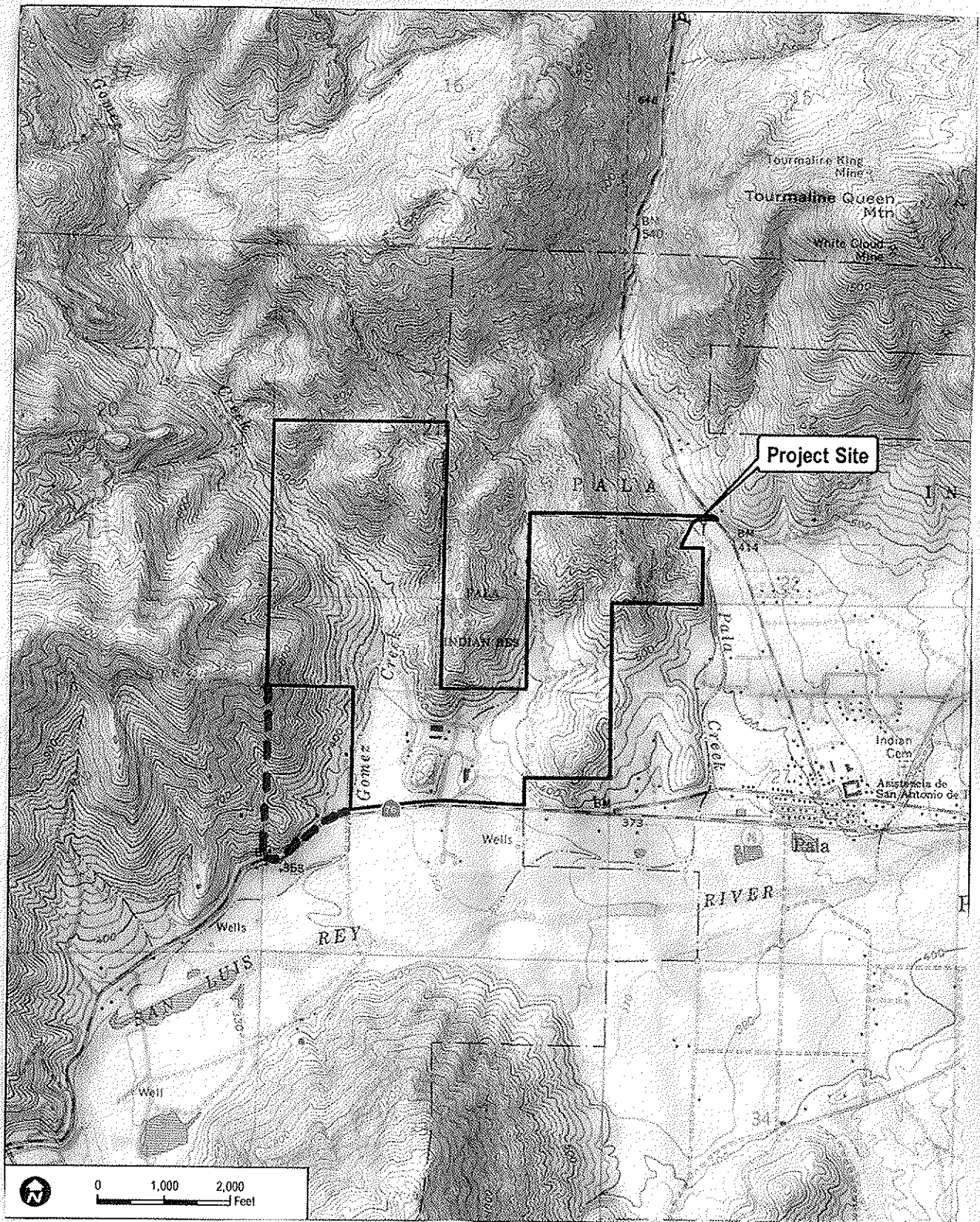


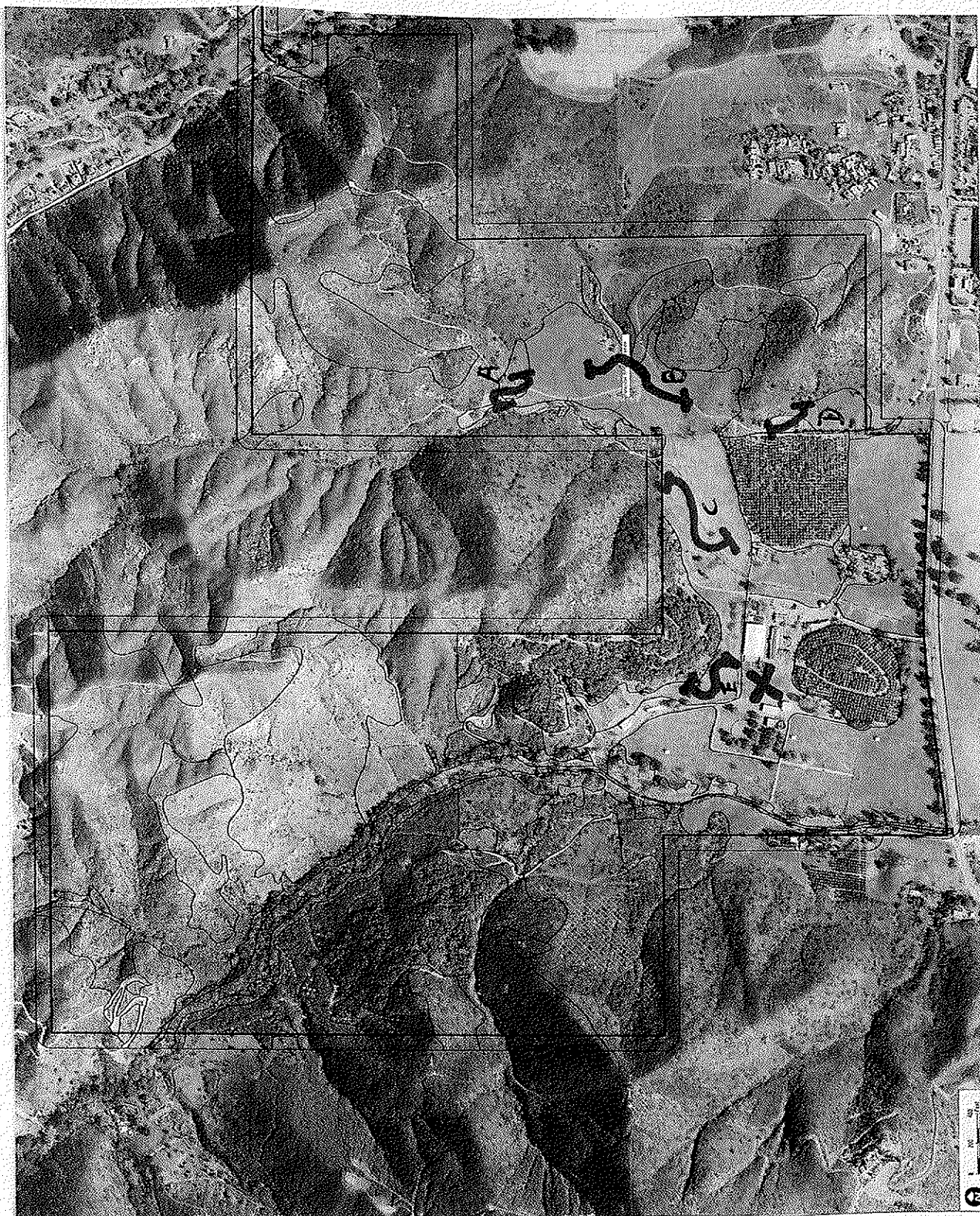
Exhibit 1 Warner Ranch Site Vicinity



## Exhibit 2 Warner Ranch Project Boundaries



### Exhibit 3 Warner Ranch Trapping Locations



## **Appendix B**

### **Site Photographs**

Picture One- DKR on site

Picture Two- Trap area B

Picture Three- Trap Area

Picture Four- Area X Irrigated Pasture





# **APPENDIX B**

## *Vascular Plant Species Observed in the Project Area*



## APPENDIX B

### Vascular Plant Species Observed in the Project Area

---

#### VASCULAR PLANT SPECIES

##### LYCOPODS

###### ***SELAGINELLACEAE – SPIKE-MOSS FAMILY***

- Selaginella* sp. – spike-moss
- Selaginella bigelovii* – Bigelow's spike-moss
- Selaginella cinerascens* – ashy spike-moss

##### FERNS

###### ***DENNSTAEDTIACEAE – BRACKEN FAMILY***

- Pteridium aquilinum* var. *pubescens* – western bracken

###### ***PTERIDACEAE – BRAKE FAMILY***

- Cheilanthes* sp. – lip fern
- Cheilanthes newberryi* – California cotton fern
- Pellaea* sp. – cliff-brake fern
- Pellaea andromedifolia* – coffee fern
- Pellaea mucronata* var. *mucronata* – bird's-foot fern
- Pentagramma triangularis* – goldenback fern

##### ANGIOSPERMS (DICOTS)

###### ***ADOXACEAE – MUSKROOT FAMILY***

- Sambucus nigra* ssp. *caerulea* – blue elderberry

###### ***AIZOACEAE – FIG-MARIGOLD FAMILY***

- \* *Carpobrotus edulis* – Hottentot-fig

###### ***ANACARDIACEAE – SUMAC FAMILY***

- Malosma laurina* – laurel sumac
- Rhus aromatica* – skunkbush
- Rhus ovata* – sugar bush
- \* *Schinus* sp. – pepper-tree
- \* *Schinus molle* – Peruvian pepper-tree
- Toxicodendron diversilobum* – western poison oak

## APPENDIX B (Continued)

---

### **APIACEAE – CARROT FAMILY**

- Apiastrum angustifolium* -bur chervil
- \* *Apium graveolens* – celery
- Bowlesia incana* – American bowlesia
- \* *Conium maculatum* – poison-hemlock
- Daucus pusillus* – rattlesnake weed
- \* *Foeniculum vulgare* – fennel
- Sanicula* sp. – sanicle

### **ASTERACEAE – SUNFLOWER FAMILY**

- Achillea millefolium* – yarrow, milfoil
- Acourtia microcephala* – sacapellote
- Ambrosia acanthicarpa* – annual bur-sage
- Ambrosia psilostachya* – western ragweed
- Artemisia californica* – California sagebrush
- Artemisia douglasiana* – mugwort
- Artemisia dracunculus* – tarragon
- Aster* sp. – aster
- Baccharis salicifolia* – mule fat, seep-willow, water-wally
- Baccharis pilularis* – chaparral broom, coyote brush
- Bebbia juncea* – rush sweetbush
- Brickellia californica* – California brickellbush
- Brickellia nevinii* – Nevin’s brickellbush
- \* *Carduus pycnocephalus* – Italian thistle
- \* *Centaurea melitensis* – tocalote
- Chaenactis artemisiifolia* – Artemisia pincushion
- Chaenactis glabriuscula* var. *glabriuscula* – yellow pincushion
- Chaenactis maculata* – spotted spurge
- Cirsium* sp. – thistle
- Cirsium occidentale* var. *californicum* – western thistle
- \* *Cirsium vulgare* – bull thistle
- Conyza canadensis* – horseweed
- Corethrogyne filaginifolia* – sand aster
- \* *Cotula australis* – Australian brass-buttons
- Deinandra [=Hemizonia]* sp. – tarweed
- Deinandra [=Hemizonia] fasciculata* – fascicled tarweed
- Deniandra [=Hemizonia] fasciculata* – paniculate tarplant
- Erigeron foliosus* – leafy daisy
- Eriophyllum* sp. – woolly sunflower

## APPENDIX B (Continued)

---

- Eriophyllum confertiflorum* – long-stem golden yarrow  
*Gazania* sp. – African daisy  
\* *Hedypnois cretica* – Crete hedypnois  
*Holocarpa virgata* ssp. *elongata* – graceful tarplant  
*Hypochaeris* sp. – flatweed  
\* *Hypochaeris glabra* – smooth catsear  
*Lessingia* sp. – sunflower  
*Logfia filaginoides* – California filago  
\* *Logfia gallica* – narrow-leaf filago  
*Gnaphalium bicolor* – bicolor cudweed  
*Gnaphalium californicum* – California everlasting  
*Gnaphalium leucocephalum* – everlasting  
*Gnaphalium stramineum* – cotton-batting plant  
*Gnaphalium palustre* – lowland cudweed  
*Hazardia squarrosa* var. *squarrosa* – saw-toothed goldenbush  
\* *Helminthotheca echioides* – bristly ox-tongue  
*Heterotheca* sp. – telegraph weed  
*Heterotheca grandiflora* – telegraph weed  
*Isocoma* sp. – goldenbush  
*Isocoma menziesii* – spreading goldenbush  
\* *Lactuca serriola* – prickly lettuce  
*Lasthenia californica* – California goldfields  
*Lasthenia glabrata* – yellow-rayed goldfields  
*Layia platyglossa* – common tidy tips  
*Logfia arizonica* – Arizona filago  
*Microseris* sp. – microseris  
*Osmadenia* sp. – osmadenia  
*Osmadenia tenella* – osmadenia  
*Pluchea odorata* – salt marsh fleabane  
*Porophyllum gracile* – odora  
*Pseudognaphalium canescens* – white everlasting  
*Rafinesquia californica* – California chicory  
\* *Silybum marianum* – blessed milkthistle  
*Sonchus asper* – spiny sow thistle  
\* *Sonchus oleraceus* – common sow thistle  
*Stebbinsoseris heterocarpa* – grassland silverpuffs  
*Stephanomeria* sp. – wreath-plant  
*Stephanomeria virgata* ssp. *virgata* – virgate wreath-plant  
*Stylocline* sp. – nest-straw

## APPENDIX B (Continued)

---

*Stylocline gnaphaloides* – everlasting nest-straw

*Tetradymia comosa* – cotton-thorn

*Uropappus lindleyi* – silver puffs

*Verbesina dissita* – big-leaved crown beard

*Xanthisma junceum* – rush bristleweed

*Xanthium strumarium* – cocklebur

### **APOCYNACEAE – DOGBANE FAMILY**

*Asclepias* sp. – asclepias

*Funastrum cynanchoides* – climbing milkweed

### **BORAGINACEAE – BORAGE FAMILY**

*Amsinckia intermedia* – rancher's fireweed

*Amsinckia menziesii* – Menzies's fireweed

*Cryptantha* sp. – Cryptantha

*Cryptantha intermedia* – Nievitas cryptantha

*Cryptantha micrantha* – redroot cryptantha

*Cryptantha muricata* – prickly cryptantha

*Eucrypta* sp. – eucrypta

*Eucrypta chrysanthemifolia* – common eucrypta

*Harpagonella palmeri* – Palmer's grapplinghook

*Nemophila* sp. – baby blue-eyes

*Nemophila menziesii* – baby blue-eyes

*Pectocarya* sp. – pectocarya

*Pectocarya linearis* – slender pectocarya

*Phacelia cicutaria* – caterpillar phacelia

*Phacelia ciliata* – ciliate phacelia

*Phacelia distans* – wild-heliotrope

*Phacelia minor* – wild canterbury-bell

*Phacelia imbricata* – southern imbricate phacelia

*Phacelia parryi* – Parry's phacelia

*Pholistoma auritum* – fiesta flower

*Plagiobothrys* sp. – popcornflower

### **BRASSICACEAE – MUSTARD FAMILY**

\* *Brassica nigra* – black mustard

\* *Brassica rapa* – common yellow mustard

\* *Capsella bursa-pastoris* – shepherd's purse

\* *Hirschfeldia incana* – short-pod mustard

*Lepidium* sp. – pepper-grass

## APPENDIX B (Continued)

---

- \* *Raphanus sativus* – radish
- \* *Sisymbrium* sp. – tumble-mustard

### ***CACTACEAE – CACTUS FAMILY***

- Cylindropuntia* sp. – cholla
- Cylindropuntia prolifera* – cholla
- Opuntia* sp. – cactus
- Opuntia basilaris* – beavertail cactus
- \* *Opuntia ficus-indica* – Indian-fig
- Opuntia littoralis* – coastal prickly-pear

### ***CAPRIFOLIACEAE – HONEYSUCKLE FAMILY***

- Lonicera* sp. – honeysuckle
- Lonicera subspicata* – southern honeysuckle

### ***CARYOPHYLLACEAE – PINK FAMILY***

- \* *Cerastium glomeratum* – mouse-ear chickweed
- Loeflingia squarrosa* – spreading pygmy-leaf
- Polycarpon* sp. – allseed
- \* *Polycarpon tetraphyllum* – four-leaved allseed
- \* *Silene gallica* – common catchfly
- Silene laciniata* – southern pink
- Spergularia* sp. – sand-spurry

### ***CHENOPODIACEAE – GOOSEFOOT FAMILY***

- \* *Atriplex semibaccata* – Australian saltbush
- \* *Beta vulgaris* – common beet
- Chenopodium californicum* – California goosefoot
- \* *Dysphania ambrosioides* – Mexican tea
- \* *Salsola tragus* – Russian thistle

### ***CISTACEAE – ROCK-ROSE FAMILY***

- Helianthemum scoparium* – peak rush-rose

### ***CONVOLVULACEAE – MORNING GLORY FAMILY***

- Calystegia macrostegia* – morning glory
- Convolvulus* sp. – bindweed
- \* *Convolvulus arvensis* – field bindweed
- Cuscuta californica* – dodder

## APPENDIX B (Continued)

---

### **CRASSULACEAE – STONECROP FAMILY**

- Crassula connata* – pygmy-weed
- Dudleya lanceolata* – lanceleaf or coastal dudleya
- Dudleya pulverulenta* – chalk dudleya

### **CUCURBITACEAE – GOURD FAMILY**

- Cucurbita foetidissima* – calabazilla
- Cucurbita palmata* – coyote melon
- Marah macrocarpus* var. *macrocarpus* – manroot, wild-cucumber

### **ERICACEAE – HEATH FAMILY**

- Arctostaphylos* sp. – manzanita
- Arctostaphylos glauca* – bigberry manzanita
- Arctostaphylos rainbowensis* – rainbow manzanita
- Xylococcus bicolor* – mission manzanita

### **EUPHORBIACEAE – SPURGE FAMILY**

- Chamaesyce* sp. – mat spurge
- Chamaesyce albomarginata* – rattlesnake weed
- Croton* sp. – doveweed
- Croton californicus* – California croton
- Croton setigerus* – doveweed
- \* *Euphorbia peplus* – petty spurge
- Ricinus communis* – castor bean
- Tetracoccus dioicus* – Parry's tetracoccus

### **FABACEAE – LEGUME FAMILY**

- Acmispon* sp. – lotus
- Acispon americanus* – Spanish-clover
- Acmispon glaber* – deerweed
- Acmispon micranthus* – grab lotus
- Acmispon strigosus* – strigose deerweed
- Cercidium* sp. – palo verde
- Lathyrus* sp. – pea
- \* *Lathyrus odoratus* – sweet pea
- Lathyrus vestitus* – Pacific pea
- Lupinus* sp. – lupine
- Lupinus bicolor* – miniature lupine
- Lupinus hirsutissimus* – stinging lupine
- Lupinus succulentus* – arroyo lupine

