>	None	None	CNPS 3	Determined to be widely distributed in the Habitat Restoration Area. In addition, approximately three hundred individuals were identified at the western end of the north runway during surveys in Spring 1998. ¹ Not detected during focused surveys for the Bradley West Project in Spring 2009. Not detected during 2011 general botanical surveys for the SPAS Study Area; however, assumed present within the Habitat Restoration Area based on previous survey results.	This annual herb blooms between March and June. It is associated with sandy and clay soils from 0 to 300 meters in coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland. ² In California, it is known from Los Angeles, Orange, and San Diego counties.

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Southern tarplant <i>Centromadia parryi</i> ssp. <i>australis</i>	None	None	CNPS 1B.1	Not detected by focused surveys conducted at the Los Angeles/EI Segundo Dunes for 1995, 1996, 1997, 1998, 1999 and focused surveys in 1998. ¹ Detected within the Continental City Property and East Contractor Employee Parking Area in Fall 2008; population subsequently relocated to mitigation area in Summer 2010. Not detected during focused botanical surveys for the SPAS Study Area in 2011; however, may occur based on historical presence within the biological resources study area.	This annual herb blooms between June and November. ² It is associated with margins of marshes and swamps, valley and foothill grassland, and vernal pools. This taxon is historically known from Los Angeles, Orange, Santa Barbara, and San Diego Counties as well as Santa Catalina Island and Baja California. ² In Los Angeles County, it is historically known from Santa Monica, Los Angeles, and Inglewood. Extant populations known from Ballona marshes, Madrona Marsh Nature Preserve, and at Harbor Lake Regional Park. ⁵
Orcutt's pincushion <i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	None	None	CNPS 1B.1	Not detected during botanical surveys in 2011. However; surveys were conducted outside of this species' blooming period and suitable habitat is present within the Los Angeles/EI Segundo Dunes. The floral compendium for the LAX Master Plan EIR reported the presence of <i>Chaenactis glabriuscula</i> ; however <i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i> was not a valid taxon at that time. Therefore, this species may occur within the Los Angeles/EI Segundo Dunes.	This annual herb blooms from January to August. It is associated with sandy soils in coastal bluff scrub and coastal dunes. Elevation range 3-100m. ² Nearby extant populations are located at Sand Dune Park in Manhattan Beach and Ballona Wetlands in Playa del Rey. ⁵
Coastal goosefoot <i>Chenopodium littoreum</i>	None	None	CNPS 1B.2	Not detected during general botanical surveys in 2011. Although it was not a target species for focused surveys, this species was not detected during previous biological surveys for the Study Area. ¹ Does not occur based upon lack of detection.	This annual herb blooms from April to August. It occurs in coastal dunes from 10 to 30 meters. The nearest known location at Playa del Rey south of Ballona Creek is presumed extirpated. Known to be extant at Vandenberg Air Force Base, San Luis Obispo County. ⁵

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Seaside red maids <i>Cistanthe maritima</i>	None	None	CNPS 4.2	Not detected by focused surveys in spring 1998. ¹ Not detected during general botanical surveys for the SPAS Study Area in 2011. Does not occur based upon lack of detection.	This annual herb blooms between March and May. ² It is associated with sandy soil on sea bluffs. ³ This taxon is historically known from Los Angeles, Orange, San Diego, and Ventura Counties, the Channel Islands, and Baja California. ² It was historically known at the Los Angeles/El Segundo Dunes. Nearest known location is at Hermosa Beach, 2.0 miles north of Redondo Beach. ⁵
Salt marsh bird's-beak <i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	FE	SE	CNPS 1B.2	Not detected by general surveys conducted at the Los Angeles/El Segundo Dunes in 1995, 1996, 1997, 1998, 1999, and focused surveys in 1998 and 2000. ¹ Does not occur due to a lack of marsh habitat.	This annual herb blooms from May to October and is generally found in coastal salt marsh and in higher zones of salt marsh habitat between 0 and 30m. Once distributed along the coast from lower California to Oregon. ⁸ Historically known from Terminal Island in San Pedro Harbor and in the vicinity of Santa Monica; presumed extirpated at both sites. ⁵ Known to be extant at Point Mugu Air Station, Ventura County. ⁵
San Fernando Valley spineflower <i>Chorizanthe parryi</i> var. <i>fernandina</i>	FC	SE	CNPS 1B.1	Not detected during general botanical surveys for the SPAS Study Area in 2011. Although it was not a target species, this species was not detected during previous biological surveys for the Study Area. ¹ Does not occur based upon lack of detection.	This annual herb blooms from April to July. It occurs in sandy soils from 150 to 1220 meters in coastal sage scrub and valley and foothill grassland. ² A population of this species was reported in 1906 from Ballona marsh but has not been detected since and is possibly extirpated. ⁵
Catalina crossosoma <i>Crossosoma californicum</i>	None	None	CNPS 1B.2	Does not occur due to lack of scrub and chaparral habitat.	This perennial shrub blooms from February to May and occurs at 0 to 500 meters in coastal sage scrub and chaparral on rocky sea bluffs, wooded canyons, and dry open sunny spots on rocky clay. ² Nearest extant populations in Rancho Palos Verdes. ⁵
Beach spectacle-pod <i>Dithyrea maritima</i>	None	ST	CNPS 1B.1	Not detected by general surveys conducted at the Los Angeles/El Segundo Dunes for 1995, 1996, 1997, 1998, 1999 and focused surveys in 1998 and 2000. ¹ Not detected during 2011 general botanical surveys for the SPAS Study Area. Does not occur based on a lack of detection.	This perennial herb blooms from March to May and occurs in coastal strand, ⁸ coastal dunes and scrub, and sandy soils below 50 meters above mean sea level. ³ Historically, this species ranged from the central coast of California south into Baja California. Known in California from less than twenty occurrences; extirpated from half of its historical range. ² Historically known from the Los Angeles/El Segundo Dunes. Historic topographic maps and aerial photographs indicate that potentially suitable habitat for this species within the Los Angeles/El Segundo Dunes was largely converted due to residential development between 1940 and 1974. This species has not been successfully reintroduced as a result of revegetation efforts undertaken between 1990 and 1994. Nearest known location is in the vicinity of the Ballona marshes near Marina del Rey. ⁵

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Santa Monica Mountains dudleya <i>Dudleya cymosa</i> ssp. <i>ovatifolia</i>	FT	None	CNPS 1B.2	Not detected as a result of general surveys conducted at the Los Angeles/El Segundo Dunes in 1995, 1996, 1997, 1998, and 1999. Not detected as a result of focused surveys conducted in 1998 and 2000. ¹ Not detected during 2011 general botanical surveys for the SPAS Study Area. Does not occur due to a lack of suitable habitat.	This perennial herb blooms from March to June and occurs on shaded, rocky slopes from 150-500 meters above mean sea level; ³ on volcanic cliff faces and rocky outcrops in chaparral and coastal sage scrub. ² Found in the Santa Monica Mountains from near Westlake Village to Agoura and in deep canyon bottoms along lower Malibu Creek and Topanga Creek. Populations in Malibu and Topanga Canyons largely on lands owned and managed by the County of Los Angeles Department of Parks and Recreation, two populations on land designated as open space by Conejo Open Space Conservation Agency, and several on private land along the northern slope of Ladyface Mountain. ⁶ In 1980, locally abundant in Topanga State Park, Santa Monica Mountains. ⁵
Many-stemmed dudleya <i>Dudleya multicaulis</i>	None	None	CNPS 1B.2	Does not occur due to a lack of suitable habitat and clay soils.	This perennial herb blooms from April to July and often occurs on clay soils in chaparral, coastal sage scrub, valley and foothill grassland. The elevation range is 15-790 meters. ² The nearest historical population is located in the foothills north of Los Angeles, but is possibly extirpated. ⁵
Island green dudleya <i>Dudleya virens</i> ssp. <i>insularis</i>	None	None	CNPS 1B.2	Does not occur due to a lack of suitable habitat.	This perennial herb blooms between April and June. ² It is associated with rocky outcrops on bluffs facing the ocean in chaparral, coastal scrub, and coastal bluff scrub. This taxon is historically known only from Los Angeles County on the mainland, as well as San Miguel, San Nicholas, Santa Catalina, and Guadalupe Islands. ⁵ Four extant populations known from Palos Verdes Peninsula, Point Fermin, and White's Point. ⁵
San Diego button-celery <i>Eryngium aristulatum</i> var. <i>parishii</i>	FE	SE	CNPS 1B.1	Not detected as a result of focused surveys undertaken within all ephemerally wetted areas of the Airfield Operations Area in late spring/early summer 1998 and 2000. ¹ Not detected during 2011 general botanical surveys. Does not occur due to a lack of suitable habitat.	This annual herb blooms from April to July and occurs in vernal pools, marshes and chaparral from 1-150 meters above mean sea level. ^{2,8} Once occurred from Riverside County, California south to northern Baja California, Mexico. ⁹ Historic topographic maps indicate that potentially suitable habitat was present between the backdune of what is now the Los Angeles/El Segundo Dunes and the approximate location of the Theme Restaurant. Potentially suitable habitat has been developed or substantially altered as a result of the construction and realignment of Pershing Drive and development of operations and maintenance activities of LAX. Extant locations include vernal pools found at the Santa Rosa Plateau in Riverside County, Otay Mesa, Kearny Mesa, Del Mar Mesa, Miramar Naval Station, and Camp Pendleton in San Diego County; ⁹ and south to the mesas of Ensenada, Mesa de Colomet, and San Quintin, Baja California, Mexico. ¹⁰