## APPENDIX B (Continued)

---

- Lupinus truncatus* – collar lupine
- \* *Medicago lupulina* – black medick, yellow trefoil
- \* *Medicago polymorpha* – California burclover
- Melica imperfecta* – coast range melic
- Pickeringia montana* var. *tomentosa* – Montana chaparral pea
- Trifolium* sp. – clover
- Vicia* sp. – tare-vetch

### **FAGACEAE – OAK FAMILY**

- Quercus* sp. – oak
- Quercus agrifolia* – coast live oak
- Quercus berberidifolia* – scrub oak
- Quercus engelmannii* – Engelmann's oak

### **GENTIANACEAE – GENTIAN FAMILY**

- Zeltnera venustum* – canchalagua

### **GERANIACEAE – GERANIUM FAMILY**

- California macrophylla* – California filaree
- \* *Erodium botrys* – broadleaf filaree
- \* *Erodium cicutarium* – red-stem filaree
- \* *Erodium moschatum* – whitestem filaree
- Geranium* sp. – geranium

### **JUNCACEAE – RUSH FAMILY**

- Juncus* sp. – rush
- Juncus bufonius* var. *bufonius* – toad rush
- Juncus effusus* – bog rush

### **LAMIACEAE – MINT FAMILY**

- \* *Marrubium vulgare* – white horehound
- Salvia apiana* – white sage
- Salvia columbariae* – chia
- Salvia mellifera* – black sage
- Stachys* sp. – hedge nettle
- Stachys ajugoides* – hillside hedge nettle
- Trichostema lanceolatum* – vinegar weed

### **PLUMBAGINACEAE – LEADWORT FAMILY**

- Limonium* sp. – marsh rosemary

## APPENDIX B (Continued)

---

### **MALVACEAE – MALLOW FAMILY**

- Malacothamnus fasciculatus* – chaparral bushmallow
- \* *Malva parviflora* – cheeseweed, little mallow

### **MONTIACEAE – MONTIA FAMILY**

- Calandrinia ciliata* – red maids
- Claytonia perfoliata* var. *perfoliata* – miner's-lettuce
- Claytonia parvifolia* – small-flowered miner's-lettuce

### **MURSINACEAE – MURSINE FAMILY**

- \* *Anagallis arvensis* – scarlet pimpernel

### **MYRTACEAE – MYRTLE FAMILY**

- \* *Eucalyptus* sp. – eucalyptus
- \* *Eucalyptus conferruminata* – bald island marlock

### **NYCTAGINACEAE – FOUR O'CLOCK FAMILY**

- Mirabilis laevis* var. *crassifolia* – wishbone bush

### **OLEACEAE – OLIVE FAMILY**

- \* *Olea europaea* – olive

### **ONAGRACEAE – EVENING-PRIMROSE FAMILY**

- Camissonia* sp. – primrose
- Camissonia bistorta* – California sun cup
- Camissonia californica* – false-mustard
- Camissonia strigulosa* – strigulose evening primrose
- Chamerion angustifolium* – narrow-leaved fireweed
- Clarkia* sp. – clarkia
- Clarkia epilobioides* – canyon godetia
- Clarkia purpurea* – winecup clarkia
- Clarkia purpurea* ssp. *quadrivulnera* – four-spot
- Epilobium* sp. – spike primrose
- Epilobium canum* – California fuchsia, zauchernia
- Oenothera elata* – great marsh evening-primrose

### **OXALIDACEAE – WOOD-SORREL FAMILY**

- Oxalis* sp. – wood-sorrel
- Oxalis californica* – California wood-sorrel

## APPENDIX B (Continued)

---

### **PAPAVERACEAE – POPPY FAMILY**

- Dicentra chrysantha* – golden ear-drops
- Eschschlozia californica* – California poppy
- Eschschlozia minutiflora* – small-flowered poppy

### **PAEONIACEAE – PEONY FAMILY**

- Paeonia californica* – California peony

### **PHRYMACEAE – HOPSEED FAMILY**

- Mimulus aurantiacus* – coast monkey flower, bush monkey flower
- Mimulus brevipes* – wide-throated monkey flower
- Mimulus cardinalis* – scarlet monkey flower
- Mimulus guttatus* – seep monkey flower
- Mimulus parishii* – Parish's monkey flower

### **PLANTAGINACEAE – PLANTAIN FAMILY**

- Antirrhinum coulterianum* – Coulter's snapdragon
- Antirrhinum nuttallianum* ssp. *nuttallianum* – Nuttall's snapdragon
- Collinsia heterophylla* – purple- and white- collinsia
- Keckiella* sp. – penstemon
- Keckiella antirrhinoides* – yellow bush-penstemon
- Keckiella cordifolia* – climbing bush penstemon
- Linaria canadensis* – blue toadflax
- Penstemon* sp. – penstemon
- Penstemon centranthifolius* – scarlet bugler
- Penstemon grinnellii* – Grinnell's penstemon
- Penstemon spectabilis* var. *spectabilis* – showy penstemon
- Plantago erecta* – dot-seed plantain
- \* *Plantago lanceolata* – English plantain
- \* *Plantago major* – common plantain
- Plantago ovata* – desert Indianwheat
- \* *Veronica persica* – birdeye speedwell

### **PLATANACEAE – SYCAMORE FAMILY**

- Platanus racemosa* – California sycamore

### **POLEMONIACEAE – PHLOX FAMILY**

- Allophyllum glutinosum* – blue false-gilia
- Allophyllum gilioides* ssp. *violaceum* – dense false-gilia
- Eriastrum* sp. – woolly-star

## APPENDIX B (Continued)

---

*Eriastrum diffusum* – diffuse woolly-star  
*Eriastrum filifolium* – thread-leaved woolly-star  
*Eriastrum sapphirinum* – sapphire Eriastrum  
*Gilia* sp. – gilia

### **POLYGONACEAE – BUCKWHEAT FAMILY**

*Chorizanthe fimbriata* – fringed spineflower  
*Gilia angelensis* – grassland gilia  
*Gilia capitata* – ball gilia  
*Leptodactylon californicum* – prickly phlox  
*Navarretia hamata* – hooked skunkweed  
*Navarretia fossalis* – Moran's nosegay *Chorizanthe* sp. – spineflower  
*Chorizanthe procumbens* – prostrate spineflower  
*Chorizanthe staticoides* – Turkish rugging  
*Eriogonum* sp. – buckwheat  
*Eriogonum fasciculatum* – California buckwheat  
\* *Rumex crispus* – curly dock *Lastarriaea coriacea* – lastarriaea  
*Persicaria lapathifolia* – willow weed  
*Polygonum aviculare* ssp. *depressum* – prostrate knotweed  
*Pterostegia drymarioides* – granny's hairnet  
\* *Rumex conglomeratus* – clustered dock

### **RANUNCULACEAE – CROWFOOT FAMILY**

*Clematis* sp. – clematis  
*Clematis ligusticifolia* – virgin's bower, yerba de chiva  
*Clematis pauciflora* – ropevine  
*Delphinium* sp. – larkspur  
*Delphinium cardinale* – cardinal or scarlet larkspur  
*Delphinium parryi* ssp. *parryi* – Parry's larkspur

### **RHAMNACEAE – BUCKTHORN FAMILY**

*Ceanothus* sp. – ceanothus  
*Ceanothus crassifolius* – hoaryleaf ceanothus  
*Ceanothus tomentosus* – Ramona-lilac  
*Ceanothus verrucosus* – warty-stemmed ceanothus  
*Frangula californica* – California coffeeberry  
*Rhamnus crocea* – spiny redberry  
*Rhamnus ilicifolia* – holly-leaf redberry  
*Rhamnus pilosa* – hairy-leaf redberry

## APPENDIX B (Continued)

---

### **ROSACEAE – ROSE FAMILY**

- Adenostoma fasciculatum* – chamise
- Cercocarpus* sp. – mountain mahogany
- Cercocarpus minutiflorus* – San Diego mountain-mahogany
- Cercocarpus betuloides* var. *betuloides* – birch-leaf mountain-mahogany
- Heteromeles arbutifolia* – toyon
- Prunus* sp. – cherry tree
- Prunus ilicifolia* – holly-leaf cherry
- Rubus ursinus* – California blackberry

### **RUBIACEAE – MADDER FAMILY**

- Galium angustifolium* – narrow-leaved bedstraw
- Galium aparine* – goose grass
- Galium nuttallii* ssp. *nuttallii* – San Diego bedstraw

### **SALICACEAE – WILLOW FAMILY**

- Populus fremontii* – Fremont cottonwood
- Salix* sp. – willow
- Salix exigua* – narrow-leaf willow
- Salix gooddingii* – Goodding's black willow
- Salix laevigata* – red willow
- Salix lasiolepis* – arroyo willow

### **SCROPHULARIACEAE – FIGWORT FAMILY**

- Castilleja exserta* ssp. *exserta* – common owl's-clover
- Castilleja foliolosa* – woolly Indian paintbrush
- Cordylanthus rigidus* – rigid bird's beak
- Scrophularia californica* – California figwort

### **SOLANACEAE – NIGHTSHADE FAMILY**

- Datura wrightii* – jimson weed
- \* *Nicotiana glauca* – tree tobacco
- Physalis* sp. – ground-cherry
- Solanum* sp. – nightshade
- Solanum douglasii* – Douglas' nightshade
- Solanum xanti* – chaparral nightshade

### **TAMARICACEAE – TAMARISK FAMILY**

- \* *Tamarix ramosissima* – salt-cedar, Mediterranean tamarisk

## APPENDIX B (Continued)

---

### **URTICACEAE – NETTLE FAMILY**

*Urtica dioica* – common perennial stinging nettle

- \* *Urtica urens* – dwarf nettle

### **VISCACEAE – MISTLETOE FAMILY**

*Phoradendron* sp. – mistletoe

### **VITACEAE – GRAPE FAMILY**

*Vitis girdiana* – desert wild grape

## **ANGIOSPERMS (MONOCOTS)**

### **ARECACEAE – PALM FAMILY**

- \* *Washingtonia robusta* – Mexican fan palm

### **AGAVACEAE – CENTURY PLANT FAMILY**

*Agave* sp. – agave

*Chlorogalum* sp. – soap plant

*Yucca schidigera* – Mojave yucca

*Yucca whipplei* – our lord's candle

### **CYPERACEAE – SEDGE FAMILY**

*Carex schottii* – Schott's sedge

- \* *Cyperus involucratus* – African umbrella plant
- Eleocharis macrostachya* – pale spike-sedge

### **LILIACEAE – LILY FAMILY**

*Calochortus* sp. – mariposa lily

*Calochortus splendens* – splendid mariposa lily

*Calochortus venustus* – Venus mariposa lily

*Calochortus weedii* var. *weedii* – Weed's mariposa lily

### **POACEAE – GRASS FAMILY**

*Achnatherum coronatum* – crested needlegrass

- \* *Arundo donax* – giant reed
  - \* *Avena barbata* – slender wild oat
  - \* *Avena fatua* – wild oat
- Bothriochloa barbinodis* – cane bluestem
- Bromus* sp. – brome
- Bromus carinatus* – California brome
- \* *Bromus diandrus* – ripgut brome

## APPENDIX B (Continued)

---

- \* *Bromus hordeaceus* – soft brome
- \* *Bromus madritensis* ssp. *rubens* – red brome
- \* *Cynodon dactylon* – bermuda grass
- Distichlis spicata* – saltgrass
- Elymus elmoides* – bottlebrush squirreltail
- Festuca* sp. – fescue grass
- Gastridium* sp. – nit grass
- \* *Gastridium ventricosum* – nit grass
- Hordeum* sp. – barley
- \* *Hordeum murinum* – hare barley
- \* *Lamarckia aurea* – golden-top
- Leymus condensatus* – giant wild rye
- Lolium* sp. – darnel grass
- \* *Lolium multiflorum* – Italian ryegrass
- Muhlenbergia microsperma* – littleseed muhly
- Muhlenbergia rigens* – deergrass
- Nassella lepida* – foothill needlegrass
- Nassella pulchra* – purple needlegrass
- \* *Paspalum dilatatum* – dallis grass
- \* *Pennisetum* sp. – fountain grass
- \* *Phalaris* sp. – phalaris
- Poa secunda* ssp. *secunda* – one-sided bluegrass
- Polypogon* sp. – rabbit's foot grass
- \* *Polypogon monspeliensis* – annual beard grass
- \* *Schismus barbatus* – Old Han schismus
- Sporobolus* sp. – sacaton grass
- Vulpia* sp. – six-weeks fescue
- \* *Vulpia myuros* – rattail fescue

### **THEMIDACEAE – BRODIAEA FAMILY**

- Bloomeria crocea* – common golden star
- Brodiaea* sp. – cluster lily
- Brodiaea terrestris* – earth cluster lily
- Dichelostema capitulatum* ssp. *capitulatum* – blue dicks

- \* signifies introduced (non-native) species

## APPENDIX B (Continued)

---

INTENTIONALLY LEFT BLANK

# **APPENDIX C**

*Wildlife Species Observed in the Project Area*



## **APPENDIX C**

### **Wildlife Species Observed in the Project Area**

---

#### **WILDLIFE SPECIES – VERTEBRATES**

##### **AMPHIBIANS**

###### ***BUFONIDAE – TRUE TOADS***

*Anaxyrus boreas* – western toad

###### ***HYLIDAE – TREEFROGS***

*Pseudacris cadaverina* – California treefrog

*Hyla regilla* – Pacific treefrog

##### **REPTILES**

###### ***IGUANIDAE – IGUANID LIZARDS***

*Phrynosoma blainvillii* – Blainville's horned lizard

*Sceloporus occidentalis* – western fence lizard

*Sceloporus orcutti* – granite spiny lizard

*Uta stansburiana* – common side-blotched lizard

###### ***SCINCIDAE – SKINKS***

*Plestiodon skiltonianus* – western skink

###### ***TEIIDAE – WHIPTAIL LIZARDS***

*Aspidoscelis tigris* – tiger whiptail

*Aspidoscelis tigris stejnegeri* – coastal western whiptail

###### ***COLUBRIDAE – COLUBRID SNAKES***

*Pituophis cantifer* – gophersnake

*Thamnophis hammondi* – two-striped garter snake

###### ***VIPERIDAE – VIPERS***

*Crotalus ruber ruber* – northern red-diamond rattlesnake

*Crotalus oreganus helleri* – southern Pacific rattlesnake

##### **FISH**

###### ***SALMONIDAE – TROUT FAMILY***

*Oncorhynchus* sp. – trout

## APPENDIX C (Continued)

---

### BIRDS

#### ***APODIDAE – SWIFTS***

*Aeronautes saxatalis* – white-throated swift

#### ***ARDEIDAE – HERONS, BITTERNS, AND ALLIES***

*Ardea herodias* – great blue heron

*Nycticorax nycticorax* – black-crowned night-heron

#### ***THRESKIORNITHIDAE – IBISES***

*Plegadis chihi* – white-faced ibis

#### ***CATHARTIDAE – NEW WORLD VULTURES***

*Cathartes aura* – turkey vulture

#### ***ACCIPITRIDAE – HAWKS, KITES, EAGLES, AND ALLIES***

*Accipiter cooperii* – Cooper’s hawk

*Accipiter striatus* – sharp-shinned hawk

*Aquila chrysaetos* – golden eagle (incidental observation during 2010 mammal trapping study)

*Buteo jamaicensis* – red-tailed hawk

*Buteo lineatus* – red-shouldered hawk

*Circus cyaneus* – northern harrier (2005 only)

*Elanus leucurus* – white-tailed kite

(non-breeding season observation, September and October 2010)

#### ***FALCONIDAE – FALCONS***

*Falco sparverius* – American kestrel

#### ***ODONTOPHORIDAE – NEW WORLD QUAIL***

*Callipepla californica* – California quail

#### ***CHARADRIIDAE – LAPWINGS AND PLOVERS***

*Charadrius vociferus* – killdeer

#### ***COLUMBIDAE – PIGEONS AND DOVES***

\* *Columba livia* – rock pigeon

*Columbina passerina* – common ground-dove

*Patagioenas fasciata* – band-tailed pigeon

*Zenaida macroura* – mourning dove

## APPENDIX C (Continued)

---

### **CUCULIDAE – CUCKOOS, ROADRUNNERS, AND ANIS**

*Geococcyx californianus* – greater roadrunner

### **TYTONIDAE – BARN OWLS**

*Tyto alba* – barn owl

### **STRIGIDAE – TYPICAL OWLS**

*Bubo virginianus* – great horned owl

*Megascops kennicottii* – western screech owl

### **CAPRIMULGIDAE – GOATSUCKERS**

*Phalaenoptilus nuttallii* – common poorwill

### **TROCHILIDAE – HUMMINGBIRDS**

*Calypte anna* – Anna's hummingbird

*Calypte costae* – Costa's hummingbird

### **PICIDAE – WOODPECKERS**

*Colaptes auratus* – northern flicker

*Melanerpes formicivorus* – acorn woodpecker

*Picoides nuttallii* – Nuttall's woodpecker

### **TYRANNIDAE – TYRANT FLYCATCHERS**

*Contopus sordidulus* – western wood-pewee

*Empidonax oberholseri* – dusky flycatcher

*Empidonax difficilis* – Pacific-slope flycatcher

*Empidonax trailli* – willow flycatcher (migrant)

*Myiarchus cinerascens* – ash-throated flycatcher

*Sayornis nigricans* – black phoebe

*Sayornis saya* – Say's phoebe

*Tyrannus vociferans* – Cassin's kingbird

*Tyrannus verticalis* – western kingbird

### **HIRUNDINIDAE – SWALLOWS**

*Hirundo rustica* – barn swallow

*Petrochelidon pyrrhonota* – cliff swallow

*Tachycineta bicolor* – tree swallow

### **CORVIDAE – JAYS AND CROWS**

*Apelocoma californica* – western scrub-jay

*Corvus brachyrhynchos* – American crow

*Corvus corax* – common raven

## APPENDIX C (Continued)

---

### **PARIDAE – CHICKADEES AND TITMICE**

*Baeolophus inornatus* – oak titmouse

### **AEGITHALIDAE – LONG-TAILED TITS AND BUSHTITS**

*Psaltiriparus minimus* – bushtit

### **SITTIDAE – NUTHATCHES**

*Sitta carolinensis* – white-breasted nuthatch

### **TROGLODYTIDAE – WRENS**

*Campylorhynchus brunneicapillus sandiegensis* – coastal cactus wren

*Thryomanes bewickii* – Bewick's wren

*Troglodytes aedon* – house wren

### **POLIOPTILIDAE – GNATCATCHERS AND GNATWRENS**

*Poliophtila caerulea* – blue-gray gnatcatcher

### **TURDIDAE – THRUSHES**

*Catharus ustulatus* – Swainson's thrush

*Sialia mexicana* – western bluebird

*Turdus migratorius* – American robin

### **SYLVIIDAE – SYLVIID WARBLERS**

*Chamaea fasciata* – wren

### **MIMIDAE – MOCKINGBIRDS AND THRASHERS**

*Mimus polyglottos* – northern mockingbird

*Toxostoma redivivum* – California thrasher

### **PTILOGONATIDAE – SILKY-FLYCATCHERS**

*Phainopepla nitens* – phainopepla

### **STURNIDAE – STARLINGS**

\* *Sturnus vulgaris* – European starling

### **VIREONIDAE – VIREOS**

*Vireo bellii pusillus* – least Bell's vireo

*Vireo huttoni* – Hutton's vireo

### **PARULIDAE – WOOD-WARBLERS**

*Dendroica coronata* – yellow-rumped warbler

*Dendroica petechial brewsteri* – yellow warbler

*Geothlypis trichas* – common yellowthroat

## APPENDIX C (Continued)

---

### **EMBERIZIDAE – EMBERIZIDS**

- Aimophila ruficeps canescens* – Southern California rufous-crowned sparrow
- Melospiza melodia* – song sparrow
- Pipilo crissalis* – California towhee
- Pipilo maculatus* – spotted towhee
- Zonotrichia leucophrys* – white-crowned sparrow