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Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Mexican flannelbush <i>Fremontodendron mexicanum</i>	FE	Ca Rare	CNPS 1B.1	Not detected as a result of focused spring surveys conducted in 2000. ¹ Not detected during 2011 general botanical surveys. Does not occur due to a lack of suitable habitat.	This perennial evergreen shrub blooms between March and June and occurs primarily in closed-cone coniferous forest and southern mixed chaparral, often associated with meta-volcanic soils between 300-1000 meters above mean sea level. ¹¹ Also known from southern oak woodland. ⁸ Associated with Southern California cypress groves. ¹² Historically, less than ten native locations reported in the United States. Current distribution includes Cedar Canyon in southern San Diego County and Arroyo Seco, Baja California, Mexico. Reported occurrences in Los Angeles County likely based on garden escapees. ¹¹ Known from Palos Verdes, but considered an erroneous occurrence. ⁵ LAX is not located within the historic range of this species.
Los Angeles sunflower <i>Helianthus nuttallii</i> ssp. <i>parishii</i>	None	None	CNPS 1A	This species was not detected as a result of general surveys conducted at the Los Angeles/EI Segundo Dunes for 1995, 1996, 1997, 1998, 1999 and focused surveys in 1998 and 2000. ¹ Does not occur as species is presumed extinct.	This perennial rhizomatous herb blooms between August and October and occurred in marshes and swamps (coastal salt and freshwater). This taxa is historically known from Los Angeles, Orange, and San Bernardino Counties. ² In Los Angeles County, it is known from Cienega, between Los Angeles and Santa Monica; presumed extirpated. This species is presumed extinct in California.
Vernal barley <i>Hordeum intercedens</i>	None	None	CNPS 3.2	Not detected during general botanical surveys in 2011. Although it was not a target species for focused surveys, this species was not detected during previous biological surveys for the Study Area. ¹ Does not occur based upon lack of detection and lack of suitable habitat.	This annual herb blooms from March to June and occurs in coastal dunes, coastal scrub, valley and foothill grassland (saline flats and depressions), and vernal pools at elevations of 5 to 1000 meters. ² This species is known from the Channel Islands and coastal southern and Baja California. ²
Mesa horkelia <i>Horkelia cuneata</i> ssp. <i>puberula</i>	None	None	CNPS 1B.1	Not detected during botanical surveys in 2011; however; surveys were conducted outside of this species' blooming period and suitable habitat is present within the Los Angeles/EI Segundo Dunes. The floral compendium for the LAX Master Plan EIR reported the presence of <i>Horkelia cuneata</i> ; however <i>Horkelia cuneata</i> ssp. <i>puberula</i> was not a valid taxon at that time. Therefore, this species may occur within the Los Angeles/EI Segundo Dunes.	This perennial herb occurs blooms from February to September and occurs on sandy or gravelly soils in chaparral, cismontane woodland, and coastal scrub at elevations from 70 to 810 meters. ² Historically known from the Sepulveda Canyon area northwest of Los Angeles; only known extant population in the eight quadrangle area around the SPAS Study Area is located in Griffith Park. ²

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	None	None	CNPS 1B.1	This species was not detected by focused surveys in spring 1998. ¹ Not detected during general botanical surveys in 2011. Does not occur based upon lack of detection.	This annual herb blooms between February and June. ² It prefers alkali playas and grasslands and vernal pools. ³ This taxa is historically known from Kern, Los Angeles, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, San Luis Obispo, Tulare, and Ventura Counties as well as Santa Rosa Island and Baja California. ³ Several populations known from the region are presumed extirpated including Hyde Park, Dominguez Slough, and Ballona Marsh. Populations presumed extant located in Culver City, El Segundo, Palos Verdes, and northeast of Bixby Slough ⁵ .
Santa Catalina Island desert thorn <i>Lycium brevipes</i> var. <i>hassei</i>	None	None	CNPS 1B.1	Not detected during general botanical surveys in 2011. Although it was not a target species for focused surveys, this species was not detected during previous biological surveys for the Study Area. ¹ Does not occur based upon lack of detection and lack of suitable habitat.	This perennial shrub blooms in June but is detectable year-round. It occurs in coastal bluff scrub and coastal scrub on coastal bluffs and slopes at elevations of 10 to 300 meters. ² Only extant population known from eight quadrangle area encompassing the Study Area is located at Portuguese Point, Rancho Palos Verdes. ⁵
California spineflower <i>Mucronea californica</i>	None	None	CNPS 4.2	This species was identified within the Habitat Restoration Area by focused surveys in summer 1998. ¹ Not detected during focused surveys for the Bradley West Project in Spring 2009. Not detected during general botanical surveys in 2011; however, assumed present within the Habitat Restoration Area based on past survey results.	This annual herb blooms between March and August. ² It is associated with sandy soils in coastal scrub and chaparral. ³ This taxa is historically known from Kern, Los Angeles, Orange, Riverside, Santa Barbara, San Bernardino, San Luis Obispo, San Diego, and Ventura Counties.
Mud nama <i>Nama stenocarpum</i>	None	None	CNPS 2.2	Not detected during general botanical surveys in 2011. Although it was not a target species for focused surveys, this species was not detected during previous biological surveys for the Study Area. ¹ Does not occur based upon lack of detection and lack of suitable habitat.	This annual/perennial herb blooms between January and July. ² It is associated with intermittently wet areas in marshes and swamps. This taxa is historically known from Imperial, Los Angeles, Orange, and San Diego Counties as well as San Miguel Island, Arizona, and Baja California. ³ Nearest known population last detected in 1924 in Bixby Slough; also historically known from two sites in Santa Monica. ⁵

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Gambel's water cress <i>Nasturtium gambelii</i>	FE	ST	CNPS 1B.1	Not detected during general botanical surveys in 2011. Although it was not a target species for focused surveys, this species was not detected during previous biological surveys for the Study Area. ¹ Does not occur based upon lack of detection and lack of suitable habitat.	This perennial herb blooms from April to October and occurs in freshwater or brackish marches and swamps at elevations from 5 to 330 meters. ² One historical location in the Cienega area has been extirpated; no other populations known from the eight quadrangle area encompassing the SPAS Study Area. ⁵
Moran's nosegay <i>Navarretia fossalis</i>	FT	None	CNPS 1B.1	Not detected during general botanical surveys in 2011. Although it was not a target species for focused surveys, this species was not detected during previous biological surveys for the Study Area. ¹ Does not occur based upon lack of detection and lack of suitable habitat.	This annual herb blooms from April to June and occurs in vernal pools, playas, chenopod scrub, marshes and swamps (assorted shallow freshwater) at elevations of 30 to 1300 meters. ² One historical location in the Inglewood area has been extirpated; no other populations known from the eight quadrangle area encompassing the SPAS Study Area. ⁵
Prostrate vernal pool navarretia <i>Navarretia prostrata</i>	None	None	CNPS 1B.1	Not detected during general botanical surveys in 2011. Although it was not a target species for focused surveys, this species was not detected during previous biological surveys for the Study Area. ¹ Does not occur based upon lack of detection and lack of suitable habitat.	This annual herb blooms from April to June and occurs on mesic soils in coastal sage scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools at elevations from 15 to 700 meters. ² All historic locations in the eight quadrangle area encompassing the SPAS Study Area, including Los Angeles, Wilmington, north of Gardena, and Manhattan Beach, are presumed extirpated. ⁵
Coast woolly heads <i>Nemacaulis denudata</i> var. <i>denudata</i>	None	None	CNPS 1B.2	Not detected during general botanical surveys in 2011. Although it was not a target species for focused surveys, this species was not detected during previous biological surveys for the Study Area. ¹ Does not occur based upon lack of detection.	This annual herb blooms from April to September and occurs on coastal dunes at elevations from 0 to 100 meters. ² One extant population is known from Terminal Island in east San Pedro. ⁵

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
California orcutt grass <i>Orcuttia californica</i>	FE	SE	CNPS 1B.1	Not detected as a result of focused surveys of all ephemeral wetted areas within the Airfield Operations Area in late spring/early summer 1998 and 2000. Does not occur based on lack of previous detection and lack of suitable habitat.	This annual herb occurs in vernal pools, drying mud flats, and valley grassland below 625 meters above mean sea level. ^{3,8} Once occurred in vernal pools from San Quintin, Baja California, Mexico northward to Riverside, Los Angeles, and San Diego Counties in Southern California. Currently known from the Santa Rosa Plateau and a site near Hemet, Skunk Hollow pool in Riverside County; two pools at Marine Corps Air Station Miramar (Carlsbad) and four pool complexes at the Cruzan Mesa near Santa Clarita; Carlsberg vernal pool in the City of Moorpark, Ventura County; Otay Mesa in San Diego County; and Woodland Hills in Los Angeles County. In Baja California, Mexico, the species is found on Mesa de Colonet and in pools in San Quintin. The nearest record for this species is 6 miles east southeast of LAX in the City of Gardena near the junction of Rosecrans and Western Avenues. Last seen in 1946. Known from less than twenty occurrences. ² Populations face high degree of threat and have low potential for recovery. ¹⁰
Lyon's pentachaeta <i>Pentachaeta lyonii</i>	FE	SE	CNPS 1B.1	Not detected during general botanical surveys in 2011. Although it was not a target species for focused surveys, this species was not detected during previous biological surveys for the Study Area. ¹ Does not occur based upon lack of detection and lack of suitable habitat.	This annual herb, which is restricted to volcanic soils, blooms from March to August and occurs in chaparral (openings), coastal sage scrub, and valley and foothill grassland at elevations from 30 to 630 meters. ² Nearby historical populations are known Point Fermin, Palos Verdes Mt, and Wilmington; all are presumed extirpated. ⁵
Hubby's phacelia <i>Phacelia hubbyi</i>	None	None	CNPS 4.2	Not detected during general botanical surveys in 2011. Although it was not a target species for focused surveys, this species was not detected during previous biological surveys for the Study Area. ¹ Does not occur based upon lack of detection and lack of suitable habitat.	This annual herb blooms from April to June and occurs on talus, gravelly, and rocky soils in coastal scrub, chaparral, and valley and foothill grassland at elevations from 0 to 1000 meters. ²
South coast branching phacelia <i>Phacelia ramosissima</i> var. <i>austrolitoralis</i>	None	None	CNPS 3.2	This species was identified within the Los Angeles/El Segundo Dunes during focused botanical surveys in 2011.	This perennial herb blooms from March to August and occurs on sandy and sometimes rocky soils in chaparral, coastal dunes, coastal scrub, and coastal salt marshes at elevations from 5 to 300 meters.

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Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Brand's star phacelia <i>Phacelia stellaris</i>	FC	None	CNPS 1B.1	Not detected by botanical surveys conducted at the Los Angeles/El Segundo Dunes for 1995, 1996, 1997, 1998, 1999 and focused surveys in 1998. Not detected during general botanical surveys in 2011. Does not occur based on lack of detection.	This annual herb blooms between March and June and occurs in open areas in coastal scrub and coastal dunes. ² This taxa is historically known from Los Angeles and San Diego counties as well as Baja California; Los Angeles populations possibly extirpated by development. ² The closest historical occurrence is at Pershing Drive, one mile south of Culver Boulevard in Playa del Rey and along the coast at Redondo Beach. ⁵
Ballona cinquefoil <i>Potentilla multijuga</i>	None	None	CNPS 1A	Not detected as a result of focused surveys in summer 1998. Not detected during general botanical surveys in 2011. Does not occur based on lack of detection and lack of suitable habitat.	This perennial herb blooms between June and August. ² It is associated with brackish marshes. ³ This taxa is historically known only from Los Angeles County. ³ Presumed extinct in California by CNPS. ² Historically known from the Ballona wetlands. ⁵
White rabbit-tobacco <i>Pseudognaphalium leucocephalum</i>	None	None	CNPS 2.2	Not detected during botanical surveys in 2011. Although it was not a target species for focused surveys, this species was not detected during previous biological surveys for the Study Area. ¹ Does not occur based on lack of detection and lack of suitable habitat.	This perennial herb blooms from July to December and occurs in sandy and gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian woodland at elevations of 0 to 2100 meters. ² One population mapped in Hollywood; exact location unknown. ⁵
Salt spring checkerbloom <i>Sidalcea neomexicana</i>	None	None	CNPS 2.2	Does not occur due to a lack of suitable habitat.	This perennial herb blooms between March and June. ² It is associated with alkali playas, brackish marshes, chaparral, coastal scrub, lower montane coniferous forest, and Mojavean desert scrub. This taxa is historically known from Los Angeles, Orange, Riverside, Santa Barbara, San Bernardino, and Ventura Counties as well as Arizona, Nevada, Utah, New Mexico, Baja California, and Sonora, Mexico. ² The nearest occurrence is in Santa Monica, from undated collection cited by Jepson in 1936. ⁵
Estuary seablite <i>Suaeda esteroa</i>	None	None	CNPS 1B.2	Does not occur due to lack of suitable habitat.	This perennial herb blooms from May to October and occurs in coastal salt marsh and swamps at elevations from 0 to 5 meters. ² One population mapped in San Pedro; exact location unknown. ⁵
San Bernardino aster <i>Symphotrichum defoliatum</i>	None	None	CNPS 1B.2	Not detected during general botanical surveys in 2011. Although it was not a target species for focused surveys, this species was not detected during previous biological surveys for the Study Area. ¹ Does not occur based upon lack of detection and lack of suitable habitat.	This perennial herb blooms from July to November and occurs in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic)/near ditches, streams, and springs. The elevation range is 2 to 2040 meters. ² Several populations are presumed extant in the eight quadrangle area, including vaguely mapped locations in Dominguez Slough, Cienega, and Hollywood. ⁵

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Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Greata's aster <i>Symphotrichum greatae</i>	None	None	CNPS 1B.3	Does not occur due to lack of suitable habitat.	This perennial herb blooms from June to October and occurs in chaparral and cismontane woodland in mesic canyons at elevations from 300 to 2010 meters. ² One population known historically from Elysian Park but presumed extirpated. ⁵
Fauna					
Gastropods					
Trask's shoulderband snail <i>Helminthoglypta traskii</i>	None	None	None	Determined present within the Los Angeles/El Segundo Dunes as a result of focused gastropod surveys performed in 1996-1998. ¹³	Habitat association seems to be different for the various subspecies and newly identified species. Collected from the Fort Tejon area in Kern County and in the Vasquez Rocks area of northern Los Angeles County. ¹⁴ Present at the Los Angeles/El Segundo Dunes, but absent from the LAX airfield.
Mimic tryonia <i>Tryonia imitator</i>	None	None	None	Does not occur due to a lack of suitable habitat.	Inhabits coastal lagoons, estuaries, and salt marshes, from Sonoma County south to San Diego County. Species found in 1974 at Ballona Creek, Los Angeles County, approximately one mile northwest of the study area. ⁵
Crustaceans					
San Diego fairy shrimp <i>Branchinecta sandiegoensis</i>	FE	None	None	Determined absent within the LAX Master Plan boundaries and the Los Angeles/El Segundo Dunes as a result of focused wet and dry season surveys performed in winter 1997 and spring 1998. ¹ Potentially suitable habitat subsequently removed ¹⁵ ; therefore does not occur due to lack of suitable habitat and based on lack of detection.	Vernal pool specialist, found in shallow depressions containing a clay hard pan soil layer. Historically, known to occur within San Diego County. ¹⁶ Currently, discontinuously distributed along coastal Southern California and northern Baja California. They are most frequently found in San Diego County. ¹⁰ The largest number of vernal pools inhabited by the San Diego fairy shrimp is found from Marine Corps Base Camp Pendleton, inland to Ramona, and south through Del Mar Mesa, Kearney Mesa, Proctor Valley, Otay Mesa, and into northwestern Baja California, Mexico. Small populations occur in Orange County, and a single isolated female was reported from a vernal pool in Isla Vista, Santa Barbara County, California. ¹⁷ The San Diego fairy shrimp occurs in San Diego County from San Marcos and Ramona south to Otay Mesa and at Valle de las Palmas in northwestern Baja California, Mexico. All known localities are below 700 meters (2,300 feet) and within 50 kilometers (30 miles) of the Pacific coast. ¹⁶ The fairy shrimp presently occurs in fewer than 70 vernal pools within 11 vernal pool complexes in coastal San Diego County. ¹⁶