### **CARDINALIDAE – CARDINALS AND ALLIES**

- Pheucticus melanocephalus* – black-headed grosbeak

### **ICTERIDAE – BLACKBIRDS**

- Euphagus cyanocephalus* – Brewer's blackbird
- Icterus cucullatus* – hooded oriole
- Icterus bullockii* – Bullock's oriole
- Molothrus ater* – brown-headed cowbird
- Quiscalus mexicanus* – great-tailed grackle

### **FRINGILLIDAE – FINCHES**

- Carpodacus mexicanus* – house finch
- Spinus psaltria* – lesser goldfinch

## MAMMALS

### **LEPORIDAE – HARES AND RABBITS**

- Sylvilagus audubonii* – Audubon's cottontail
- Sylvilagus bachmani* – brush rabbit

### **SCIURIDAE – SQUIRRELS**

- Spermophilus beecheyi* – California ground squirrel

### **GEOMYIDAE – POCKET GOPHERS**

- Thomomys bottae* – Botta's pocket gopher

### **HETEROMYIDAE – POCKET MICE AND KANGAROO RATS**

- Chaetodipus fallax fallax* – northwestern San Diego pocket mouse
- Dipodomys* sp. – kangaroo rat
- Dipodomys simulans* – Dulzura kangaroo rat

### **MURIDAE – RATS AND MICE**

- Neotoma* sp. – woodrat
- Neotoma lepida intermedia* – San Diego desert woodrat
- Peromyscus maniculatus* – North American deer mouse
- Reithrodontomys megalotis* – western harvest mouse

## APPENDIX C (Continued)

---

### **CANIDAE – WOLVES AND FOXES**

*Canis latrans* – coyote

### **PROCYONIDAE – RACCOONS AND RELATIVES**

*Procyon lotor* – common raccoon

### **MUSTELIDAE – WEASELS, SKUNKS, AND OTTERS**

*Mephitis mephitis* – striped skunk

*Mustela frenata* – long-tailed weasel

### **FELIDAE – CATS**

*Puma concolor* – mountain lion

*Lynx rufus* – bobcat

### **CERVIDAE – DEERS**

*Odocoileus hemionus* – mule deer

## **WILDLIFE SPECIES – INVERTEBRATES**

### **BUTTERFLIES AND MOTHS**

#### **HESPERIIDAE – SKIPPERS**

*Erynnis funeralis* – funereal duskywing

*Pyrgus albescens* – checkered skipper

#### **PAPILIONIDAE – SWALLOWTAILS**

*Papilio eurymedon* – pale swallowtail

*Papilio rutulus* – western tiger swallowtail

*Papilio zelicaon* – anise swallowtail

#### **PIERIDAE – WHITES AND SULFURS**

*Anthocharis sara sara* – Pacific sara orangetip

*Pieris rapae* – cabbage white

*Pontia protodice* – checkered white

*Colias eurytheme* – orange sulphur

*Nathalis iole* – dainty sulphur

#### **RIODINIDAE – METALMARKS**

*Apodemia mormo virgulti* – Behr's metalmark

#### **LYCAENIDAE – BLUES, HAIRSTREAKS, AND COPPERS**

*Callophrys augustinus* – blue elfin

## APPENDIX C (Continued)

---

*Callophrys dumetorum* – bramble (green) hairstreak  
*Callophrys dumetorum perplexa* – perplexing hairstreak  
*Glaucopsyche lygdamus* – southern blue  
*Leptotes marina* – marine blue  
*Plebejus acmon* – acmon blue  
*Strymon melinus* – gray hairstreak

### ***NYMPHALIDAE – BRUSH-FOOTED BUTTERFLIES***

*Adelpha bredowii* – California sister  
*Danaus gilippus* – queen  
*Danaus plexippus* – monarch  
*Junonia coenia* – common buckeye  
*Limenitis lorquini* – Lorquin’s admiral  
*Nymphalis antiopa* – mourning cloak  
*Vanessa annabella* – west coast lady  
*Vanessa atalanta* – red admiral  
*Vanessa cardui* – painted lady  
*Vanessa virginiensis* – American lady

\* signifies introduced (non-native) species

## APPENDIX C (Continued)

---

INTENTIONALLY LEFT BLANK

## **APPENDIX D**

*2005 Focused California Gnatcatcher, Least Bell's  
Vireo and Southwestern Willow Flycatcher  
Surveys, Warner Ranch Project, County of  
San Diego, California*



August 31, 2005  
(Revised 9/24/05)

4488-01

U.S. Fish and Wildlife Service  
Attn: Recovery Permit Coordinator  
6010 Hidden Valley Road  
Carlsbad, CA 92009`

***Subject: Focused California Gnatcatcher, Least Bell's Vireo and Southwestern Willow Flycatcher Surveys, Warner Ranch Project, County of San Diego, California***

Dear Recovery Permit Coordinator:

This report documents the results of 13 protocol-level presence/absence surveys for the federally-listed threatened coastal California gnatcatcher (*Polioptila californica californica*; gnatcatcher), the state- and federally-listed endangered least Bell's Vireo (*Vireo bellii pusillus*; vireo), and the state- and federally-listed endangered southwestern willow flycatcher (*Empidonax traillii extimus*; flycatcher). These focused surveys were conducted for the approximately 430-acre Warner Ranch project by Dudek & Associates, Inc. (Dudek) in 2005. The surveys were conducted in all areas of suitable habitat for each species. Approximately 142 acres of coastal sage scrub, including disturbed forms and sub-associations, are present onsite. Approximately 18.7 acres of riparian habitat, including disturbed forms, is present onsite.

The California gnatcatcher is a federally-listed threatened species and a California Department of Fish and Game (CDFG) species of special concern. It is closely associated with coastal sage scrub habitat and typically occurs below 950 feet in elevation and on slopes less than 40%, but gnatcatchers have been observed at elevations greater than 2,000 feet. The species is threatened primarily by loss, degradation, and fragmentation of coastal sage scrub habitat and is also impacted by brown-headed cowbird (*Molothrus ater*) nest parasitism.

The southwestern willow flycatcher and least Bell's vireo are closely associated with riparian habitats, especially densely-vegetated willow scrub and riparian forest vegetation. These species are threatened primarily by loss, degradation, and fragmentation of riparian habitats. They also are impacted by brown-headed cowbird (nest parasitism).

**Focused California Gnatcatcher, Least Bell's Vireo and  
Southwestern Willow Flycatcher Surveys, Warner Ranch Project,  
Community of Pala, San Diego County, California**

---

## **LOCATION AND EXISTING CONDITIONS**

Warner Ranch is situated in the community of Pala in the northeastern portion of San Diego County, California (*Figure 1*). The property lies approximately five miles east of the Interstate 15 on Highway 76, on the U.S. Geological Survey 7.5 minute Pala and Pechanga quadrangles (*Figure 2*).

The soils, topography, and vegetation of the site are heterogeneous. According to Bowman (1973), soils onsite include Ramona series (RcE, RaB, RaC2), Cieneba series (CnG2, ClG2, CmrG), Las Posas series (LrG, LrE), Visalia series (VaA, VbB, VaB), and Fallbrook series (FaE3). Riverwash soils (Rm). Ramona series soils occur in the southeastern portion of the site; Cieneba series soils occupy the greatest area of the site including the east side of Gomez Canyon in the northern portion of the site, and the majority of the northeastern project area. Las Posas series soils are restricted to the western side Gomez Canyon; Visalia series soils occur within the existing ranch area in the southwestern portion of the site. The remainder of the soil types occurs as small slivers onsite. Elevations onsite range from approximately 350 feet to 1,000 feet above mean sea level. The site supports a mixture of steep to moderately steep slopes, ridgelines and canyons.

Three riparian areas flow from north to south through the project site. Gomez Canyon Creek is the western-most and largest drainage onsite; a channel tributary to Gomez Canyon Creek occurs along the western border of the eastern portion of the site; and a 150-foot-long segment of Pala Creek crosses the eastern-most portion of the project area. The project area currently supports disturbed and undisturbed native plant communities on gentle to steep-sloped hillsides with a large orchard, agricultural, and horse ranch area in the relatively flat southern area. Portions of the northern area appear to have burned in 2004.

## **VEGETATION COMMUNITIES**

Based on species composition and general physiognomy, 15 vegetation types and land covers occurred within the project study area. Approximate acreages of vegetation communities and land covers within the project area are presented in *Table 1*. Vegetation communities suitable for gnatcatcher, vireo and flycatcher are described following the table and are illustrated on *Figure 3*.

**Focused California Gnatcatcher, Least Bell's Vireo and  
Southwestern Willow Flycatcher Surveys, Warner Ranch Project,  
Community of Pala, San Diego County, California**

**Table 1  
Acreages of Vegetation Communities and Land Cover Types**

<b>Vegetation Communities &amp; Land Cover Types (mapping abbreviation on figures)</b>	<b>Acreage</b>	<b>% of Total Site</b>
<b>Sensitive Uplands</b>		
Annual grassland (AGL)	42.7	10
Coastal sage scrub (CSS)	129.6	30
Disturbed coastal sage scrub (dCSS)	9.2	2
Coast live oak woodland (LOW)	0.7	<1
Southern cactus scrub (SCS)	3.1	<1
Southern mixed chaparral (SMX)	97.7	23
Disturbed southern mixed chaparral (dSMX)	0.4	<1
Scrub oak chaparral (SOC)	7.5	2
Valley Needlegrass Grassland (VGL)	1.2	<1
<b>subtotal*</b>	292.1	68
<b>Sensitive Wetlands**</b>		
Mule fat scrub (MFS)	1.7	<1
Oak riparian forest (ORF)	0.5	<1
Oak riparian forest – CDFG only (ORF-C)	7.4	2
Disturbed oak riparian forest (dORF)	0.6	<1
Disturbed oak riparian forest – CDFG only (dORF-C)	0.9	<1
Southern cottonwood willow riparian forest (SCWRF)	5.0	1
Sycamore alluvial woodland – CDFG only (SAW-C)	4.3	1
<b>subtotal*</b>	20.3	5
<b>Non-Sensitive Uplands</b>		
Agriculture	45.5	11
Developed	16.7	4
Disturbed habitat	1.8	<1
Orchard	53.5	12
<b>subtotal*</b>	117.6	27
<b>Total</b>	<b>430.0</b>	<b>100</b>

\* Numbers may not add precisely due to rounding.

\*\* Wetlands communities under jurisdiction of ACOE, CDFG, RWQCB, and County unless otherwise indicated

### ***Coastal Sage Scrub and Disturbed Coastal Sage Scrub***

Coastal sage scrub is a native plant community composed of a variety of soft, low, aromatic shrubs, characteristically dominated by drought-deciduous species such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* spp.), with scattered evergreen shrubs, including lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), and toyon (*Heteromeles arbutifolia*). It typically develops on south-facing slopes and other xeric situations.

**Focused California Gnatcatcher, Least Bell's Vireo and  
Southwestern Willow Flycatcher Surveys, Warner Ranch Project,  
Community of Pala, San Diego County, California**

---

Coastal sage scrub is mapped on gentle slopes and south facing exposures in both the western and eastern portions of the site. In general, shrub cover in these areas is relatively low (approximately 30 to 60%) with common species including California sagebrush, flat-top buckwheat, and laurel sumac. Where shrub cover is less than approximately 30%, the community was mapped as disturbed coastal sage scrub. Where coastal sage scrub occurs as a mosaic with southern mixed chaparral in the northern portion of the site, yellow bush-penstemon (*Keckiella antirrhinoides* var. *antirrhinoides*) is a common component. Understory species are varied including fringed spineflower (*Chorizanthe fimbriata*), yellow pincushion (*Chaenactis glabriuscula* var. *glabriuscula*), California everlasting (*Gnaphalium californicum*), chalk dudleya (*Dudleya pulverenta*), caterpillar phacelia (*Phacelia cicutaria*), silver puffs (*Uropappus lindleyi*), bromes (*Bromus* spp.), and star thistle (*Centaurea melitensis*).

***Southern Cactus Scrub***

Southern cactus scrub is not described in Holland (1986) or Oberbauer (1996) but is a distinct community occurring in relatively isolated areas throughout San Diego County (e.g., Chula Vista, San Pasqual). The vegetation community is recognized by Gray and Bamlet (1992) for Orange County. The community can be considered a subtype of coastal sage scrub, but generally consists of over 50% cover of cactus species (*Cylindropuntia* spp. or *Opuntia* spp.) with associated species often being typical coastal sage scrub species.

Portions of the southeastern study area are dominated by prickly-pear cactus (*Opuntia littoralis*) with relatively large gaps occupied by non-native grasses and coastal sage scrub shrubs.

***Coast Live Oak Riparian Forest***

Southern coast live oak riparian forest (oak riparian forest) is an open to locally dense evergreen riparian woodland dominated by coast live oak. It develops on fine-grained rich alluvium on the outer floodplains along larger streams. This community often contains relatively more herbs and fewer shrubs than other riparian communities. Understory species commonly observed within oak riparian forest include poison oak (*Toxicodendron diversiloba*) and toyon (Holland 1986).

Oak riparian forest on the Warner Ranch project site occurs as two subtypes according to the wetlands jurisdictional designation; each also occurs in disturbed phases for a total of four mapping categories.

**Focused California Gnatcatcher, Least Bell's Vireo and  
Southwestern Willow Flycatcher Surveys, Warner Ranch Project,  
Community of Pala, San Diego County, California**

---

Coast live oak riparian forest, under the jurisdiction of Army Corps of Engineers (ACOE), CDFG, Regional Water Quality Control Board (RWQCB), and County as a wetlands community, occupies the ordinary high water mark (OHWM) within the northern tributary to Gomez Canyon Creek. In this area the channel also contains arroyo willow (*Salix lasiolepis*), mule fat (*Baccharis sarathroides*), and an herbaceous understory. Along the small stretch of Pala Creek onsite, oaks occur sparsely along an open sandy channel. Although no substantial populations of invasive exotic species were found in this creek segment onsite, off-road vehicular activity was observed and appears to be a regular occurrence and therefore the area is mapped as disturbed.

Coast live oak riparian forest, under the jurisdiction of CDFG only, occurs on slopes on either side of Gomez Canyon Creek, above the OHWM. Associated species in this community include poison oak, prickly ox-tongue (*Picris echioidies*), California mugwort (*Artemisia douglasii*), and bull thistle (*Cirsium vulgare*). The disturbed phase of this subtype, located on the east side of the channel, has been altered by mechanical disturbance (apparently regular mowing and parking/driving) creating a compacted soil condition substantially reducing understory cover and oak recruitment.

***Southern Cottonwood Willow Riparian Forest***

Southern cottonwood-willow riparian forest is a tall, open, broadleafed winter-deciduous riparian community dominated by cottonwoods (*Populus* spp.) and willow trees (*Salix* spp.) with shrubby willows occurring in the understory. This community is typically found along perennially wet rivers and streams where receding flood waters leave behind moist, bare mineral soils required for the germination and establishment of the dominant species. In addition to the dominant cottonwood and willow species, other species occurring within this community include California mugwort, mule fat, wild cucumber (*Marah macrocarpus*) and hoary nettle (*Urtica dioica*) (Holland 1986).

The majority vegetation within Gomez Canyon Creek, within the OHWM, is mapped as southern cottonwood willow riparian forest. Species composition includes a mixture of arroyo willow, Fremont's cottonwood (*Populus fremontii*), and coast live oak in the tree layer, a shrub layer of mule fat and giant cane (*Arundo donax*) which varies from sparse to dense, and a herbaceous layer that varies in cover according to shrub density and rock exposure and includes dwarf nettle (*Urtica urens*), water speedwell (*Veronica angallis-aquatica*), Parish's monkeyflower (*Mimulus parishii*), narrow-leaved willow (*Salix exigua*), and cocklebur (*Xanthium strumarium*).

**Focused California Gnatcatcher, Least Bell's Vireo and  
Southwestern Willow Flycatcher Surveys, Warner Ranch Project,  
Community of Pala, San Diego County, California**

---

*Sycamore Alluvial Woodland*

Sycamore alluvial woodland is described in Holland (1986) for the central California coastal areas. The variant that occurs in San Diego County is found in wide, cobble, braided channels that are subject to scour during flooding events and support an open canopy of mature western sycamore (*Platanus racemosa*). Understory species typically mule fat, non-native grasses, California mugwort, and Mexican elderberry (*Sambucus mexicanus*).

Sycamore alluvial woodland occurs both along side Gomez Canyon Creek and the eastern tributary channel, but clearly above the OHWM for both channels. Mature western sycamores are the predominant species, occurring as an open, tall structure with a relatively dense non-native understory along Gomez Canyon Creek and a sparser understory along the eastern tributary channel. Associated species in both locations include bull thistle, bristly ox-tongue, wild mustard (*Hirshfeldia incana*), and rip-gut grass (*Bromus diandrus*). Soils in both areas are sandy; disturbance, likely through mowing and grazing, appears have been more intensive in the western areas.

## **METHODS**

Suitable habitat areas within the project area were surveyed 13 times (*Table 3*) by Dudek wildlife biologists Jeff D. Priest (Permit # TE8406191) and Anita Hayworth, PhD. (Permit # TE781084) for gnatcatcher, vireo and flycatcher. Focused surveys for these species were initiated in May, 2005 and continued through August 1, 2005.

The surveys for gnatcatcher were conducted in conformance with the currently accepted protocol of the USFWS, Coastal California gnatcatcher (*Polioptila californica californica*) 1997 Presence/Absence Survey Protocol. Protocol surveys within an enrolled NCCP/HCP included three surveys in all suitable habitat and a maximum of 100 acres surveyed per day. Therefore, a minimum of three surveys is required during appropriate weather conditions.