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Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Riverside fairy shrimp <i>Streptocephalus woottoni</i>	FE	None	None	Embedded cysts determined present on the western LAX airfield as a result of focused dry season surveys performed in winter 1997. ¹ Adult shrimp determined absent on the western LAX airfield as a result of focused dry season surveys performed in winter 1997. ¹ Adult shrimp determined absent on the western LAX airfield based on the result of focused wet season surveys in spring 1998. ¹ Soil and embedded cysts were subsequently removed to satisfy the requirements of two Biological Opinions and as such the Study Area no longer supports Riverside fairy shrimp. Focused surveys conducted in 2008, 2009, and 2010 at the Continental City site in the eastern airfield found no sensitive fairy shrimp. ^{16,17}	Vernal pool specialist, adults found in deep vernal pools which retain water through the warm weather of late April and May, road cuts, and depressions that support suitable habitat. ¹⁰ The embedded cysts were discovered in disturbed non-native grassland areas that do not retain the habitat characteristics of extent vernal pools. Therefore, no suitable habitat exists within the LAX Master Plan boundaries or the Los Angeles/El Segundo Dunes. Distribution is limited to discrete localities from Los Angeles County (LAX), Orange County, Riverside County, San Diego County, and south to Baja California. San Diego County contains the most known localities. ¹⁰ The northern range of the Riverside fairy shrimp is defined by Skunk Hollow and the Santa Rosa Plateau in Riverside County and coastal sites in San Diego and Orange Counties; it is documented from one complex on Marine Corps Air Station Miramar, throughout Marine Corps Base Camp Pendleton, and eight complexes on Otay Mesa. Soils with embedded cysts were removed from the Study Area, thereby rendering the habitat unsuitable to support this species. ¹⁵
Insects					
Dune scarab beetle <i>Aegilla convexa</i>	None	None	None	Determined present based on focused insect surveys from 1996-1998. ¹⁸ Not included in the CDFG Special Animals List.	Ocean beaches, dunes. Live beneath the surface of the sand in burrows. Species observed at the Los Angeles/El Segundo Dunes. ¹⁸ Collected from Los Angeles County (Fall 1932), Playa del Rey Dunes, Ventura County and San Luis Obispo County. ¹⁹
Santa Monica shieldback katydid <i>Aglaothorax longipennis</i>	None	None	None	Does not occur due to a lack of suitable habitat.	Occur normally in chaparral and canyon stream bottom vegetation, in the Santa Monica Mountains of southern California. ⁵ Species found in 1985 at Big Rock Canyon entrance, approximately .5 mile northwest of the LAX Master Plan boundaries. ⁵
Belkin's dune tabanid fly <i>Brennania belkini</i>	None	None	None	Determined present within the Los Angeles/El Segundo Dunes as a result of focused arthropod insect surveys performed in 1996-1998. ¹⁸	Distribution may be limited to subsites with exposed sandy substrates. ^{18,20} Species is known to occupy the southern foredune and southern dune scrub plant communities. Feeds on flowers. ²⁰ Adult specimens were observed and collected at the Los Angeles/El Segundo Dunes area and LAX. ¹⁸

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Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Busck's gallmoth <i>Carolella busckana</i>	None	None	None	This species was not detected within the LAX Master Plan boundaries or the Los Angeles/El Segundo Dunes as a result of focused insect surveys performed in 1996-1998. ¹⁸ May be extirpated from El Segundo.	Type locality is El Segundo; however, species is possibly extirpated from El Segundo. ⁵
Sandy beach tiger beetle <i>Cincindela hirticollis gravida</i>	None	None	None	This species was not detected within the LAX Master Plan boundaries or the Los Angeles/El Segundo Dunes as a result of focused insect surveys performed in 1996-1998. ¹⁸ Not expected to occur due to a lack of suitable habitat.	Inhabits areas along the coast of California from San Francisco Bay to Northern Mexico. Last seen in 1979 in the Playa del Rey area approximately one mile northwest of the study area. ⁵
Western beach tiger beetle <i>Cincindela latesignata latesignata</i>	None	None	None	This species was not detected within the LAX Master Plan boundaries or the Los Angeles/El Segundo Dunes as a result of focused insect surveys performed in 1996-1998. ¹⁸ Not expected to occur due to a lack of suitable habitat.	Occurs at mudflats and beaches in coastal southern California. ⁵
Senile beach tiger beetle <i>Cincindela senilis frosti</i>	None	None	None	This species was not detected within the LAX Master Plan boundaries or the Los Angeles/El Segundo Dunes as a result of focused insect surveys performed in 1996-1998. ¹⁸ Not expected to occur due to a lack of suitable habitat.	Inhabits marine shoreline, from the central California coast to the salt marshes of San Diego. Inhabits dark-colored mud in the lower zone and dried salt pans in the upper zone. Species last found at Manhattan Beach in 1979, approximately 2.5 miles southwest of the study area. ⁵
Globose dune beetle <i>Coelus globosus</i>	None	None	None	Determined present within the Los Angeles/El Segundo Dunes as a result of focused insect surveys performed in 1996-1998. ¹⁸	Inhabitant of coastal sand dune habitat, from Bodega Head in Sonoma County, south to Ensenada, Mexico. Inhabits foredunes and sand hummocks. Species found at Los Angeles/El Segundo Dunes. ¹⁸ Species also found at Las Tunas Beach in 1992 and at the foredunes at Dockweiler State Beach (information suppressed). ⁵

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Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
El Segundo goat moth <i>Comadia intrusia</i>	None	None	None	This species is believed to be historically present based on the presence of larval host plant and historical collections. However, this species was not detected by focused insect surveys from 1996-1998. ¹⁸ Not included in the CDFG Special Animals List.	An obligate species of the bush lupine. Southern dune scrub plant communities of the Los Angeles/EI Segundo Dunes. Known to occur only at the Los Angeles/EI Segundo Dunes; however, its current population at the Dunes is unknown. ²⁰
Santa Monica dunes moth <i>Copeblepharon sanctamonicae</i>	None	None	None	This species is believed to be historically present based on the presence of larval host plant and historical collections. However, this species was not detected by focused insect surveys from 1996-1998. ¹⁸ Not included in the CDFG Special Animals List.	Restricted to sand dune environments. An obligate species of sand verbena. ²⁰ Common in the southern foredune and less abundant in the southern dune scrub. Historically known to occur at the Los Angeles/EI Segundo Dunes. ¹⁹ However, its current population at the Los Angeles/EI Segundo Dunes is unknown. ¹⁹
Monarch butterfly <i>Danaus plexippus</i>	None	None	None	This species does not winter at LAX or the Los Angeles/EI Segundo Dunes due to a lack of suitable roosting habitat. However, species occurs as an occasional visitor to the Los Angeles/EI Segundo Dunes. ¹	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. ⁵ Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, and cypress). ⁵ Species has been observed as a fly-over on the Los Angeles/EI Segundo Dunes. ¹
Henne's eucosman moth <i>Eucosma hennei</i>	None	None	None	This species is believed to be historically present based on the presence of larval host plant and historical collections. However, this species was not detected by focused insect surveys from 1996-1998. ¹⁸	Endemic to the Los Angeles/EI Segundo Dunes, Los Angeles County. Species has been collected from and identified at the Los Angeles/EI Segundo Dunes in 1984. ²¹

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Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
El Segundo blue butterfly <i>Euphilotes battoides allyni</i>	FE	None	None	Surveys conducted within the Study Area found this species within the Los Angeles/El Segundo Dunes in 1995, 1996, 1997, 1998, 1999, and 2000. ¹ This species also detected in large numbers during annual population monitoring surveys within the Los Angeles/El Segundo Dunes, including surveys conducted during 2010 and 2011. ²²	Coastal sand dunes that support populations of its food plant: coastal buckwheat. Historically ranged over the entire Los Angeles/El Segundo Dunes and the northwestern Palos Verdes Peninsula in southwestern Los Angeles County. Currently distributed on three remnant habitats within its former range; Los Angeles/El Segundo Dunes, the 1.5 acre site at the Chevron oil refinery located south of the airport, and a half-acre site at Malaga Cove, all in Los Angeles County. ²³ There are currently 150.2 acres of occupied habitat for the El Segundo blue butterfly within the Los Angeles/El Segundo Dunes. Focused surveys of the El Segundo blue butterfly at the Los Angeles/El Segundo Dunes indicated continued decline in numbers between 1977 and 1979 with an estimated total of less than 2,000 adults. The City of Los Angeles initiated active habitat management measures for the El Segundo blue butterfly in 1987, and continues those work efforts as part of its annual operations and maintenance activities. Population estimates for 2010 range from 111,562 - 116,474 butterflies. Population estimates from 2011 range from 120,610 - 125,920 butterflies.
Rivers' dune moth <i>Euxoa riversii</i>	None	None	None	This species is believed to be historically present based on the presence of larval host plant and historical collections. However, this species not detected by focused insect surveys from 1996-1998. ¹⁸ Not included in the CDFG Special Animals List.	Coastal sand dunes ranging from Santa Barbara County to Baja California and the Channel Islands. Adults were collected on the Los Angeles/El Segundo Dunes in 1956. ¹⁹
Palos Verdes blue butterfly <i>Glaucopsyche lygdamus palosverdesensis</i>	FE	None	None	Does not occur as the Study Area is outside the species' range and lacks the species' host plant.	Restricted to the cool, fog shrouded, seaward side of Palos Verdes Hills, Los Angeles County. Host plant is <i>Astragalus trichopodus</i> var. <i>lonchus</i> (locoweed). ¹
Lange's El Segundo Dune weevil <i>Onychobaris langei</i>	None	None	None	This species was not detected within the Master Plan boundaries and the Los Angeles/El Segundo Dunes as a result of focused insect surveys performed in 1996-1998. ¹⁸	Southern foredune and southern dune scrub plant communities. Not observed at Los Angeles/El Segundo Dunes since 1938. ⁵

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Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Wandering skipper <i>Panoquina errans</i>	None	None	None	This species was not detected by focused insect surveys performed in 1996-1998. ¹⁸ Not expected to occur due to a lack of its host plant.	Distributed along a narrow coastal strip from Santa Barbara and Ventura to San Diego County. ²⁴ Can be found near host plant, saltgrass (<i>Distichlis spicata</i>). ⁵ Species found in 1981 at Ballona Wetlands, Playa del Rey area, approximately 1.3 miles north of the Master Plan boundaries. ⁵
Ford's sand dune moth <i>Psammobotys fordii</i>	None	None	None	This species is believed to be historically present based on the presence of larval host plant and historical collections. However, this species was not detected by focused insect surveys from 1996-1998. ¹⁸	Coastal sand dune and coastal sage scrub habitats. Species collected at the Los Angeles/El Segundo Dunes in 1955 and 1957. ^{19,20} Collected in Riverside County as recently as 1973. ¹⁸
South coast dune beetle <i>Psammodyus macclayi</i>	None	None	None	This species was determined present within the Los Angeles/El Segundo Dunes as a result of focused arthropod insect surveys performed in 1996-1998. ¹⁸ Not included in the CDFG Special Animals List.	Associated with sand dune systems along coast and flood plains of river systems. Species observed at the Los Angeles/El Segundo Dunes in 1996-1998. ¹⁸ Collected at Playa del Rey, L.A. County. ²⁰ Records from Los Angeles and Newport Beach. ¹⁹
El Segundo scythruid moth <i>Scythruid new species</i>	None	None	None	This species is believed to be historically present based on the presence of larval host plant and historical collections. However, this species was not detected by focused insect surveys from 1996-1998. ¹⁸ Not included in the CDFG Special Animals List.	Coastal sand dune habitat. Has not been identified in recent insect surveys and are presumed to be a new species. ¹⁸
Lesser dunes scythruid moth <i>Scythruid new species</i>	None	None	None	This species is believed to be historically present based on the presence of larval host plant and historical collections. However, this species was not detected by focused insect surveys from 1996-1998. ¹⁸ Not included in the CDFG Special Animals List.	Coastal sand dune habitat. Has not been identified in recent insect surveys and are presumed to be a new species. ¹⁸

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Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
El Segundo Jerusalem cricket <i>Stenopelmatus new species</i>	None	None	None	This species was determined present within the Los Angeles/EI Segundo Dunes as a result of focused arthropod insect surveys performed in 1996-1998. ¹⁸ Not included in the CDFG Special Animals List.	Southern foredune and southern dune scrub plant communities. Prefers sand areas and burrows in sand to feed on roots. ²⁰ Currently only known from the Los Angeles/EI Segundo Dunes.
Dorothy's El Segundo Dune weevil <i>Trigonoscuta dorothea dorothea</i>	None	None	None	This species was not detected within the LAX Master Plan boundaries and the Los Angeles/EI Segundo Dunes as a result of focused insect surveys performed in 1996-1998. ¹⁸	Distributed only along coastal southern California from Point Dume to Point Fermin. Southern dune scrub plant community. Species found at Los Angeles/EI Segundo Dunes and Ballona Creek in the 1980s. ¹⁸
Arachnids					
Trapdoor spider <i>Aptosichus simus</i>	None	None	None	This species was determined present based on focused insect surveys from 1996-1998. ¹⁸ Not included in the CDFG Special Animals List.	An inhabitant of Southern California coastal dunes and the Channel Islands, and ranges from Los Angeles to Ventura County. Species is currently known from the Los Angeles/EI Segundo Dunes as well as Point Dune State Beach, Los Angeles County and Sycamore Cove Beach, Ventura County.
El Segundo crab spider <i>Ebo new species</i>	None	None	None	This species was presumed present based on focused insect surveys from 1996-1998. ¹⁸ Not included in the CDFG Special Animals List.	Known to be found associated with buckwheat and coast golden bush (<i>Ericomerica ericoides</i>) in the Southern Foredune plant community and Southern Dune Scrub plant community. During the focused surveys the crab spider was not identified to the species level of taxonomy; however, several genera and species within this spider family were present on vegetation throughout the Los Angeles/EI Segundo Dunes and portions of the airfield.
El Segundo sun spider <i>Eremobates new species</i>	None	None	None	This species was determined present based on focused insect surveys from 1996-1998. ¹⁸ Not included in the CDFG Special Animals List.	A new species, which has yet to be described. It is currently known from the Dunes, and was identified in recent surveys. The full extent of occurrence in this species range is not known.
Gertsch's socialchemmis spider <i>Socalchemmis gertschi</i>	None	None	None	This species was not detected within the LAX Master Plan boundaries and the Los Angeles/EI Segundo Dunes as a result of focused insect surveys performed in 1996-1998. ¹⁸ Not expected to occur as only known occurrences are in Brentwood and Topanga Canyon, which have dissimilar habitat characteristics relative to LAX.	Known from only two localities in Los Angeles County: Brentwood (Type Locality) and Topanga Canyon.