A tape of recorded California gnatcatcher vocalizations played approximately every 50-100 feet was used to induce responses from potentially present California gnatcatchers. If a California gnatcatcher was detected, tape-playback was terminated to minimize potential for harassment. A 400-scale (1"=400') digital ortho quarter quad map of the site overlaid with the limits of grading, vegetation polygons and topography was used to map any California gnatcatchers detected.

**Focused California Gnatcatcher, Least Bell's Vireo and  
Southwestern Willow Flycatcher Surveys, Warner Ranch Project,  
Community of Pala, San Diego County, California**

---

Binoculars (7x50) were used to aid in detecting and identifying bird species. Weather conditions, time of day, and season were appropriate for the detection of California gnatcatcher.

Surveys for flycatcher were conducted concurrently with the vireo surveys. All surveys consisted of slowly walking a methodical, meandering transect within and adjacent to all riparian habitat onsite. The perimeter also was surveyed. This route was arranged to cover all suitable habitat onsite. A vegetation map (scale 1"=200') of the project site was available to record any detected vireo or flycatcher. Binoculars (7x50) were used to aid in detecting and identifying wildlife species.

The nine surveys conducted for flycatcher followed the currently accepted protocol (Sogge *et al.*, 1997 in conjunction with the 2000 Southwestern Willow Flycatcher Protocol Revision issued by the U.S. Fish and Wildlife Service) which states that a minimum of five survey visits is needed to evaluate project effects on flycatchers. It is recommended that one survey is made during the period from May 15 to 31, one survey is made from June 1 to 21 and three surveys are made between June 22 and July 17. The nine surveys conducted surpass the minimum survey requirements of the flycatcher protocol. A tape of recorded flycatcher vocalizations was used approximately every 50-100 feet within suitable habitat to induce flycatcher responses. If a flycatcher had been detected, playing of the tape would have ceased to avoid harassment.

A Section 10(a) (1) (A) permit is not required to conduct presence/absence surveys for vireo. The eight surveys for vireo followed the currently accepted protocol (U.S. Fish and Wildlife Service, April 8, 1999, Least Bell's Vireo Survey Guidelines) which states that a minimum of eight survey visits should be made to all riparian areas and any other potential vireo habitats during the period from April 10 to July 31. The site visits are required to be conducted at least 10 days apart to maximize the detection of early and late arrivals, females, non-vocal birds, and nesting pairs. Taped playback of vireo vocalizations are not to be used during the surveys. Surveys are to be conducted between dawn and 1100 and are not be conducted during periods of excessive or abnormal cold, heat, wind, rain, or other inclement weather.

Weather conditions, time of day and season were appropriate for the detection of gnatcatcher, flycatcher and vireo (*Table 1*).

**Focused California Gnatcatcher, Least Bell's Vireo and  
Southwestern Willow Flycatcher Surveys, Warner Ranch Project,  
Community of Pala, San Diego County, California**

**Table 2  
Schedule of Surveys**

DATE	HOURS	FOCUS	PERSONNEL	CONDITIONS
5/18/05	0645-0945	LBVI/WIFL	JDP	62-69° F; 0-5 mph winds; 0% clouds
5/28/05	0530-0845	LBVI/WIFL	AMH	61-68° F; 1-3 mph winds; 30%-0% clouds
6/11/05	0515-0800	LBVI/WIFL	JDP	60-64° F; 0 mph winds; 0% clouds
6/20/05	0530-1130	LBVI/WIFL; CAGN – Route A	JDP	48-80° F; 0-5 mph winds; 5-15% clouds
6/24/05	0620-1220	CAGN – Route B	JDP	56-82° F; 0-5 mph winds; 0% clouds
6/25/05	0530-0830	WIFL	JDP	55-68° F; 0-2 mph winds; 100%-0% clouds
6/30/05	0600-1200	LBVI/WIFL; CAGN – Route C	JDP	58-79° F; 0-6 mph winds; 0% clouds
7/7/05	0600-1200	CAGN - Routes B and D	JDP	60-88° F; 0-5 mph winds; 0% clouds
7/11/05	0600-1030	LBVI/WIFL; CAGN – Route C	JDP	60-76° F; 0-1 mph winds; 0% clouds
7/21/05	0600-1200	LBVI/WIFL; CAGN - Routes A and C	JDP	60-96° F; 0-4 mph winds; 0-50% clouds
7/25/05	0600-1200	CAGN - Routes B and D	JDP	64-93° F; 0-3 mph winds; 0-5% clouds
7/31/05	0600-0900	LBVI/WIFL	JDP	64-74° F; 0-2 mph winds; 0% clouds
8/1/05	0600-1200	CAGN - Routes A and D	JDP	68-90° F; 0-4 mph winds; 0-100% clouds

Abbreviations

CAGN – California gnatcatcher

LBVI/WIFL – least Bell's vireo/willow flycatcher

## RESULTS

No California gnatcatcher, least Bell's vireo or southwestern willow flycatcher were observed onsite during protocol-level surveys (*Figure 3*).

Eighty-seven species of wildlife were observed during the surveys. A full list of wildlife species observed during the survey is provided in *APPENDIX A*. Flycatcher data forms, including brown-headed cowbird detection data, are included in *APPENDIX B*. Please feel free to contact me or Vipul Joshi at (760) 942-5147 with questions or if you require additional information.



**Focused California Gnatcatcher, Least Bell's Vireo and  
Southwestern Willow Flycatcher Surveys, Warner Ranch Project,  
Community of Pala, San Diego County, California**

---

U.S. Fish and Wildlife Service. January 19, 2001. *Least Bell's Vireo Survey Guidelines*

U.S. Fish and Wildlife Service. July 11, 2000. *Southwestern Willow Flycatcher Protocol  
Revision 2000.*

U. S. Fish and Wildlife Service. April 2004. *Willow Flycatcher Survey and Detection Form  
(revised).*

**APPENDIX A**  
**List of Wildlife Species Observed**  
**or Detected at the Project Site**

**WILDLIFE SPECIES -VERTEBRATES**

**AMPHIBIANS**

**BUFONIDAE - TRUE TOADS**

*Bufo boreas* - western toad

**HYLIDAE - TREEFROGS**

*Hyla regilla* - Pacific treefrog

**REPTILES**

**IGUANIDAE - IGUANID LIZARDS**

*Sceloporus orcutti* - granite spiny lizard

*Sceloporus occidentalis* - western fence lizard

*Uta stansburiana* - side-blotched lizard

**SCINCIDAE - SKINKS**

*Eumeces skiltonianus* - western skink

**TEIIDAE - WHIPTAIL LIZARDS**

*Cnemidophorus tigris* - western whiptail

**COLUBRIDAE - COLUBRID SNAKES**

*Thamnophis hammondi* - two-striped garter snake

**VIPERIDAE - VIPERS**

*Crotalus atrox* – southern Pacific diamondback rattlesnake

*Crotalus ruber ruber*- northern red-diamond rattlesnake

**Focused California Gnatcatcher, Least Bell's Vireo and  
Southwestern Willow Flycatcher Surveys, Warner Ranch Project,  
Community of Pala, San Diego County, California**

---

**FISH**

**SALMONIDAE – TROUT FAMILY**

*Oncorhynchus* sp. - trout

**BIRDS**

**ARDEIDAE - HERONS**

*Ardea alba* - great egret

*Nycticorax nycticorax* - black-crowned night-heron

**ACCIPITRIDAE - HAWKS**

*Accipiter cooperii* - Cooper's hawk

*Buteo jamaicensis* - red-tailed hawk

*Buteo lineatus* - red-shouldered hawk

*Circus cyaneus* - northern harrier

*Elanus leucurus* - white-tailed kite

**FALCONIDAE - FALCONS**

*Falco sparverius* - American kestrel

**PHASIANIDAE - PHEASANTS & QUAILS**

*Callipepla californica* - California quail

**COLUMBIDAE - PIGEONS & DOVES**

\* *Columba livia* - rock dove

*Zenaida macroura* - mourning dove

**CUCULIDAE - CUCKOOS & ROADRUNNERS**

*Geococcyx californianus* - greater roadrunner

**TYTONIDAE - BARN OWLS**

*Tyto alba* - barn owl

**Focused California Gnatcatcher, Least Bell's Vireo and  
Southwestern Willow Flycatcher Surveys, Warner Ranch Project,  
Community of Pala, San Diego County, California**

---

**STRIGIDAE - TRUE OWLS**

*Bubo virginianus* - great horned owl  
*Megascops kennicottii* - western screech owl

**CAPRIMULGIDAE - GOATSUCKERS**

*Phalaenoptilus nuttallii* - common poorwill

**TROCHILIDAE - HUMMINGBIRDS**

*Calypte anna* - Anna's hummingbird

**PICIDAE - WOODPECKERS**

*Colaptes auratus* - northern flicker  
*Melanerpes formicivorus* - acorn woodpecker  
*Picoides nuttallii* - Nuttall's woodpecker

**TYRANNIDAE - TYRANT FLYCATCHERS**

*Contopus sordidulus* - western wood-pewee  
*Empidonax difficilis* - Pacific-slope flycatcher  
*Myiarchus cinerascens* - ash-throated flycatcher  
*Sayornis nigricans* - black phoebe  
*Tyrannus vociferans* - Cassin's kingbird  
*Tyrannus verticalis* - western kingbird

**HIRUNDINIDAE - SWALLOWS**

*Petrochelidon pyrrhonota* - cliff swallow

**CORVIDAE - JAYS & CROWS**

*Apelocoma californica* - western scrub-jay  
*Corvus brachyrhynchos* - American crow  
*Corvus corax* - common raven

**AEGITHALIDAE - BUSHTITS**

*Psaltiriparus minimus* - bushtit

**Focused California Gnatcatcher, Least Bell's Vireo and  
Southwestern Willow Flycatcher Surveys, Warner Ranch Project,  
Community of Pala, San Diego County, California**

---

**TROGLODYTIDAE - WRENS**

*Thryomanes bewickii* - Bewick's wren

*Troglodytes aedon* - house wren

**CINCLIDAE – DIPPERS**

*Turdus migratorius* – American robin

**TURDIDAE - THRUSHES & BABBLERS**

*Catharus ustulatus* - Swainson's thrush

**TIMALIIDAE – LAUGHING THRUSH AND WRENTIT**

*Chamaea fasciata* - wrentit

**MIMIDAE - THRASHERS**

*Mimus polyglottos* - northern mockingbird

*Toxostoma redivivum* - California thrasher

**PTILOGONATIDAE - SILKY-FLYCATCHERS**

*Phainopepla nitens* - phainopepla

**STURNIDAE - STARLINGS**

\* *Sturnus vulgaris* - European starling

**PARULIDAE - WOOD WARBLERS**

*Dendroica petechia* - yellow warbler

**EMBERIZIDAE - BUNTINGS & SPARROWS**

*Aimophila ruficeps* - rufous-crowned sparrow

*Melospiza melodia* - song sparrow

*Pipilo crissalis* - California towhee

*Pipilo maculatus* - spotted towhee

**ICTERIDAE - BLACKBIRDS & ORIOLES**

*Molothrus ater* - brown-headed cowbird

*Icterus cucullatus* - hooded oriole

**Focused California Gnatcatcher, Least Bell's Vireo and  
Southwestern Willow Flycatcher Surveys, Warner Ranch Project,  
Community of Pala, San Diego County, California**

---

**FRINGILLIDAE - FINCHES**

*Carpodacus mexicanus* - house finch

*Carduelis psaltria* - lesser goldfinch

\* signifies introduced (non-native) species

**MAMMALS**

**LEPORIDAE - HARES & RABBITS**

*Sylvilagus bachmani* - brush rabbit

**SCIURIDAE - SQUIRRELS**

*Spermophilus beecheyi* - California ground squirrel

**GEOMYIDAE - POCKET GOPHERS**

*Thomomys bottae* - Botta's pocket gopher

**HETEROMYIDAE - POCKET MICE & KANGAROO RATS**

*Dipodomys* sp. - kangaroo rat

**MURIDAE - RATS & MICE**

*Neotoma* sp. – woodrat (middens)

**CANIDAE - WOLVES & FOXES**

*Canis latrans* - coyote

**PROCYONIDAE - RACCOONS & RELATIVES**

*Procyon lotor* - common raccoon

**FELIDAE - CATS**

*Lynx rufus* - bobcat

**CERVIDAE - DEERS**

*Odocoileus hemionus* - mule deer

**Focused California Gnatcatcher, Least Bell's Vireo and  
Southwestern Willow Flycatcher Surveys, Warner Ranch Project,  
Community of Pala, San Diego County, California**

---

**WILDLIFE SPECIES - INVERTEBRATES**

**BUTTERFLIES AND MOTHS**

**HESPERIIDAE - SKIPPERS**

*Erynnis funeralis* - funereal duskywing

**PAPILIONIDAE - SWALLOWTAILS**

*Papilio eurymedon* - pale swallowtail

*Papilio rutulus* - tiger swallowtail

*Papilio zelicaon* – Anise Swallowtail

**PIERIDAE – WHITES, SULFURS AND ORANGETIPS**

*Anthocharis sara* - Sara orangetip

*Nathalis iole* – dainty sulphur

*Pieris rapae* - cabbage butterfly

*Pontia protodice* – checkered white

*Pyrgus albescens* – western checkered skipper

**RIODINIDAE - METALMARKS**

*Apodemia mormo virgulti* - Behr's metalmark

**LYCAENIDAE - BLUES, HAIRSTREAKS, & COPPERS**

*Leptotes marina* - marine blue

*Plebejus acmon* - acmon blue

**NYMPHALIDAE - BRUSH-FOOTED BUTTERFLIES**

*Danaus gilippus* - queen

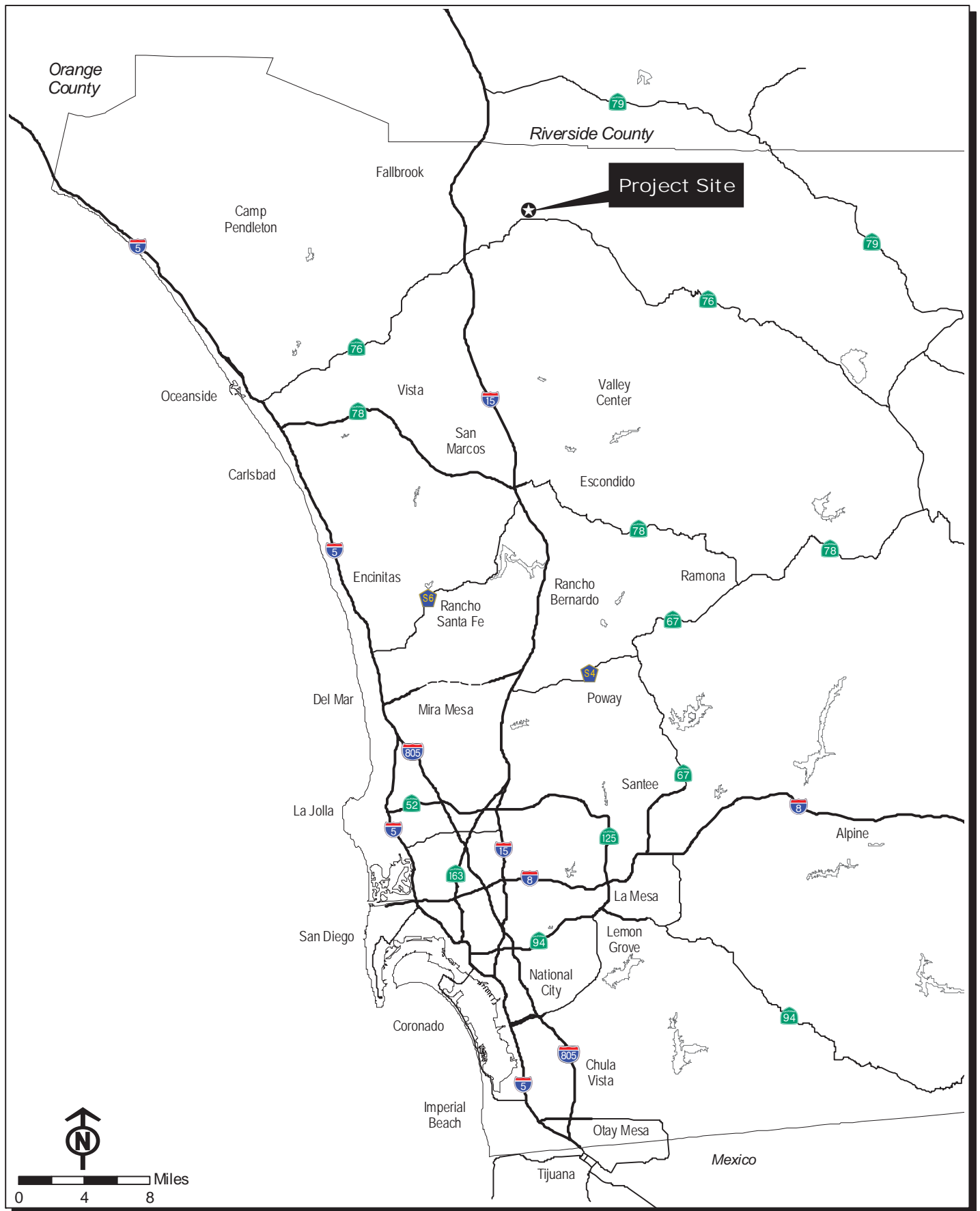
*Junonia coenia* - buckeye

*Limenitis lorquini* - Lorquin's admiral

*Nymphalis antiopa* – morning cloak

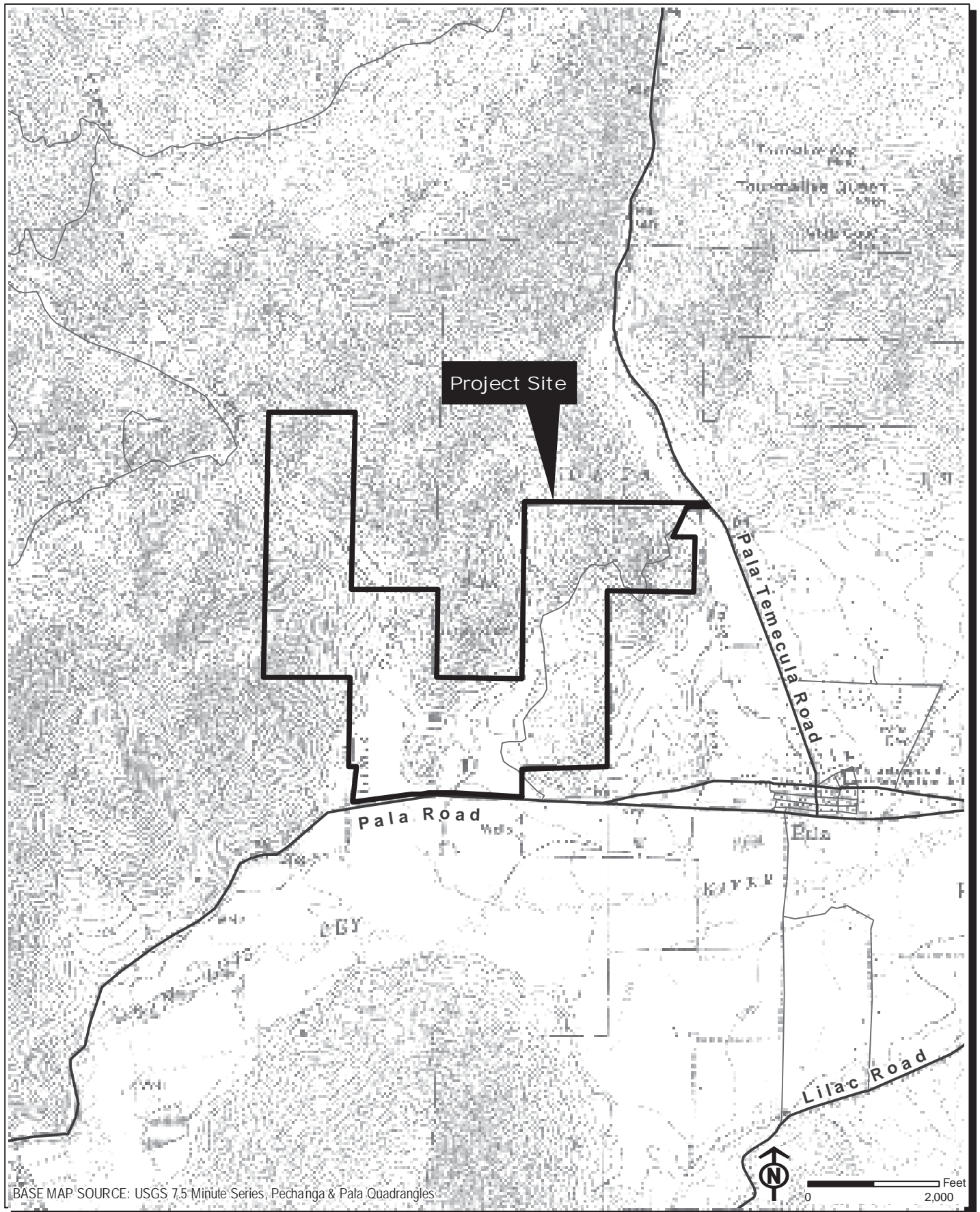
*Vanessa annabella* – west coast lady

*Vanessa cardui* – painted lady



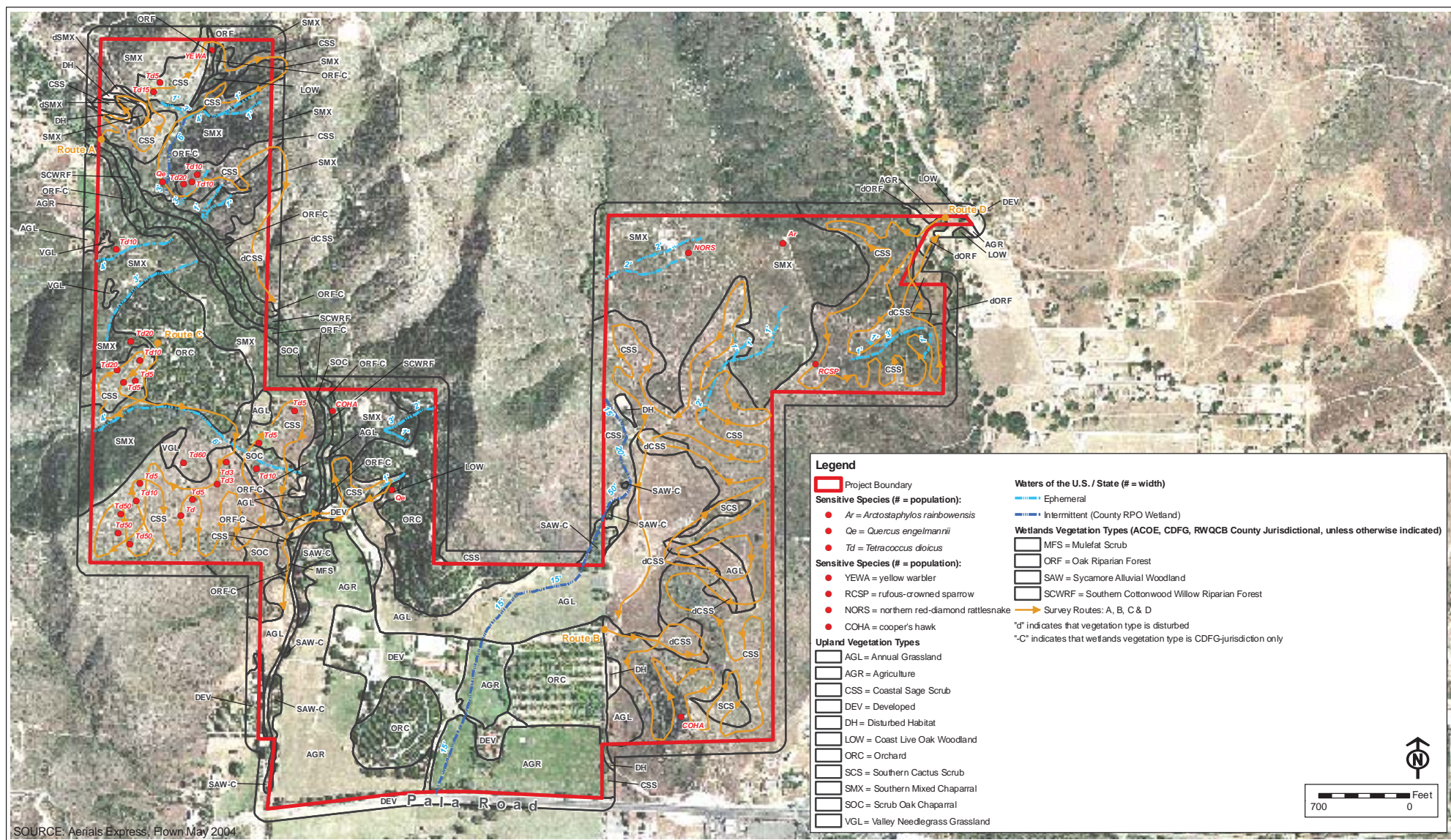
2005 Focused CAGN, LBVI, & WIFL Surveys - Warner Ranch Project  
**Regional Map**

**FIGURE**  
**1**



2005 Focused CAGN, LBVI, & WIFL Surveys - Warner Ranch Project  
**Vicinity Map**

FIGURE  
2



2005 Focused CAGN, LBVI, & WIFL Surveys - Warner Ranch Project  
**Biological Resources Map**



# **APPENDIX E**

*2010 California Gnatcatcher Focused Survey  
Results for the Warner Ranch Project, Community  
of Pala, County of San Diego, California*



December 30, 2010

6653-04

U.S. Fish and Wildlife Service  
Attn: Recovery Permit Coordinator  
6010 Hidden Valley Road, Suite 100  
Carlsbad, California 92011

***Subject: 2010 California Gnatcatcher Focused Survey Results for the Warner Ranch Project, Community of Pala, County of San Diego, California***

Dear Recovery Permit Coordinator:

This report documents the results of three protocol-level presence/absence surveys conducted by Dudek for the federally listed threatened coastal California gnatcatcher (*Polioptila californica californica*; gnatcatcher) within the approximately 638-acre Warner Ranch Project site. The project site is located within the community of Pala, San Diego County, California. The surveys were conducted in all areas of suitable habitat on site including coastal sage scrub and southern cactus scrub with the exclusion of slopes greater than 50% (approximately 170 acres surveyed).

The coastal California gnatcatcher is a federally listed threatened species and a California Department of Fish and Game (CDFG) species of special concern. It is closely associated with coastal sage scrub habitat and typically occurs below 950 feet in elevation and on slopes less than 40%, but gnatcatchers have been observed at elevations greater than 2,000 feet. The species is threatened primarily by loss, degradation, and fragmentation of coastal sage scrub habitat and is also impacted by brown-headed cowbird (*Molothrus ater*; cowbird) nest parasitism.

## **LOCATION AND EXISTING CONDITIONS**

The study area is located within an approximately 638-acre Warner Ranch Project site in the community of Pala, San Diego County, California. This site is located northwest of the Pala Casino Resort and Spa, approximately four miles east of Interstate 15, west of Pala Temecula Road, and immediately north of Highway 76 (Figure 1). The site is located within the Sections 21 and 28, Township 9 South, Range 2 West within the U.S. Geological Survey (USGS) 7.5-minute Pala and Pechanga quadrangles; as well as in the western portion of Section 22, Township 9 South, Range 2 West in the USGS 7.5-minute Pechanga quadrangle. The central point of the site is at longitude 117°5'23" W and latitude 33°22'18" N (Figure 2).

The central portion of the site is about 330 feet in elevation, is relatively flat, as are the 100 to 200-foot wide stretches of bank along Gomez Creek on the west and the two other small drainages on the eastern portion of the site. The rest of the project site consists of hillsides up to 1,000 feet above mean sea level (AMSL).

## **VEGETATION COMMUNITIES**

Nineteen distinct vegetation communities and land cover types are present on site (Table 1). Vegetation communities that are suitable for gnatcatcher include coastal sage scrub, disturbed coastal sagebrush scrub, and southern cactus scrub. Acreages of vegetation communities present on site are provided in Table 1, their distribution is depicted in Figure 3, and habitat suitable for gnatcatcher are described below.

**Table 1**  
**Vegetation Communities and Land Cover Types**

<b>Vegetation Communities</b>	<b>Existing Acreage</b>
Southern cactus scrub	4.7
Diegan coastal sage scrub	217.4
Disturbed Diegan coastal sage scrub	33.1
Scrub oak chaparral	9.6
Southern mixed chaparral	132.2
Disturbed southern mixed chaparral	0.2
Coast live oak woodland	0.5
Valley needlegrass grassland	1.3
Annual non-native grassland	37.7
Mulefat scrub	2.0
Southern cottonwood riparian forest	7.1
Sycamore alluvial woodland	5.0
Southern coast live oak riparian forest	10.8
Disturbed southern coast live oak riparian forest	2.9
Open channel	0.1
Orchard	71.7
Disturbed	4.0
Agriculture	88.5
Developed	9.1
<b>Total</b>	<b>637.7*</b>

\*Sum does not total precisely due to rounding.

### **Coastal Sage Scrub and Disturbed Coastal Sage Scrub**

The coastal sage scrub community is characterized by shrubs up to a meter tall, with many species being facultatively drought-deciduous, and thus most active during winter and early spring. This community is usually located on sites with low moisture, clay-rich soils, or steep, xeric slopes. Stem- and leaf-succulents are present, but this community is dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*) and white sage (*Salvia apiana*). Other shrubs associated with the coastal sage scrub community include lemonade berry (*Rhus integrifolia*), deerweed (*Lotus scoparius*), and small-flowered needlegrass (*Nassella lepida*) (Holland 1986).

Coastal sage scrub is mapped on gentle and steep slopes, and south-facing exposures in both the western and eastern portions of the site. In general, shrub cover in these areas is relatively low (approximately 30% to 60%) with common species including California sagebrush, flat-top buckwheat, and laurel sumac. Where coastal sage scrub occurs as a mosaic with southern mixed chaparral in the northern portion of the site, yellow bush-penstemon (*Keckiella antirrhinoides* ssp. *antirrhinoides*) is a common component.

Disturbed coastal sage scrub is similar in composition to undisturbed, but has a lower percent cover of native species and a high percent cover of non-native species. A differentiation between disturbed and undisturbed vegetation communities was made in the field based on species composition where native shrub cover at 20% to 50% was classified as “disturbed.” Areas with less than 20% native shrub cover were mapped as non-native communities or other land cover types.

### **Southern Cactus Scrub**

The community can be considered a subtype of coastal sage scrub, but generally consists of over 50% cover of cactus species (*Cylindropuntia* spp. or *Opuntia* spp.) with associated species often being typical coastal sage scrub species (see coastal sage description above).

Portions of the southeastern study area are dominated by prickly-pear cactus (*Opuntia littoralis*) with relatively large gaps occupied by non-native grasses and coastal sage scrub shrubs.

## **METHODS**

All areas of suitable habitat areas within the project study area were surveyed three times by Dudek wildlife biologists Anita M. Hayworth (AMH, Permit # TE 781084-7), Paul M. Lemons (PML, Permit # TE 051248-3), Kamarul J. Muri (KJM, Permit # TE 051250-2), Brock A. Ortega (BAO; Permit # TE 813545-6), Jeffrey D. Priest (JDP, Permit # TE 840619-3), and

Tricia L. Wotipka (TLW, Permit # TE 840619-3) according to the schedule provided in Table 2. Focused surveys for gnatcatcher were initiated on August 24, 2010, and continued through September 10, 2010.

**Table 2**  
**California Gnatcatcher Survey Details and Conditions**

Survey Pass	Survey Area	Date	Hours	Personnel	Conditions
1	A	8/24/10	0600-1220	BAO	Start: 10% cc, 0 mph wind, 70°F; End: 0%cc, 0 mph wind, 80°F
1	B	8/27/10	0600-1110	AMH	Start: 0% cc, 3-5 mph wind, 65°F; End: 0%cc, 5-8 mph wind, 75°F
1	C	8/27/10	0700-1040	PML	Start: 0% cc, 1-2 mph wind, 63°F; End: 0%cc, 3-6 mph wind, 76°F
2	A	9/10/10	0700-1120	PML	Start: 0% cc, 0-1 mph wind, 58°F; End: 0%cc, 1-4 mph wind, 78°F
2	B	9/3/10	0630-1145	TLW	Start: 0% cc, 0-2 mph wind, 58°F; End: 0%cc, 2-4 mph wind, 91°F
2	C	9/3/10	0630-1300	KJM	Start: 0% cc, 0 mph wind, 57°F; End: 0%cc, 3-8 mph wind, 96°F
3	A	9/17/10	0750-1200	JDP	Start: 100% cc, <1 mph wind, 57°F; End: 0%cc, 1-5 mph wind, 80°F
3	B	9/14/10	0715-1200	JDP	Start: 0% cc, <1 mph wind, 54°F; End: 0%cc, 1-5 mph wind, 88°F
3	C	9/10/10	0630-1215	KJM	Start: 0% cc, 0-1 mph wind, 55°F; End: 0%cc, 4-8 mph wind, 92°F

The focused surveys for gnatcatcher were conducted in conformance with the currently accepted protocol of the USFWS, Coastal California gnatcatcher (*Poliophtila californica californica*) 1997 Presence/Absence Survey Protocol. Focused surveys within an enrolled NCCP/HCP require three surveys in all suitable habitat and a maximum of 100 acres surveyed per day; thus, the project site was divided into 3 survey areas (A, B, and C), each of which was surveyed three times. Survey routes for these areas were arranged to cover 100% of the suitable habitat on site with the exclusion of slopes greater than 50% which were deemed unsuitable for the gnatcatcher (Figure 3). Habitat suitable for gnatcatcher on slopes less than 50% included 80.8 acres for survey area A, 25.2 acres for survey area B, and 64.1 acres for survey area C. Survey routes were digitized by Dudek using ArcGIS software, and are presented on Figure 3.

A tape of recorded California gnatcatcher vocalizations was played approximately every 50–100 to induce responses from potentially present California gnatcatchers. If a California gnatcatcher

*Recovery Permit Coordinator*

*Subject: 2010 California Gnatcatcher Focused Survey Results for the Warner Project, County of San Diego, California*

---

had been detected, tape-playback would have been terminated to minimize potential for harassment. A 200-scale (1 inch = 200 feet) aerial map of the site overlaid with vegetation polygons and topography was used to map any gnatcatchers detected. Binoculars (8 × 42 and 10 × 50) were used to aid in detecting and identifying wildlife species. Weather conditions, time of day and season were appropriate for the detection of gnatcatcher (Table 2).

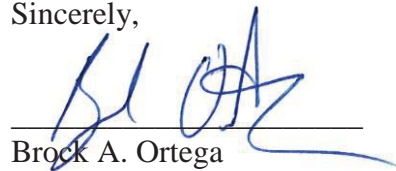
## RESULTS

No coastal California gnatcatchers were observed or detected during the focused surveys described in this report. Sixty-six wildlife species were observed during the focused survey. A full list of wildlife species observed during the survey is provided in Appendix A.

Please feel free to contact me at 760.479.4287 with questions or if you require additional information.

I certify that the information in this survey report and attached exhibits fully and accurately represent my work.