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
<u>Fish</u>					
Mohave tui chub <i>Siphateles bicolor mohavensis</i>	FE	SE	CFP	Does not occur due to a lack of suitable habitat and because Study Area is outside of this species' range.	Endemic to the Mojave River Basin, and adapted to alkaline, mineralized waters. Needs deep pools, ponds, or slough-like areas and vegetation for spawning. Nearest population at South Coast Botanic Garden in Palos Verdes was transplanted to the botanic garden in 1970 from the species' normal range; was extinct by 1976. ⁵
<u>Amphibians</u>					
Western spadefoot toad <i>Spea hammondi</i>	None	None	CSC	Determined present as a result of spring 1996 focused surveys. ¹ Onsite pools subsequently altered by soil removal, and not detected during focused surveys in Spring 2009. Does not occur on site due to removal of suitable habitat.	Endemic to the Californias; can be found along coastal regions inhabiting open chaparral, foothills, grasslands and, occasionally, woodlands. ⁵
<u>Reptiles</u>					
Silvery legless lizard <i>Anniella pulchra pulchra</i>	None	None	CSC	Determined present in the Los Angeles/EI Segundo Dunes based on focused herpetofauna surveys performed in summer of 1998. ¹ This species was not detected within the Airfield Operations Area. Not detected during 2011 general wildlife surveys, but presumed present in the Los Angeles/EI Segundo Dunes based on previous survey results.	Occurs primarily in areas with sandy or loose organic soil, or where there is plenty of leaf litter. Associated with coastal sage scrub, chaparral, coastal dunes, valley/foothill grasslands, oak woodlands, and pine forests. ⁵ This species has been observed at the Los Angeles/EI Segundo Dunes and the area north of Sandpiper Street, but has not been observed elsewhere within the Study Area. ⁵
Coastal whiptail <i>Aspidocelis tigris stejnegeri</i>	None	None	None	Does not occur due to a lack of suitable habitat.	Inhabits deserts and semi-arid areas with sparse vegetation and open areas. Also found in open, often rocky areas with little vegetation, or sunny microhabitats within shrub, grassland, woodland, and riparian associations. Species found at Greenleaf Canyon in the Santa Monica Mountains in 1993. ⁵
Western pond turtle <i>Emys marmorata</i>	None	None	CSC	Does not occur due to a lack of suitable habitat.	Slow-moving permanent or intermittent streams, small ponds and lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and treatment lagoons. Abundant basking sites and cover necessary, including logs, rocks, submerged vegetation, and undercut banks. Species found in 1941 in Ballona Creek, Playa del Rey, with this occurrence possibly extirpated. ⁵

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
California mountain kingsnake (San Diego population) <i>Lampropeltis zonata pulchra</i>	None	None	CSC	Does not occur due to a lack of suitable habitat and because Study Area is outside of this species' range.	Restricted to the San Gabriel and San Jacinto Mountains of southern California. Inhabits valley-foothill, coniferous, chaparral, riparian, and wet meadows. Species found in the 1980's at Stunt Ranch and Cold Creek Preserve ⁵ .
Coast horned lizard <i>Phrynosoma blainvillii</i>	None	None	CSC	This species was determined present within the Los Angeles/El Segundo Dunes based on focused herpetofauna surveys performed in summer of 1998. ¹ This species was not detected within the Airfield Operations Area and does not occur due to a lack of suitable habitats. Not detected during 2011 general wildlife surveys, but presumed present within the Los Angeles/El Segundo Dunes based on previous survey results.	Inhabits the coastal strip of southern California from Ventura County south to portions of Baja California. Habitat can be characterized as arid and semi-arid regions with soil that is loose and fine. ¹ Occurs at the Los Angeles/El Segundo Dunes and the area north of Sandpiper, but has not been observed elsewhere in the Study Area. ⁵
Birds					
Tricolored blackbird <i>Agelaius tricolor</i> (nesting colony)	None	None	CSC	Does not occur due to lack of suitable habitat.	Breeding colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland. Species found in the 1980s at Harbor Lake, in the San Pedro area of Los Angeles. ⁵

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Burrowing owl <i>Athene cunicularia</i> (burrow sites and some wintering sites)	None	None	CSC	This species was determined present as a winter resident within the Los Angeles/EI Segundo Dunes and determined absent from the LAX Master Plan boundaries (LAX airfield) based on focused winter 1998 surveys. ¹ This species was determined not to breed within the LAX Master Plan boundaries and the Los Angeles/EI Segundo Dunes based on focused spring 1998 surveys. ¹ Breeding season focused surveys conducted in June 2009 in areas of suitable habitat for the Bradley West Project did not detect any burrowing owls. ²⁵ This species was detected along the Argo Drainage Channel during Fall 2011 general wildlife surveys and immediately east of Pershing Drive and west of the north airfield in 2012. May occasionally occur in the Los Angeles/EI Segundo Dunes.	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses. ⁵ Species has also been found in vicinity of Playa del Rey, Los Angeles County in 1981. ⁵
Western snowy plover <i>Charadrius alexandrinus nivosus</i> (nesting)	FT	None	CSC	Does not occur due to lack of suitable habitat.	Sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting. ⁵ Occurs at Dockweiler State Beach and several other beaches in Los Angeles County. Critical Habitat for western snowy plover has been designated by U.S. Fish and Wildlife Service for two distinct segments of Dockweiler State Beach. Subunit CA 21B, Dockweiler North, is located immediately west of LAX, south of Ballona Creek and west of the EI Segundo Dunes. It stretches roughly 0.5 miles (0.8 km) centered at Sandpiper Street. Subunit CA 21C, Dockweiler South, is located immediately west of the City of EI Segundo and the Hyperion Wastewater Treatment Plant. It stretches roughly 0.7 miles (1.1 km) centered at Grand Avenue. ³⁹

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Southwestern willow flycatcher <i>Empidonax extimus traillii</i> (nesting)	FE	SE	None	This species was determined absent within the LAX Master Plan Boundaries and the Los Angeles/EI Segundo Dunes as a result of focused surveys performed in summer 1998 and 2000. ¹ Does not occur due to a lack of suitable habitat.	Riparian acres with thick willow forests. ⁵ Historically nested throughout California, wherever willow thickets or other riparian habitat was found. ²⁶ Regular nesting is currently known only from a few mountain meadows in the Sierra Nevada and several rivers in Trinity, Inyo, Kern, Santa Barbara, Los Angeles, and San Diego Counties. ²⁷ Species becomes more widely distributed in the spring and fall migration period. ²⁷
American peregrine falcon <i>Falco peregrinus anatum</i> (nesting)	Delisted	Delisted	CFP	This species was not detected within the LAX Master Plan Boundaries or the Los Angeles/EI Segundo Dunes as a result of focused surveys performed in 1995, 1996, 1998, and 2002/2003, but was observed flying over the Study Area and roosting in buildings adjacent to the Study Area in 2000.	Breeds primarily in woodland, forest, and coastal habitats. ⁵ Non-breeding habitat occurs in riparian, coastal, and inland wetlands. De-listed as federally-endangered on August 25, 1999. ²⁸ The peregrine falcon has reoccupied most of its historic breeding range in California, including the Channel Islands, the coast and Cascade ranges, and Sierra Nevada. It can inhabit all counties in California throughout the year, except during breeding season. ⁵ This species is an occasional visitor to the LAX Master Plan boundaries, however no breeding habitat occurs within the LAX Master Plan boundaries or Los Angeles/EI Segundo Dunes. ¹
California black rail <i>Laterallus jamaicensis coturniculus</i>	None	ST	CFP	Does not occur due to a lack of suitable habitat.	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that does not fluctuate during the year and dense vegetation for nesting habitat. ⁵
Loggerhead shrike <i>Lanius ludovicianus</i> (nesting only)	None	None	CSC	This species was determined present within the Los Angeles/EI Segundo Dunes as a result of focused surveys conducted in spring 1998. ¹ Not detected during general surveys in the Airfield Operations Area in 2008 and 2009. ²⁵ Not detected during general surveys in 2011. May rarely occur within the extreme western airfield, and assumed to occur in the Los/Angeles EI Segundo Dunes.	Occurs in the central valley and throughout coastal southern regions. Perch sites are essential components of its habitat and are associated with open areas that have well dispersed bushes and trees. ²⁵ There were three pairs of loggerhead shrike breeding within the EI Segundo Blue Butterfly Habitat Restoration Area in spring 1998.
Belding's savannah sparrow <i>Passerculus sandwichensis beldingi</i>	None	SE	None	Does not occur due to lack of salt marsh habitat.	This species inhabits coastal salt marshes, from Santa Barbara south through San Diego County, and nests in pickleweed (<i>Salicornia virginica</i>) on and about the margins of tidal flats. ⁵