Sincerely,



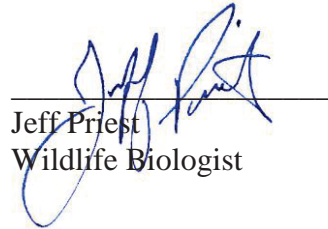
Brock A. Ortega  
Senior Wildlife Biologist



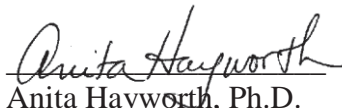
Paul Lemons  
Wildlife Biologist



Kamarul Muri  
Wildlife Biologist



Jeff Priest  
Wildlife Biologist



Anita Hayworth, Ph.D.  
Senior Wildlife Biologist



Tricia Wotipka  
Wildlife Biologist

Att: *Figures 1–3*

*Appendix A, List of Wildlife Species Observed or Detected On Site.*

*Recovery Permit Coordinator*

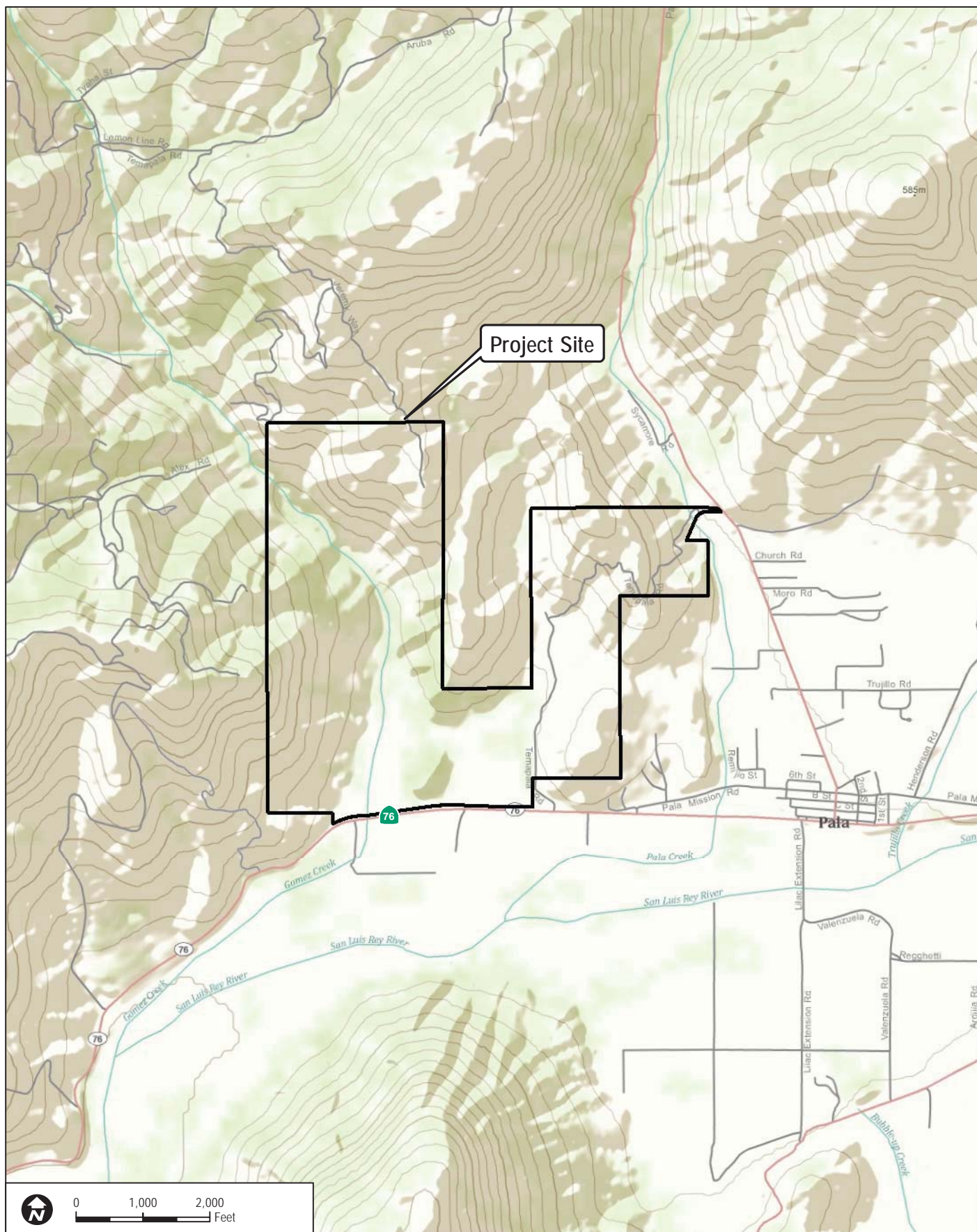
*Subject: 2010 California Gnatcatcher Focused Survey Results for the Warner Project, County of San Diego, California*

---

## **REFERENCES**

- Holland, R.F. 1986. *Preliminary descriptions of the terrestrial natural communities of California. Nongame-Heritage Program, California Department of Fish and Game.*
- Oberbauer, T., M. Kelly, and J. Buegge. March 2008. Draft Vegetation Communities of San Diego County. Based on “Preliminary Descriptions of the Terrestrial Natural Communities of California”, Robert F. Holland, Ph.D., October 1986.
- USFWS. (US Fish and Wildlife Service). 1997. Coastal California Gnatcatcher (*Poliophtila californica californica*) Presence/Absence Survey Protocol. Provided by the USFWS Carlsbad Fish and Wildlife Office on July 28, 1997.





**DUDEK**

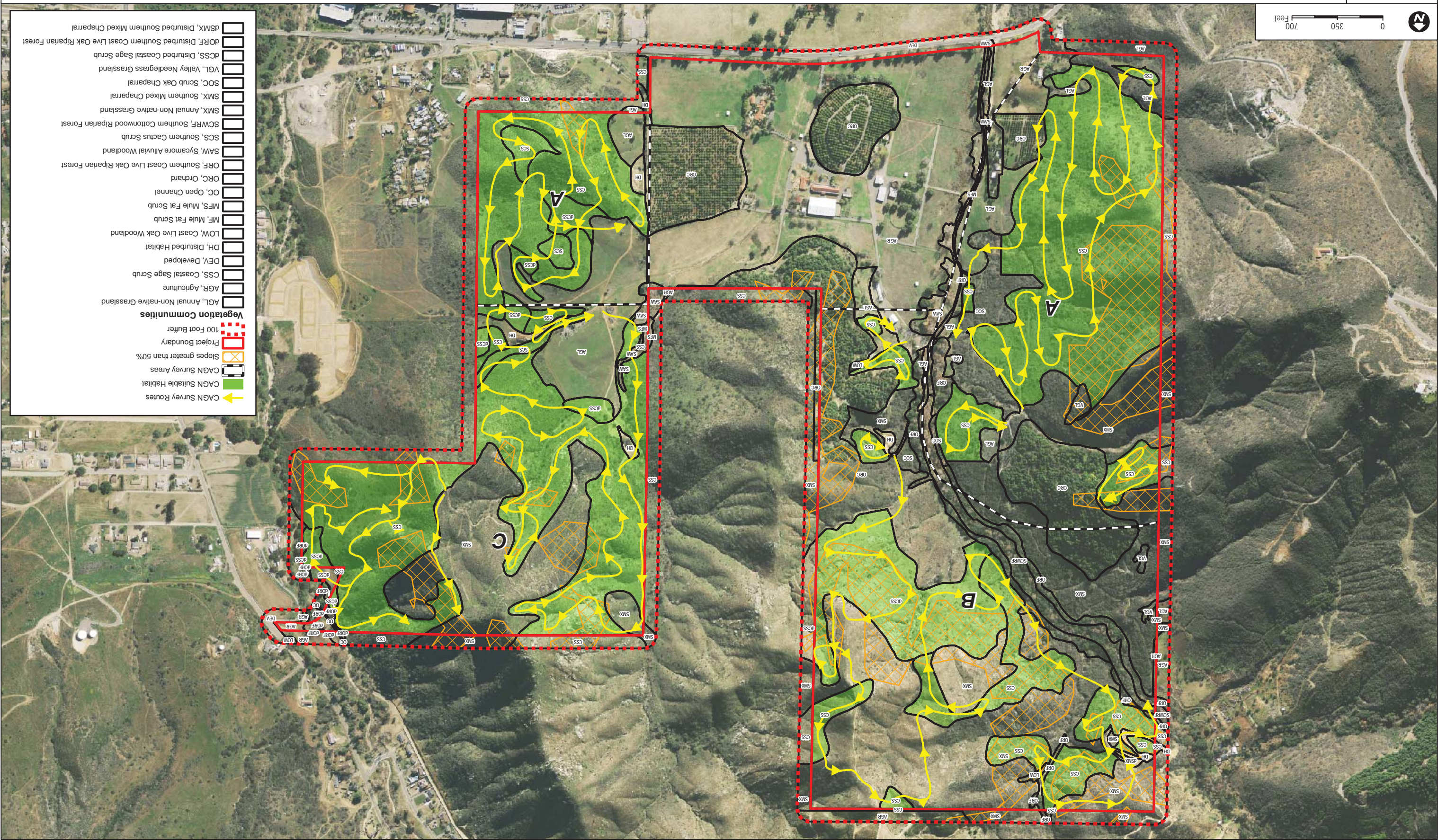
6653-01

DECEMBER 2010

SOURCE: ArcGIS Online World Topographic Map Service

Warner Ranch - 2010 California Gnatcatcher Survey Report

**FIGURE 2**  
**Vicinity Map**



- Vegetation Communities**
- CAGN Survey Routes
  - CAGN Suitable Habitat
  - CAGN Survey Areas
  - Slopes greater than 50%
  - Project Boundary
  - 100 Foot Buffer
- Vegetation Communities**
- DSMX, Disturbed Southern Mixed Chaparral
  - DORF, Disturbed Southern Coast Live Oak Riparian Forest
  - DCSS, Disturbed Coastal Sage Scrub
  - VGL, Valley Needlegrass Grassland
  - SOC, Scrub Oak Chaparral
  - SMX, Southern Mixed Chaparral
  - SMX, Annual Non-native Grassland
  - SCWF, Southern Cottonwood Riparian Forest
  - SCS, Southern Cactus Scrub
  - SAW, Sycamore Alluvial Woodland
  - ORF, Southern Coast Live Oak Riparian Forest
  - ORC, Orchard
  - OC, Open Channel
  - MFS, Mule Fat Scrub
  - MF, Mule Fat Scrub
  - LOW, Coast Live Oak Woodland
  - DH, Disturbed Habitat
  - DEV, Developed
  - CSS, Coastal Sage Scrub
  - AGR, Agriculture
  - AGL, Annual Non-native Grassland

FIGURE 3  
Survey Routes

INTENTIONALLY LEFT BLANK

# **APPENDIX A**

*Wildlife Species Observed or Detected On Site*



# APPENDIX A

## Wildlife Species Observed or Detected On Site

---

### WILDLIFE SPECIES – VERTEBRATES

#### AMPHIBIANS

##### **HYLIDAE – TREEFROGS**

*Hyla regilla* – Pacific treefrog

#### REPTILES

##### **IGUANIDAE – IGUANID LIZARDS**

*Sceloporus occidentalis* – western fence lizard

*Uta stansburiana* – common side-blotched lizard

##### **SKINIDAE – SKINKS**

*Plestidon skiltonianus* – Western skink

#### BIRDS

##### **ARDEIDAE – HERONS, BITTERNS, AND ALLIES**

*Ardea alba* – great egret

##### **THRESKIORNITHIDAE – IBISES**

*Plegadis chihi* – white-faced ibis

##### **CATHARTIDAE – NEW WORLD VULTURES**

*Cathartes aura* – turkey vulture

##### **ACCIPITRIDAE – HAWKS**

*Accipiter cooperii* – Cooper’s hawk

*Buteo jamaicensis* – red-tailed hawk

*Buteo lineatus* – red-shouldered hawk

*Elanus leucurus* – white-tailed kite

##### **FALCONIDAE – CARACARAS AND FALCONS**

*Falco sparverius* – American kestrel

##### **ODONTOPHORIDAE – NEW WORLD QUAILS**

*Callipepla californica* – California quail

##### **CHARADRIIDAE – LAPWINGS AND PLOVERS**

*Charadrius vociferous* – killdeer

## APPENDIX A (Continued)

---

### **COLUMBIDAE – PIGEONS AND DOVES**

*Columbina passerine* – common ground-dove

*Zenaida macroura* – mourning dove

### **CUCULIDAE – ROADRUNNERS AND CUCKOOS**

*Geococcyx californianus* – greater roadrunner

### **TYTONIDAE – BARN OWLS**

*Tyto alba* – barn owl

### **STRIGIDAE—TYPICAL OWLS**

*Bubo virginianus* – great horned owl

### **TROCHILIDAE – HUMMINGBIRDS**

*Calypte anna* – Anna's hummingbird

*Calypte costae* – Costa's hummingbird

### **PICIDAE – WOODPECKERS**

*Colaptes auratus* – northern flicker

*Melanerpes formicivorus* – acorn woodpecker

*Picoides nuttallii* – Nuttall's woodpecker

### **TYRANNIDAE – TYRANT FLYCATCHERS**

*Empidonax difficilis* – Pacific-slope flycatcher

*Myiarchus cinerascens* – ash-throated flycatcher

*Sayornis nigricans* – black phoebe

*Sayornis saya* – Say's phoebe

*Tyrannus vociferans* – Cassin's kingbird

### **HIRUNDINIDAE – SWALLOWS**

*Petrochelidon pyrrhonota* – cliff swallow

### **CORVIDAE – JAYS AND CROWS**

*Apelocoma californica* – western scrub-jay

*Corvus brachyrhynchos* – American crow

*Corvus corax* – common raven

### **PARIDAE – TITMICE**

*Baeolophus inornatus* – oak titmouse

## APPENDIX A (Continued)

---

### **AEGITHALIDAE – BUSHTITS**

*Psaltiriparus minimus* – bushtit

### **TROGLODYTIDAE – WRENS**

*Campynchus brunneicapillus* – cactus wren

*Thryomanes bewickii* – Bewick's wren

*Troglodytes aedon* – house wren

### **POLIOPTIDAE – GNATCATCHERS**

*Poliophtila caerulea* – blue-gray gnatcatcher

### **TURDIDAE – THRUSHES**

*Sialia mexicana* – western bluebird

### **SYLVIIDAE – SYLVIID WARBLERS**

*Chamaea fasciata* – wrentit

### **MIMIDAE – MOCKINGBIRDS AND THRASHERS**

*Mimus polyglottos* – northern mockingbird

*Toxostoma redivivum* – California thrasher

### **PTILOGONATIDAE – SILKY FLYCATCHERS**

*Phainopepla nitens* – phainopepla

### **STURNIDAE – STARLINGS**

\* *Sturnus vulgaris* – European starling

### **VIREONIDAE – VIREOS**

*Vireo huttoni* – Hutton's vireo

### **PARULIDAE – WOOD-WARBLERS**

*Dendroica coronata* – yellow-rumped warbler

### **EMBERIZIDAE – EMBERIZIDS**

*Aimophila ruficeps canescens* – rufous-crowned sparrow

*Melospiza melodia* – song sparrow

*Melospiza crissalis* – California towhee

*Pipilo maculatus* – spotted towhee

### **ICTERIDAE – BLACKBIRDS**

*Icterus cucullatus* – hooded oriole

*Quiscalus mexicanus* – great-tailed grackle

## APPENDIX A (Continued)

---

### **FRINGILLIDAE – FINCHES**

*Carpodacus mexicanus* – house finch

*Spinus psaltria* – lesser goldfinch

### **MAMMALS**

### **LEPORIDAE – HARES AND RABBITS**

*Sylvilagus bachmani* – brush rabbit

### **SCIURIDAE – SQUIRRELS**

*Spermophilus beecheyi* – California ground squirrel

### **GEOMYIDAE – POCKET GOPHERS**

*Thomomys bottae* – Botta's pocket gopher

### **HETEROMYIDAE – POCKET MICE AND KANGAROO RATS**

*Dipodomys* spp – kangaroo rat

### **CANIDAE – WOLVES AND FOXES**

*Canis latrans* – coyote

### **FELIDAE – CATS**

*Lynx rufus* – bobcat

### **CERVIDAE – UNGULATES**

*Odocoileus hemionus* – mule deer

### **WILDLIFE SPECIES – INVERTEBRATES**

### **BUTTERFLIES AND MOTHS**

### **PAPILIONIDAE – SWALLOWTAILS**

*Papilio eurymedon* – pale swallowtail

*Papilio rutulus* – tiger swallowtail

### **PIERIDAE - WHITES AND SULFURS**

*Pieris rapae rapae* – cabbage butterfly

### **RIODINIDAE - METALMARKS**

*Apodemia mormo virgulti* – Behr's metalmark

## **APPENDIX F**

*2010 Least Bell's Vireo and Southwestern Willow  
Flycatcher Focused Survey Results for the Warner  
Project, County of San Diego, California*



December 20, 2010

6653-04

U.S. Fish and Wildlife Service  
Attn: Recovery Permit Coordinator  
6010 Hidden Valley Road, Suite 100  
Carlsbad, California 92011

***Subject: Least Bell's Vireo and Southwestern Willow Flycatcher Focused Survey  
Results for the Warner Project, County of San Diego, California***

Dear Recovery Permit Coordinator:

This report documents the results of eight protocol-level presence/absence surveys for the state- and federally listed endangered least Bell's Vireo (*Vireo bellii pusillus*; vireo) and five protocol-level presence/absence surveys for the state- and federally listed endangered southwestern willow flycatcher (*Empidonax traillii extimus*; flycatcher). The focused surveys were conducted within approximately 23 acres of suitable habitat within a portion of the existing approximately 638-acre Warner site in Pala, California. The surveys were conducted in all areas of suitable habitat for each species.

The southwestern willow flycatcher and least Bell's vireo are closely associated with riparian habitats, especially densely vegetated willow scrub and riparian forest vegetation. These species are threatened primarily by loss, degradation, and fragmentation of riparian habitats, as well as by brown-headed cowbird (*Molothrus ater*; cowbird) nest parasitism.

## **LOCATION AND EXISTING CONDITIONS**

The study area is within the approximately 638-acre Warner property in Pala, California. This site is located northwest of the Pala Casino Resort and Spa, approximately four miles east of Interstate 15, west of Pala Temecula Road, and immediately north of Highway 76 (Figure 1). The site is located within Sections 21 and 28, Township 9 South, Range 2 West within the U.S. Geological Survey (USGS) 7.5-minute Pala and Pechanga quadrangles; as well as in the western portion of Section 22, Township 9 South, Range 2 West in the USGS 7.5-minute Pechanga quadrangle. The central point of the site is at longitude 117°5'23" W and latitude 33°22'18" N (Figure 2).

Four riparian areas occur on the project site: Gomez Creek is the western-most and largest drainage on site; a tributary to Gomez Creek is present near the northern portion of the site; an approximately 85-foot-long segment of Pala Creek crosses the eastern-most portion of the

project area; and an area in the central portion of the site that supports sycamore alluvial woodland. The central portion of the site is about 330 feet in elevation, is relatively flat, as are the 100–800 foot wide stretches of bank along Gomez Creek on the west and the two other small drainages on the eastern portion of the site. The rest of the project site consists of hillsides up to 1,000 feet above mean sea level (AMSL).

## VEGETATION COMMUNITIES

Nineteen distinct vegetation communities and land cover types are present on site (Table 1). Riparian vegetation communities mapped on site include sycamore alluvial woodland, southern coast live oak riparian and southern cottonwood riparian forests. Native upland communities and land covers, including coastal sage scrub, chaparral, disturbed habitat and orchards, also occur on site, but are not considered suitable habitat for purposes of this survey report. Acreages of vegetation communities present on site are provided in Table 1, their distribution is depicted in Figure 3, and habitat suitable for vireo and flycatcher are described below.

**Table 1**  
**Vegetation Communities and Land Cover Types**

Vegetation Communities	Existing Acreage
Southern cactus scrub	4.65
Diegan coastal sage scrub	217.4
Disturbed Diegan coastal sage scrub	33.1
Scrub oak chaparral	9.59
Southern mixed chaparral	132.2
Disturbed southern mixed chaparral	0.19
Coast live oak woodland	0.47
Valley needlegrass grassland	1.26
Annual non-native grassland	37.7
Mulefat scrub	1.97
Southern cottonwood riparian forest	7.14
Sycamore alluvial woodland	5.04
Southern coast live oak riparian forest	10.8
Disturbed southern coast live oak riparian forest	2.85
Open channel	0.13
Orchard	71.7
Disturbed	3.99
Agriculture	88.5
Developed	9.09
<b>Total</b>	<b>637.7</b>

## **Sycamore Alluvial Woodland**

Sycamore alluvial woodland is a winter-deciduous, open, broadleafed riparian community, with sycamores (*Platanus racemosa*) being the dominant species, and blue elderberry (*Sambucus nigra* ssp. *cerulea*) often appearing in the subcanopy. Introduced grasses and mulefat (*Baccharis salicifolia*) comprise the understories of this community. Sycamore alluvial woodlands, which often have a clumped appearance due to the sycamore's vegetative reproduction, are usually situated on cobbly substrate in and around the depositional channels of intermittently flowing streams. Other common species found in this community include oaks (*Quercus* spp.), Fremont cottonwood (*Populus fremontii*), willows (*Salix* spp.), and introduced herbaceous plants.