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
California brown pelican <i>Pelecanus occidentalis californicus</i> (nesting colony and communal roosts)	Delisted	Delisted	CFP	This species was determined absent within the LAX Master Plan Boundaries and the Los Angeles/El Segundo Dunes as a result of focused surveys performed in spring 1998 and 2000. ¹ Does not nest or roost within the study area due to a lack of suitable habitat.	Open ocean, near-shore coastal waters, and coastal estuaries. Historic nesting range extended from Central Mexico north to Monterey. ²⁹ Currently breeds on Channel Islands off Southern California coast. ²⁷ This species is a year round resident in Southern California. The nearest roosting site is located at the San Pedro Harbor in Los Angeles County. ²⁷ The nearest known seasonal visitor sighting is located at Dockweiler State Beach. ¹
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT	None	CSC	Does not occur due to a lack of suitable habitat.	Obligate, permanent resident of coastal sage scrub below 2500 feet in southern California. Occurs in low, coastal sage scrub in arid washes, on mesas, and slopes. Not all areas classified as coastal sage scrub are occupied. ⁵
California least tern <i>Sterna antillarum browni</i> (nesting colony)	FE	SE	CFP	This species was determined absent within the LAX Master Plan Boundaries and the Los Angeles/El Segundo Dunes as a result of focused surveys performed in spring 1998 and 2000. ¹ Does not breed within the Study Area due to a lack of suitable habitat.	Open ocean and a colonial breeder on bare or sparsely vegetated flat substrate located along marine shores, estuarine shores, alkali flats, landfills, or paved areas throughout the year. ⁵ This federally-listed endangered species comes to shore only to breed. Historically nested along the central and Southern California coast to the coast of Mexico. ²⁷ Currently nests sporadically along coast from San Francisco to Baja California. ³⁰ Nearest known breeding colony is located 3 miles north of the LAX Master Plan boundaries in Venice. ⁵ Observed as a seasonal visitor to waters offshore of Dockweiler State Beach. ¹
Least Bell's vireo <i>Vireo belli pusillus</i> (nesting)	FE	None	CSC	This species was determined absent within the LAX Master Plan Boundaries and the Los Angeles/El Segundo Dunes as a result of focused surveys performed in summer 1998 and 2000. ¹ Does not occur within the Study Area due to a lack of suitable habitat.	Inhabits rivers with riparian vegetation associated with willows and other low, dense valley foothill riparian habitat, lower portions of canyons, and desert and coastal slopes. ³⁰ Historically ranged from the northern tip of the Sierra Nevada along valleys and rivers south to Baja California, Mexico. ³¹ Currently breeds only in a few scattered areas of riparian habitat along the coast and western edges of the Mohave Desert in the following counties: Santa Barbara, Ventura, Riverside, Orange, San Bernardino, and San Diego. ³⁰

Mammals

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Pallid bat <i>Antrozous pallidus</i>	None	None	CSC	Not expected to occur due to a lack of suitable habitat.	Pallid bat ranges throughout western North America, from British Columbia 's southern interior, south to Mexico, and east to Texas. This species inhabits low elevation (< 1,830 meters) rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and higher elevation coniferous forests. It is most abundant in xeric ecosystems, including the Great Basin, Mojave, and Sonoran Deserts. Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of coast redwoods and giant sequoias, bole cavities of oaks, exfoliating Ponderosa pine and valley oak bark, deciduous trees in riparian areas, and fruit trees in orchards), and various human structures such as bridges (especially wooden and concrete girder designs), barns, porches, bat boxes, and human-occupied as well as vacant buildings. They forage over open shrub-steppe grasslands, oak savannah grasslands, open Ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards. ³²
Western mastiff bat <i>Eumops perotis californicus</i>	None	None	CSC	Not expected to occur due to a lack of suitable habitat.	Western mastiff bat is primarily a cliff-dwelling species, where maternity colonies of 30 to several hundred (typically fewer than 100) roost generally under exfoliating rock slabs (e.g., granite, sandstone or columnar basalt). It has also been found in similar crevices in large boulders and buildings. Roosts are generally high above the ground, usually allowing a clear vertical drop of at least 3m below the entrance for flight. In California, it is most frequently encountered in broad open areas. Its foraging habitat includes dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas. ³³
Silver-haired bat <i>Lasionycteris noctivagans</i>	None	None	None	Not expected to occur due to a lack of suitable habitat.	Silver-haired bat is found from southern Alaska, throughout southern Canada, and most of the United States into the San Carlos Mountains of northeastern Mexico. This species is primarily a forest bat, associated primarily with north temperate zone conifer and mixed conifer/hardwood forests. It has been found in winter and during seasonal migrations in low elevation, more xeric habitats. Maternity roosts appear to be almost exclusively in trees -- inside natural hollows and bird excavated cavities or under loose bark of large diameter snags. Roosting sites are generally at least 15 m above the ground. Both males and females change roosts frequently, and use multiple roosts within a limited area throughout the summer, indicating that clusters of large trees are necessary. This species has been found hibernating in hollow trees, under sloughing bark, in rock crevices, and occasionally under wood piles, in leaf litter, under foundations, and in buildings, mines and caves. Silver-haired bat forages above the canopy, over open meadows, and in the riparian zone along water courses. ³⁴ Needs water near roost sites. ⁵

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Hoary bat <i>Lasiurus cinereus</i>	None	None	None	Not expected to occur due to a lack of suitable habitat.	This species ranges from near the limit of trees in Canada, southward at least to Guatemala, and from Brazil to Argentina and Chile in South America. They are highly associated with forested habitats in the west. Hoary bats are solitary and roost primarily in foliage of both coniferous and deciduous trees, near the ends of branches, 3-12 m above the ground. Roosts are usually at the edge of a clearing. Some unusual roosting situations have been reported in caves, beneath a rock ledge, in a woodpecker hole, in a grey squirrel nest, under a driftwood plank, and clinging to the side of a building. ³⁵ Requires water near roosting sites. ⁵
South coast marsh vole <i>Microtus californicus stephansi</i>	None	None	CSC	Does not occur due to a lack of tidal marsh habitat.	Occurs in tidal marshes in Orange, Los Angeles, and southern Ventura Counties. ⁵
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	None	None	CSC	One individual of this species was observed within the southwestern airfield during summer 1997 focused surveys for the Pacific pocket mouse. ²⁵ Not subsequently observed in the airfield by surveys for the Bradley West Project. Not observed during general wildlife surveys in 2011.	Occupies a variety of habitats, but is most common among shortgrass habitats. Also occurs in sage scrub, but needs open habitats. ⁵ This species has been observed in the LAX airfield open space, west of the southern airfield in the 1990s. ¹ However, it has not been seen in the last several years following the installation of a security fence and other wildlife management activities at LAX and is likely extirpated from the Airfield Operations Area.
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	None	None	CSC	Does not occur due to a lack of suitable habitat.	This species occurs in coastal scrub of southern California from San Diego County to San Luis Obispo County in areas of moderate to dense shrub canopy. They are particularly abundant in rock outcrops and rocky cliffs and slopes. ⁵
Pocketed free-tailed bat <i>Nyctinomops femorosaccus</i>	None	None	CSC	Not expected to occur due to a lack of suitable habitat.	Pocketed free-tailed bat occurs in western North America, from southern California, central Arizona, southern New Mexico and western Texas, south into Mexico including Baja California. The known altitudinal distribution is from near sea level to about 2,250 meters. Breeding populations have recently been identified in southern California. The pocketed free-tailed bat is colonial and roosts primarily in crevices of rugged cliffs, high rocky outcrops and slopes. It has been found in a variety of plant associations, including desert shrub and pine-oak forests. The species may also roost in buildings, caves, and under roof tiles. ³⁶

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
	Federal	State	Other Lists		
Big free-tailed bat <i>Nyctinomops macrotis</i>	None	None	CSC	Not expected to occur due to a lack of suitable habitat.	Big free-tailed bat ranges from most of South America northward to include Mexico, Arizona, New Mexico, southern and western Texas, southern California and southeastern Nevada, southern Utah, and north to central Colorado. This species appears to be mainly an inhabitant of rugged, rocky habitats in arid landscapes. It has been found in a variety of plant associations, including desert shrub, woodlands, and evergreen forests. It appears to be associated with lowlands, but has been documented at around 8,000 ft in New Mexico. It roosts mainly in the crevices of rocks in cliff situations, although there is some documentation of roosting in buildings, caves, and tree cavities. ³⁷
Pacific pocket mouse <i>Perognathus longimembris pacificus</i>	FE	None	CSC	This species was determined absent within the Los Angeles/El Segundo Dunes as a result of focused surveys performed in 1995, 1998, and 2000. ¹	Occurs on fine-grained, sand substrates in open coastal sage scrub, coastal dunes, coastal strand, and river alluvium habitats. ²⁷ Species occurred historically along Southern California coast from Los Angeles County south to Baja, California. ³⁸ Now restricted to less than five populations, one in Orange County and others in San Diego County. ²⁷ This species was last seen in 1938 at Marina del Rey in the El Segundo Area. ⁵
Southern California saltmarsh shrew <i>Sorex ornatus salicornicus</i>	None	None	CSC	Does not occur due to a lack of suitable habitat.	This species occurs in coastal marshes in Los Angeles, Orange, and Ventura Counties. This species requires dense vegetation and woody debris for cover. ⁵
American badger <i>Taxidea taxus</i>	None	None	CSC	Not expected to occur due to lack of suitable habitat and high degree of urbanization surrounding Study Area.	Occurs in drier shrub, forest, and herbaceous habitats. Needs open, uncultivated ground and friable soils for digging burrows. Preys on burrowing rodents. ⁵

Notes:

ssp. = subspecies.

CSC = California Department of Fish and Game designated Species of Special Concern.

CNPS 1A = Plant presumed extinct in California by the California Native Plant Society.

CNPS 1B = Plant considered rare, threatened, or endangered in California by the California Native Plant Society.

CNPS 2 = Plants considered rare, threatened, or endangered in California, but more common elsewhere by the California Native Plant Society.

CNPS 3 = Plants for which more information is needed to determine their status by the California Native Plant Society.

CNPS 4 = Plants considered to be of limited distribution by the CNPS.

CNPS threat rank 0.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat.

CNPS threat rank 0.2 = Fairly threatened in California (20-80% of occurrences threatened / moderate degree and immediacy of threat.

CNPS threat rank 0.3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known.

CR = State rare. Afforded protection under the Native Plant Protection Act.

FE = Listed as endangered under the Federal Endangered Species Act.

FT = Listed as threatened under the Federal Endangered Species Act.

FC = Candidate for federal listing. Formerly classified as "Category 1;" these are species for which the USFWS has information on file to support issuance of proposed rule to list as endangered or threatened.

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

Flora/Fauna	Status			Survey Results	Habitat Requirements and Distribution
Federal	State	Other Lists			
SE = Listed as endangered by the State of California					
ST = Listed as threatened by the State of California					
SE = Listed as endangered by the State of California					
CFP = California Fully Protected species					
¹ Sapphos Environmental Inc., <u>Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources, Memoranda for the Record on Floral and Faunal Surveys</u> , January 2001.					
² California Native Plant Society, <u>Online Inventory of Rare and Endangered Plants of California</u> , 8th Edition, Available: http://www.cnps.org/cnps/rareplants/inventory/ , accessed November 2011.					
³ Hickman, James C., ed., <u>The Jepson Manual: Higher Plants of California</u> , 1993.					
⁴ Pierce, W.D. and D. Pool, "The Fauna and Flora of the El Segundo Sand Dunes", <u>Bulletin of the Southern California Academy of Sciences</u> , Vol. 37: 93-97, 1938.					
⁵ California Department of Fish and Game, <u>California Natural Diversity Database - Rarefind 3</u> , Sacramento, 2011.					
⁶ Federal Register, Department of the Interior, U.S. Fish and Wildlife Service, 50 CFR Part 17, Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Two Plants and Threatened Status for Four Plants from Southern California, January 29, 1997.					
⁷ Federal Register, Department of the Interior, U.S. Fish and Wildlife Service, 50 CFR Part 17, Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for <i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i> (Ventura Marsh Milkvetch), May 25, 1999.					
⁸ Munz, Philip A, <u>A Flora of Southern California</u> , 1974.					
⁹ Federal Register, Department of the Interior, U.S. Fish and Wildlife Service, 50 CFR Part 17, Endangered and Threatened Wildlife and Plants; Determination of Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Three Vernal Pool Plants and the Riverside Fairy Shrimp, July 16, 1993.					
¹⁰ U.S. Fish and Wildlife Service, <u>Vernal Pools of Southern California Recovery Plan</u> , 1998.					
¹¹ Federal Register, Department of the Interior, U.S. Fish and Wildlife Service, 50 CFR Part 17, Endangered and Threatened Wildlife; Endangered or Threatened Status for Three Plants from the Chaparral and Scrub of Southwestern California, October 13, 1998.					
¹² Barbour, M. G. and J. Major, ed., <u>Terrestrial Vegetation of California</u> , New Expanded Edition, California Native Plant Society, Special Publication Number 9, 1990.					
¹³ Frank Hovore & Associates, <u>Report of surveys for Trask's landsnail at Los Angeles/El Segundo Dunes</u> , August 13, 1998.					
¹⁴ Roth, Barry and F. G. Hochberg, "Two New Species of Helminthoglypta (Gastropoda: Pulmonata) from Southern California, with Comments on the Subgenus Charodotes Pilsbry," <u>The Veliger</u> , 35(4) 338-346, 1992.					
¹⁵ Sapphos Environmental, Inc., <u>Documentation of Salvage and Storage of Riverside Fairy Shrimp Cyst-Bearing Soil in Support of the April 20, 2004 Biological Opinion for Alternative D and the April 8, 2005 Biological Opinion for Operations and Maintenance</u> , 2005.					
¹⁶ BonTerra Consulting, <u>Riverside Fairy Shrimp Wet Season Presence/Absence Survey Report</u> , May 2009 (Appendix H-4 LAX Bradley West Project Draft EIR).					
¹⁷ BonTerra Consulting, <u>90-Day Report for the Wet Season and Dry Season Presence/Absence Surveys for Vernal Pool Branchiopods Conducted on the Bradley West Project</u> , Los Angeles County, California, June 29, 2010.					
¹⁶ Federal Register, Department of the Interior, U.S. Fish and Wildlife Service, 50 CFR Part 17, Endangered and Threatened Wildlife; Final Rule Listing San Diego Fairy Shrimp as Endangered or Threatened, 1994.					
¹⁷ Fugate, Michael, " <i>Branchinecta sandiegonensis</i> , A New Species of Fairy Shrimp (Crustacea: Anostraca) from Western North America," <u>Proceedings of the Biological Society of Washington</u> , 106 (2): 296-304, 1993.					
¹⁸ Frank Hovore & Associates, <u>Report of sensitive arthropod surveys, Los Angeles International Airport 2015 Master Plan Study Area, 1996-1998</u> , September 28, 1998.					
¹⁹ Hawks, D. C., <u>Los Angeles/El Segundo Dunes Insect Collection</u> , 1996.					
²⁰ Mattoni, R., <u>Species Diversity and Habitat Evaluation Across the El Segundo Dunes at LAX</u> , 1990.					
²¹ Arnold, R. A., <u>Studies of the El Segundo Blue Butterfly - 1984, Inland Fisheries Administrative Report 86-4</u> , California Department of Fish and Game, 1986.					
²² Entomological Consulting Services, Ltd., <u>Report of El Segundo Blue Monitoring Activities in 2010 at the Los Angeles International Airport</u> , February 2011; Entomological Consulting Services, Ltd., <u>Report Los Angeles International Airport El Segundo Blue Butterfly 2011</u> , January 2012.					

Appendix D-1 Floral and Faunal Compendium and Sensitive Plants and Wildlife

Sensitive Plant and Wildlife Species Evaluated for Potential to Occur within the SPAS Study Area

	Status			Survey Results	Habitat Requirements and Distribution
	Flora/Fauna	Federal	State		
²³					U.S. Fish and Wildlife Service, <i>Recovery Plan for the El Segundo Blue Butterfly (Euphilotes battoides allyni)</i> , Portland, Oregon, 1998.
²⁴					Garth, J. S. and J. W. Tilden, <i>California Butterflies</i> , 1986.
²⁵					City of Los Angeles, Los Angeles World Airports, <i>Final Environmental Impact Report for Los Angeles International Airport (LAX) Bradley West Project</i> , September 2009.
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Source: Glenn Lukos Associates, 2011.