On site, sycamore alluvial woodland communities occur primarily in the southwest region, along the southern portion of Gomez Creek. This community also occurs along the channel tributary of Gomez Creek in the central eastern portion of the site. The vegetation is dominated by mature western sycamore with a variety of understory species including a few non-native species such as bristly ox-tongue (*Picris echioides*), shortpod mustard (*Hirshfeldia incana*), and ripgut brome (*Bromus diandrus*).

## **Southern Coast Live Oak Riparian Forest**

According to Holland (1986), this vegetation community can range from an open to a dense evergreen, riparian, and sclerophyllous woodland. Coast live oak (*Quercus agrifolia*) is the dominant species, and seems to have richer herb diversity and fewer understory shrubs compared to other riparian communities. California wild rose (*Rosa californica*), blue elderberry (*Sambucus nigra* spp. *cerulea*), and poison oak (*Toxicodendron diversilobum*) are among the species contained beneath the canopy within this community.

Southern coast live oak riparian forest occurs in association with Gomez Creek in the northwest region of the site. A few understory species observed on site include poison oak, bristly ox-tongue, California mugwort (*Artemisia douglasiana*), and bull thistle (*Cirsium vulgare*).

## **Southern Cottonwood Riparian Forest**

Southern cottonwood riparian forest is generally an open, winter-deciduous broad-leafed riparian forest dominated by cottonwood (*Populus* spp.) and willow (*Salix* spp.) species with a shrubby willow understory. Frequently overflowed and sub-irrigated lands alongside streams and rivers provide the moist, mineral soil necessary for dominant species recruitment in this soil type, and recruitment for common species such as mulefat, sycamore, and stinging nettle (*Urtica dioica* ssp. *holosericea*) (Holland 1986).

Southern cottonwood riparian forest occurs in the northwest region of the site, and is associated with Gomez Creek. Species composition includes a mixture of arroyo willow (*Salix lasiolepis*), Fremont's cottonwood, and coast live oak in the tree layer, a shrub layer of mulefat and giant cane (*Arundo donax*), and an herbaceous layer that includes dwarf nettle (*Urtica urens*) and cocklebur (*Xanthium strumarium*).

## METHODS

Suitable habitat within the project site was surveyed eight times for vireo and five times for flycatcher (Table 2) by Dudek wildlife biologists Jeffrey D. Priest (JDP, Permit # TE8406191) and Thomas S. Liddicoat (TSL, Permit # TE139634). Focused surveys for these species were initiated on May 11, 2010, and continued through July 28, 2010.

**Table 2**  
**Survey Conditions**

Survey Pass*	Date	Hours	Personnel	Focus	Conditions
L 1/8	5/11/10	0545–1100	TSL	LBVI; habitat assessments	Start: 20% cc, 0 mph wind, 52°; End: 30%cc, 0–3 mph wind, 67°F
L 2/8 W 1/5	5/21/10	0610–1100	JDP	LBVI/WIFL	Start: 100% cc, 0–1 mph wind, 56°F; End: 80%cc, 1–4 mph wind, 68°F
L 3/8 W 2/5	6/2/10	0645–1045	JDP	LBVI/WIFL	Start: 100%cc, <1 mph wind, 57°F; End: 30%cc, 0–3 mph wind, 70°F
L 4/8	6/11/10	0545–0840	TSL	LBVI	Start: 100% cc, 0 mph wind, 62°F; End: 100%cc, 0–3 mph wind, 64°F
L 5/8 W 3/5	6/21/10	0700–1145	JDP	LBVI/WIFL	Start: 100% cc, 0–3 mph wind, 59°F; End: 0%cc, 1–5 mph wind, 72°F
L 6/8 W 4/5	7/2/10	0745–1145	JDP	LBVI/WIFL	Start: 30% cc, <1 mph wind, 62°F; End: 0%cc, 1–5 mph wind, 76°F
L 7/8 W 5/5	7/12/10	0750–1115	JDP	LBVI/WIFL	Start: 0% cc, 0–3 mph wind, 67°F; End: 0% cc, 1–4 mph wind, 73°F
L 8/8	7/28/10	0700–1115	JDP	LBVI	Start: 100% cc, <1 mph wind, 60°F; End: 0%cc, 1–4 mph wind, 73°F

\* L = LBVI; W = WIFL

Suitable habitat on site for vireo and flycatcher was determined through a habitat assessment conducted during the first survey pass. During this first pass, all areas mapped as a riparian vegetation community (i.e., sycamore alluvial woodland, southern coast live oak riparian forest, southern cottonwood riparian forest) were thoroughly evaluated on-foot for the potential to support vireo and/or flycatcher. Of the riparian areas mapped, two areas were considered suitable; the primary channel of Gomez Creek and a small tributary to Gomez Creek in the

central part of the site (Figure 3). The areas in the northwestern and northeastern portions of the site were determined to be unsuitable for vireo and flycatcher because of their extremely small size, lack of herbaceous understory, and level of disturbance. The two areas determined suitable and surveyed in 2010 included an approximately 5,400-linear-foot stretch of Gomez Creek and an approximately 700-linear-foot section of a tributary to Gomez Creek (Figure 3).

Surveys for flycatcher and vireo were conducted concurrently during all flycatcher visits. All surveys consisted of slowly walking a methodical, meandering transect within and adjacent to suitable riparian habitat on site. The perimeter also was surveyed. This route was arranged to cover 100% of suitable habitat on site. A vegetation map (1 inch=200 feet) of the project site was carried in the field to record any detected gnatcatcher, vireo or flycatcher. Binoculars (8.5×42; 10×50) were used to aid in detecting and identifying wildlife species.

The five surveys conducted for flycatcher followed the currently accepted protocol (Sogge et al., 1997) in conjunction with the *2000 Southwestern Willow Flycatcher Protocol Revision* issued by the U.S. Fish and Wildlife Service (USFWS), which states that a minimum of five survey visits is needed to evaluate project effects on flycatchers. It is recommended that one survey is made during the period from May 15–31, one survey from June 1–21, and three surveys between June 22 and July 17. A tape of recorded flycatcher vocalizations was used, approximately every 50–100 feet within suitable habitat, to induce flycatcher responses. If a flycatcher had been detected, playing of the tape would have ceased to avoid harassment.

A Section 10(a)(1)(A) permit is not required to conduct presence/absence surveys for vireo. The eight surveys for vireo followed the currently accepted *Least Bell's Vireo Survey Guidelines* (USFWS 2001), which states that a minimum of eight survey visits should be made to all riparian areas and any other potential vireo habitats during the period from April 10 to July 31. The site visits are required to be conducted at least 10 days apart to maximize the detection of early and late arrivals, females, non-vocal birds, and nesting pairs. Taped playback of vireo vocalizations were not used during the surveys. Surveys were conducted between dawn and 1200 and were not conducted during periods of excessive or abnormal cold, heat, wind, rain, or other inclement weather.

Weather conditions, time of day and season were appropriate for the detection of flycatcher and vireo (Table 2).

*Recovery Permit Coordinator*

*Subject: 2010 Least Bell's Vireo and Southwestern Willow Flycatcher Focused Survey Results  
for the Warner Project, County of San Diego, California*

---

## RESULTS

No southwestern willow flycatchers were detected during the surveys. Two flycatchers, later determined to be migrants, were observed during the first survey on May 21, 2010. One individual willow flycatcher was observed visually and was repeatedly calling from a perch in the top canopy of a sycamore. A second flycatcher individual was observed on that same survey pass approximately 1,800 feet north of the first individual; however, it did not respond to the call playback. It was determined that neither individual was a southwestern willow flycatcher, by the fact that they were not present during any subsequent survey passes.

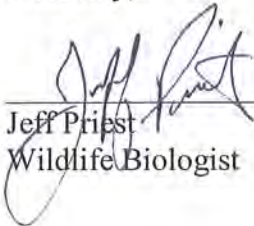
No least Bell's vireo were observed during the focused surveys. During the survey, brown-headed cowbird (*Molothrus ater*) also was observed along Gomez Creek.

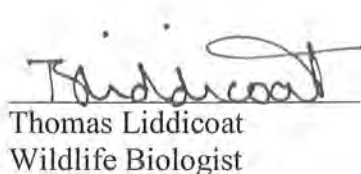
Sixty-eight wildlife species were detected during the focused surveys. A full list of wildlife species detected during the survey is provided in Appendix A. Flycatcher protocol data forms are included as Appendix B. Exterior and interior photographs of the suitable habitat surveyed on site are included as Appendix C.

Please feel free to contact me at 760.479.4287 with questions or if you require additional information.

I certify that the information in this survey report and attached exhibits fully and accurately represent my work.

Sincerely,

  
Jeff Priest  
Wildlife Biologist

  
Thomas Liddicoat  
Wildlife Biologist

Att: *Figure 1, Regional Map*  
*Figure 2, Vicinity Map*  
*Figure 3, LBVI and WIFL Focused Survey Area*  
*Appendix A, Wildlife Species Detected in Study Area*  
*Appendix B, Flycatcher Dataforms*  
*Appendix C, Photo Exhibits of Habitat On Site*

## **REFERENCES**

- Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California. Nongame-Heritage Program, California Department of Fish and Game.
- Oberbauer, T., M. Kelly, and J. Buegge. March 2008. Draft Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California", Robert F. Holland, Ph.D., October 1986.
- Sogge, M.K., R.M. Marshall, S.J. Sferra, and T.J. Tibbitts. 1997. A southwestern willow flycatcher natural history summary and survey protocol. National Park Service. U.S. Department of Interior.
- USFWS (U.S. Fish and Wildlife Service). 2000. Southwestern Willow Flycatcher Protocol Revision 2000. July 11.
- USFWS. 2001. Least Bell's Vireo Survey Guidelines. January 19.

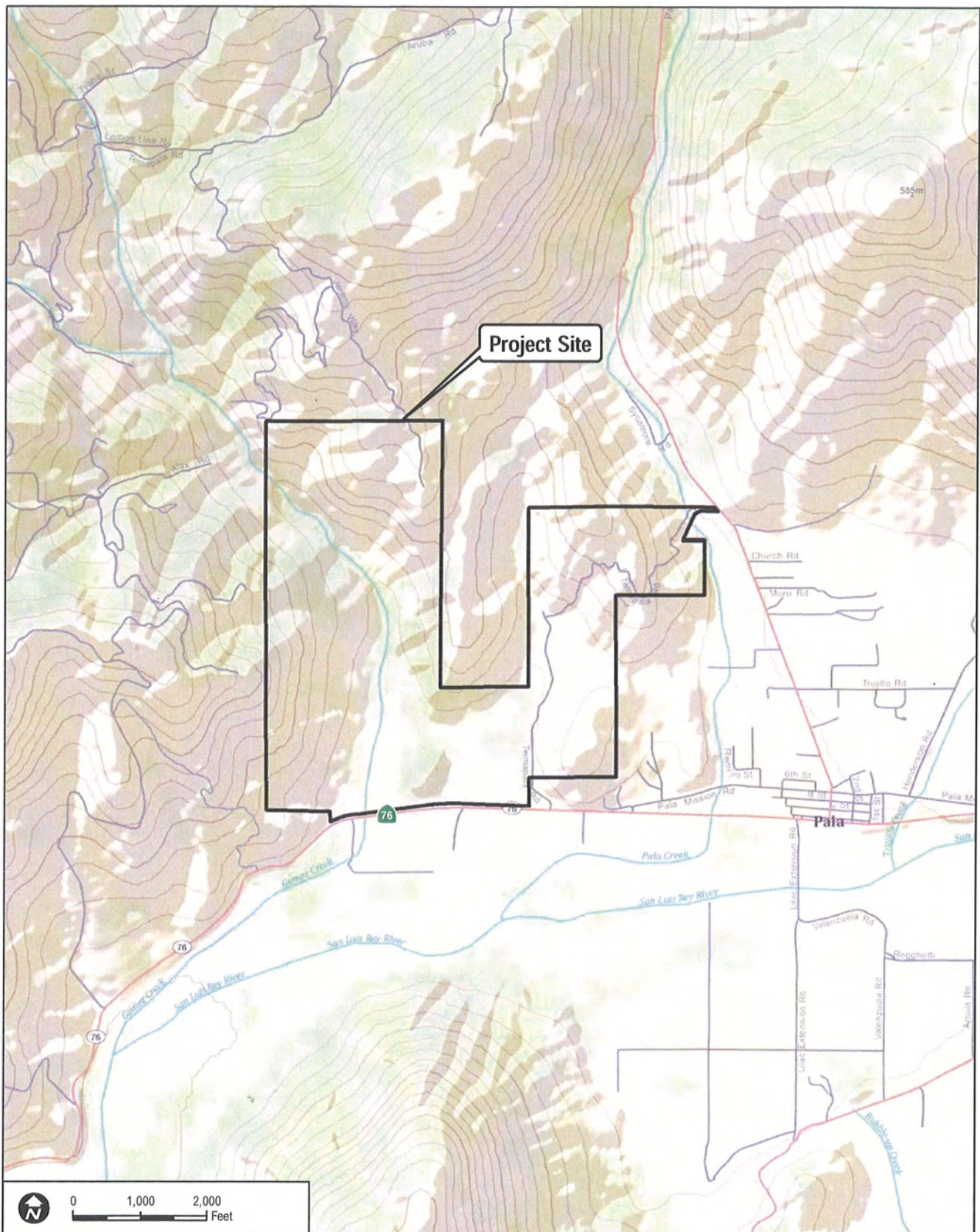


**FIGURE 1**  
**Regional Map**

**DUDEK**

6653-01  
DECEMBER 2010

Warner Ranch - 2010 LBVI and WIFL Focused Survey Report



**DUDEK**

6653-01

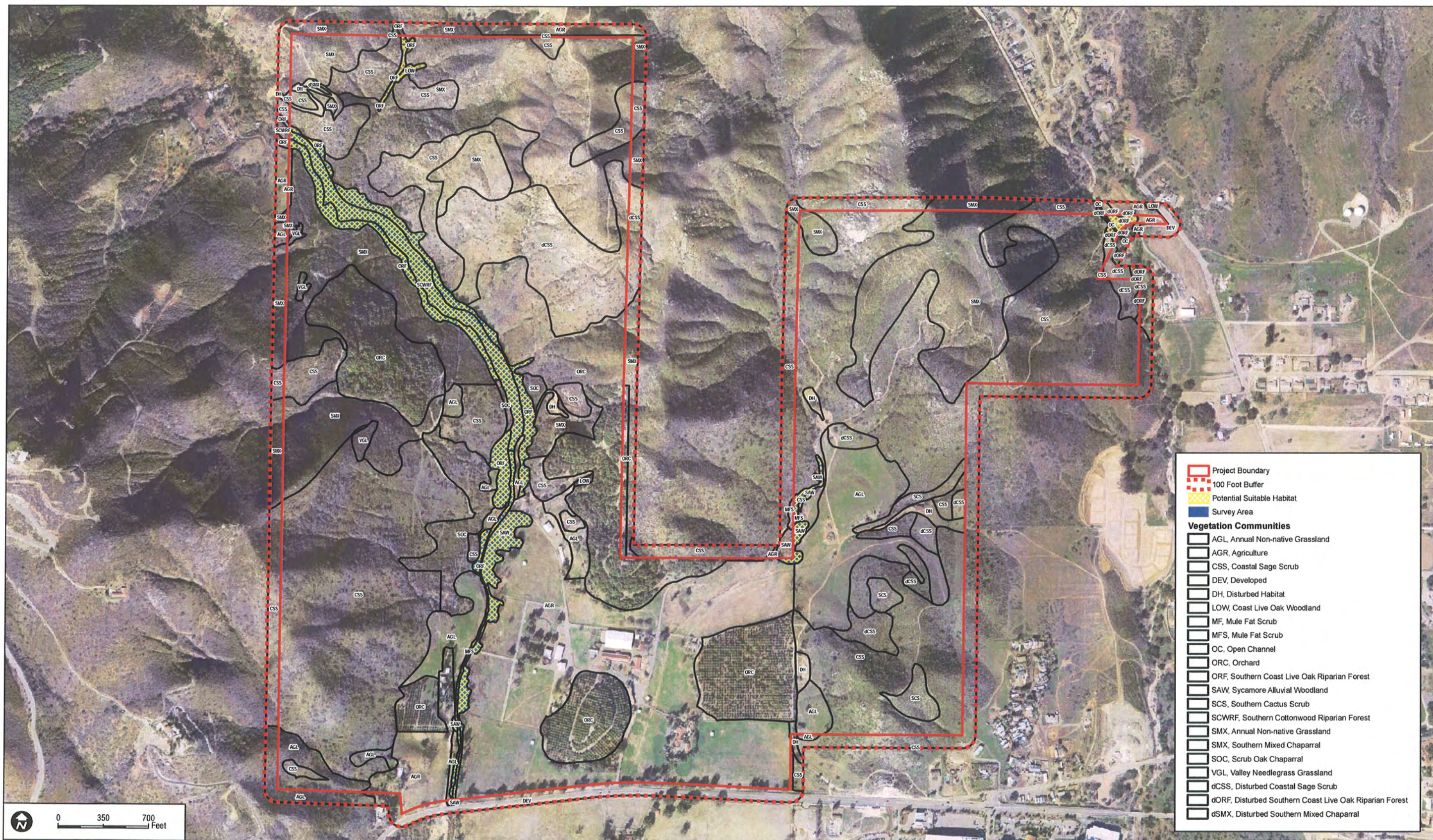
DECEMBER 2010

SOURCE: USGS 7.5-Minute Series Quadrangle.

Warner Ranch - 2010 LBVI and WIFL Focused Survey Report

**FIGURE 2**  
**Vicinity Map**

INTENTIONALLY LEFT BLANK



**FIGURE 3**  
**LBVI and WIFL Focused Survey Area**

INTENTIONALLY LEFT BLANK

# **APPENDIX A**

*Wildlife Species Detected in Study Area*





# **APPENDIX A**

## **Wildlife Species Detected in Study Area**

---

### **WILDLIFE SPECIES – VERTEBRATES**

#### **AMPHIBIANS**

##### **HYLIDAE – TREEFROGS**

*Hyla regilla* – Pacific treefrog

*Pseudacris cadaverina* – California treefrog

#### **REPTILES**

##### **IGUANIDAE – IGUANID LIZARDS**

*Sceloporus occidentalis* – western fence lizard

*Uta stansburiana* – common side-blotched lizard

##### **SKINIDAE – SKINKS**

*Plestidon skiltonianus* – Western skink

#### **BIRDS**

##### **CATHARTIDAE – NEW WORLD VULTURES**

*Cathartes aura* – turkey vulture

##### **ACCIPITRIDAE – HAWKS**

*Buteo jamaicensis* – red-tailed hawk

*Buteo lineatus* – red-shouldered hawk

##### **FALCONIDAE – CARACARAS AND FALCONS**

*Falco sparverius* – American kestrel

##### **ODONTOPHORIDAE – NEW WORLD QUAILS**

*Callipepla californica* – California quail

##### **COLUMBIDAE – PIGEONS AND DOVES**

*Columbina passerina* – common ground-dove

*Zenaida macroura* – mourning dove

##### **STRIGIDAE – TYPICAL OWLS**

*Bubo virginianus* – great horned owl

## APPENDIX A (Continued)

---

### TROCHILIDAE – HUMMINGBIRDS

- Calypte anna* – Anna’s hummingbird
- Calypte costae* – Costa’s hummingbird

### PICIDAE – WOODPECKERS

- Colaptes auratus* – northern flicker
- Melanerpes formicivorus* – acorn woodpecker
- Picoides nuttallii* – Nuttall’s woodpecker

### TYRANNIDAE – TYRANT FLYCATCHERS

- Contopus sordidulus* – western wood-pewee
- Empidonax oberholseri* – dusky flycatcher
- Empidonax difficilis* – Pacific-slope flycatcher
- Empidonax trailli* – willow flycatcher (migrant)
- Myiarchus cinerascens* – ash-throated flycatcher
- Sayornis nigricans* – black phoebe
- Sayornis saya* – Say’s phoebe
- Tyrannus vociferans* – Cassin’s kingbird
- Tyrannus verticalis* – western kingbird

### HIRUNDINIDAE – SWALLOWS

- Petrochelidon pyrrhonota* – cliff swallow
- Tachycineta bicolor* – tree swallow

### CORVIDAE – JAYS AND CROWS

- Aphelocoma californica* – western scrub-jay
- Corvus brachyrhynchos* – American crow
- Corvus corax* – common raven

### PARIDAE – TITMICE

- Baeolophus inornatus* – oak titmouse

### AEGITHALIDAE – BUSHTITS

- Psaltirparus minimus* – bushtit

### SITTIDAE – NUTHATCHES

- Sitta carolinensis* – white-breasted nuthatch

## APPENDIX A (Continued)

---

### TROGLODYTIDAE – WRENS

*Campynchus brunneicapillus* – cactus wren

*Thryomanes bewickii* – Bewick's wren

*Troglodytes aedon* – house wren

### TURDIDAE – THRUSHES

*Turdus migratorius* – American robin

### SYLVIIDAE – SYLVIID WARBLERS

*Chamaea fasciata* – wrentit

### MIMIDAE – MOCKINGBIRDS AND THRASHERS

*Mimus polyglottos* – northern mockingbird

*Toxostoma redivivum* – California thrasher

### PTILOGONATIDAE – SILKY FLYCATCHERS

*Phainopepla nitens* – phainopepla

### STURNIDAE – STARLINGS

\* *Sturnus vulgaris* – European starling

### VIREONIDAE – VIREOS

*Vireo huttoni* – Hutton's vireo

### PARULIDAE – WOOD WARBLERS

*Geothlypis trichas* – common yellowthroat

### EMBERIZIDAE – EMBERIZIDS

*Melospiza melodia* – song sparrow

*Melospiza crissalis* – California towhee

*Pipilo maculatus* – spotted towhee

### CARDINALIDAE – CARDINALS AND ALLIES

*Pheucticus melanocephalus* – black-headed grosbeak

### ICTERIDAE – BLACKBIRDS

*Euphagus cyanocephalus* – Brewer's blackbird

*Icterus cucullatus* – hooded oriole

*Icterus bullockii* – Bullock's oriole

*Molothrus ater* – brown-headed cowbird

## APPENDIX A (Continued)

---

### FRINGILLIDAE – FINCHES

*Carpodacus mexicanus* – house finch

*Spinus psaltria* – lesser goldfinch

### MAMMALS

### LEPORIDAE – HARES AND RABBITS

*Sylvilagus bachmani* – brush rabbit

### SCIURIDAE – SQUIRRELS

*Spermophilus beecheyi* – California ground squirrel

### GEOMYIDAE – POCKET GOPHERS

*Thomomys bottae* – Botta's pocket gopher

### MURIDAE – RATS AND MICE

*Neotoma* sp. – woodrat

### CANIDAE – WOLVES AND FOXES

*Canis latrans* – coyote

### PROCYONIDAE – RACCOONS AND RELATIVES

*Procyon lotor* – common raccoon

### FELIDAE – CATS

*Lynx rufus* – bobcat

### CERVIDAE – UNGULATES

*Odocoileus hemionus* – mule deer

### WILDLIFE SPECIES – INVERTEBRATES

### BUTTERFLIES AND MOTHS

### PAPILIONIDAE – SWALLOWTAILS

*Papilio rutulus* – tiger swallowtail

### PIERIDAE – WHITES AND SULFURS

*Pieris rapae* – European cabbage butterfly

### NYMPHALIDAE – BRUSH-FOOTED BUTTERFLIES

*Nymphalis antiopa* – mourning cloak

## APPENDIX A (Continued)

---

### RIODINIDAE – METALMARKS

*Apodemia mormo virgulti* – Behr's metalmark

\* signifies introduced (non-native) species

# **APPENDIX B**

## *Flycatcher Data Forms*



Fill in the following information completely. Submit original form by August 1<sup>st</sup>. Retain a copy for your records.

Reporting Individual Jeff Priest Phone # 760-942-5147  
Affiliation Dudek E-mail jpriest@dudek.com  
Site Name Warner Ranch Date Report Completed 12-10-10

Did you verify that this site name is consistent with that used in previous years? Yes / No (circle one)

If name is different, what name(s) was used in the past? \_\_\_\_\_

If site was surveyed last year, did you survey the same general area this year? Yes / No If no, summarize in comments below.

Did you survey the same general area during each visit to this site this year? Yes / No If no, summarize in comments below.

Management Authority for Survey Area (circle one): Federal Municipal/County State Tribal Private  
Name of Management Entity or Owner (e.g., Tonto National Forest) \_\_\_\_\_

Length of area surveyed: 1.5 km (specify units, e.g., miles = mi, kilometers = km, meters = m)

Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):

☐ Native broadleaf plants (entirely or almost entirely, includes high-elevation willow)

☒ Mixed native and exotic plants (mostly native)

☐ Mixed native and exotic plants (mostly exotic)

☐ Exotic/introduced plants (entirely or almost entirely)

Identify the 2-3 predominant tree/shrub species: Arroyo willow, live oak, Mulefat, Sycamore

Average height of canopy (Do not put a range): 30 feet (specify units)

Was surface water or saturated soil present at or adjacent to site? Yes / No (circle one)

Distance from the site to surface water or saturated soil: on site (specify units)

Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes / No (circle one)

If yes, describe in comments section below.

Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall site and describe any unique habitat features.

Comments (attach additional sheets if necessary)

Lower half of Gomez Creek dried early in season.

WIFL Detection Locations: N/A

Date Detected	N UTM	E UTM	Date Detected	N UTM	E UTM

**Willow Flycatcher Survey and Detection Form (revised April, 2004)**

Site Name Warner Ranch State CA County San Diego  
 USGS Quad Name Pala and Pecharanga Elevation 350-1,000 (feet) / meters (circle one)

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? ☒ Yes ☐ No

Site Coordinates: Start: N 3693263N E 490381E UTM 11 Datum NAD83 (NAD27 preferred)  
 Stop: N 3691703N E 490778E UTM 11 Zone WGS 84

**\*\* Fill in additional site information on back of this page \*\***

Survey # Observer(s) (Full Name)	Date (m/d/y) Survey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign, If Yes, Describe Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
1 <u>Jeff</u> <u>Priest</u>	Date <u>5-21-10</u> Start <u>0610</u> Stop <u>1100</u> Total hrs <u>5</u>	<u>2</u> <u>migrants</u> <u>South</u> <u>western</u>	<u>0</u>	<u>0</u>	<u>N</u>	<u>Y</u>	<u>N</u>	<u>2 flycatchers</u> <u>perching, flying</u> <u>and calling.</u> <u>Only observed</u> <u>during first visit.</u>
2 <u>Jeff</u> <u>Priest</u>	Date <u>6-2-10</u> Start <u>0645</u> Stop <u>1045</u> Total hrs <u>4</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>	<u>N</u>	<u>N</u>	
3 <u>Jeff</u> <u>Priest</u>	Date <u>6-21-10</u> Start <u>0700</u> Stop <u>1145</u> Total hrs <u>4.75</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>	<u>N</u>	<u>N</u>	
4 <u>Jeff</u> <u>Priest</u>	Date <u>7-2-10</u> Start <u>0745</u> Stop <u>1145</u> Total hrs <u>4</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>	<u>N</u>	<u>N</u>	
5 <u>Jeff</u> <u>Priest</u>	Date <u>7-12-10</u> Start <u>0750</u> Stop <u>1115</u> Total hrs <u>3.5</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>N</u>	<u>N</u>	<u>N</u>	
Overall Site Summary (Total resident WIFLs only)		Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes <u>(No)</u> If yes, report color combination(s) in the comments section on back of form		
Total survey hrs <u>21.25</u>		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>			

Reporting Individual Jeff Priest Date Report Completed 12-10-10  
 US Fish and Wildlife Service Permit # TE840619 AZ Game and Fish Department (or other state) Permit # \_\_\_\_\_

Submit original form by August 1<sup>st</sup>. Retain a copy for your records.

# **APPENDIX C**

*Photo Exhibits of Habitat On Site*



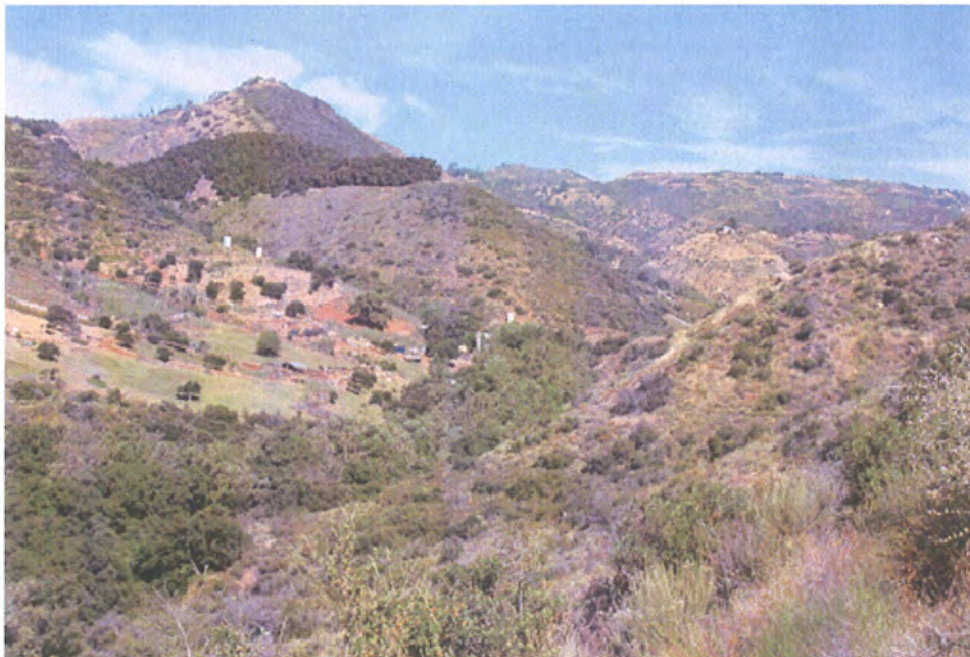
## APPENDIX C

### Photo Exhibits of Habitat On Site

---



**Photo Exhibit A:** Facing northeast; photo represents exterior of non-suitable riparian habitat (tributary to Gomez Creek) area excluded from surveys. Photo taken 6/2/10.



**Photo Exhibit B:** Facing northwest; photo represents exterior of suitable riparian habitat of Gomez Creek. Photo taken 6/2/10.

## APPENDIX C (Continued)

---



**Photo Exhibit C:** Represents understory of suitable riparian habitat. Photo taken 6/2/10.

# **APPENDIX G**

*2008 Focused Quino Checkerspot Butterfly Survey  
for the Warner Ranch Project, Pala Area,  
County of San Diego, California*



October 14, 2008

5887-05

Ms. Sandy Marquez  
Recovery Permit Coordinator  
U. S. Fish and Wildlife Service  
6010 Hidden Valley Road  
Carlsbad, California 92009

***Subject: Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California***

Dear Ms. Marquez:

This letter report documents the results of a focused survey conducted by Dudek for the federally-listed endangered Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) within the approximately 511.22-acre Warner Ranch study area in the County of San Diego, California.

The initial habitat assessment, conducted by Dudek QCB-permitted biologists during the first three survey visits, determined that approximately 250.28 acres within the project study area contained potential QCB habitat as defined by the U.S. Fish and Wildlife Service survey protocol (USFWS 2002a, 2002b).

## **PROJECT LOCATION AND EXISTING CONDITIONS**

Warner Ranch is situated in the community of Pala in the northeastern portion of San Diego County, California (Figure 1). The property lies approximately 5 miles east of Interstate 15 on Highway 76, within the U.S. Geological Survey 7.5 minute Pala and Pechanga quadrangles (Figure 2).

The soils, topography, and vegetation of the site are heterogeneous. Soils on site include Ramona series (RcE, RaB, RaC2), Cieneba series (CnG2, ClG2, CmrG), Las Posas series (LrG, LrE), Visalia series (VaA, VbB, VaB), Fallbrook series (FaE3) and Riverwash soils (Rm). Ramona series soils occur in the southeastern portion of the site; Cieneba series soils occupy the greatest area of the site including the east side of Gomez Canyon in the northern portion of the site, and the majority of the northeastern project area. Las Posas series soils are restricted to the western side Gomez Canyon; and Visalia series soils occur within the existing ranch area in the southwestern portion of the site. The remainder of the soil types occurs as small slivers on site (Bowman 1973).

Ms. Sandy Marquez

Subject: *Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California*

---

Elevations range from about 350 to 1,000 feet above mean sea level. Three riparian areas flow from north to south through the project site. Gomez Canyon Creek is the western-most and largest drainage on site; a channel tributary to Gomez Canyon Creek occurs along the western border of the eastern portion of the site; and a 150-foot-long segment of Pala Creek crosses the eastern-most portion of the project area. The project area currently supports disturbed and undisturbed native plant communities on gentle to steep-sloped hillsides with a large orchard, agricultural, and horse ranch area in the relatively flat southern area. Portions of the northern area appear to have burned in 2004.

Vegetation mapping was conducted on June 7, 2005, by Dudek biologists Vipul R. Joshi and Sparrow S. Serrano. Based on species composition and general physiognomy, 15 vegetation types and land covers occur within the project study area (Dudek 2005). Approximate acreages of vegetation communities and land covers within the project area are presented in Table 1. Vegetation communities are described following the table and are illustrated in Figure 3 (map pocket).

**Table 1**  
**Warner Ranch Vegetation Communities**

<b>Vegetation Communities and Land Cover Types (mapping abbreviation on figures)</b>	<b>Total Acreage</b>
Annual grassland (AGL)	42.8
Coastal sage scrub (CSS)	147.1
Disturbed coastal sage scrub (dCSS)	34.9
Coast live oak woodland (LOW)	0.7
Southern cactus scrub (SCS)	3.1
Southern mixed chaparral (SMX)	131.2
Disturbed southern mixed chaparral (dSMX)	0.4
Scrub oak chaparral (SOC)	8.0
Valley Needlegrass Grassland (VGL)	1.2
<b>Subtotal Upland Habitats*</b>	<b>369.4</b>
Mule fat scrub (MFS)	1.2
Disturbed southern coast live oak riparian forest (dORF)	0.8
Southern coast live oak riparian forest (ORF)	10.6
Southern cottonwood willow riparian forest (SCWRF)	6.9
Sycamore alluvial woodland – (SAW)	4.4
<b>Subtotal Wetland Habitats*</b>	<b>23.9</b>
Agriculture	44.8
Developed	16.6
Disturbed habitat	2.5
Orchard	54.1
<b>Subtotal Non-native Habitats*</b>	<b>118.0</b>
<b>Grand Total</b>	<b>511.2*</b>

\* Numbers may not add precisely due to rounding.

Ms. Sandy Marquez

Subject: Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California

---

A total of 254 species of vascular plants have been identified during surveys of the site since 2005. Of these species, 185 (73%) are native and 69 (27%) are non-native. The flora of the site is rich as a consequence of its varied topography, soil types, and vegetation associations.

### Annual Non-native Grassland

Where the native habitat has been disturbed frequently or intensively by grazing, fire, agriculture, or other activities, the native community usually is incapable of recovering. These areas often are characterized by weedy, introduced annuals, primarily grasses, including especially slender wild oat (*Avena barbata*), bromes (*Bromus diandrus*, *B. madritensis*, *B. hordeaceus*), mustards (*Brassica* spp. and *Sisymbrium* spp.), filaree (*Erodium* spp.), and Russian-thistle (*Salsola tragus*).

Annual grassland is present mainly within the south-central portion of the site in flat to gently sloped areas adjacent to the existing ranch operation. Predominant species include non-native annual grasses such as slender wild oat, red brome (*Bromus madritensis* ssp. *rubens*), and non-native forbs such as red-stemmed filaree (*Erodium cicutarium*). Annual grasslands on the project site appear to have been regularly disturbed through mowing. Native species are extremely limited and include scattered individual species such as Nievitas cryptantha (*Cryptantha intermedia*), spreading goldenbush (*Isocoma menziesii* ssp. *menziesii*), morning-glory (*Calystegia macrostegia*), calabazilla (*Cucurbita foetidissima*), and deerweed (*Lotus scoparius*) (Dudek 2005).

### Coastal Sage Scrub

Coastal sage scrub is a native plant community composed of a variety of soft, low, aromatic shrubs, characteristically dominated by drought-deciduous species such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* spp.), with scattered evergreen shrubs, including lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), and toyon (*Heteromeles arbutifolia*). It typically develops on south-facing slopes and other xeric situations.

Coastal sage scrub is mapped on gentle to steep slopes and south facing exposures in both the western and eastern portions of the site. In general, shrub cover in these areas is relatively low (approximately 30% to 60%) with common species including California sagebrush, flat-top buckwheat, and laurel sumac. Where coastal sage scrub occurs as a mosaic with southern mixed chaparral in the northern portion of the site, yellow bush-penstemon (*Keckiella antirrhinoides* var. *antirrhinoides*) is a common component. Understory species are varied including fringed spineflower (*Chorizanthe fimbriata*), yellow pincushion (*Chaenactis glabriuscula* var.

Ms. Sandy Marquez

Subject: Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California

---

*glabriuscula*), California everlasting (*Gnaphalium californicum*), chalk dudleya (*Dudleya pulverenta*), caterpillar phacelia (*Phacelia cicutaria*), silver puffs (*Uropappus lindleyi*), bromes (*Bromus* spp.), and star thistle (*Centaurea melitensis*) (Dudek 2005). Disturbed coastal sage scrub was mapped where characteristic coastal sage scrub species provide less than 30% cover and a higher percent cover of non-native grasses are present.

### **Coast Live Oak Woodland**

Coast live oak woodland is dominated by coast live oak (*Quercus agrifolia*), which may occur in pure stands, open savannas, or in stands mixed with conifers and broadleaf trees. Few shrubs are typically present in the oak understory, and non-native grasses dominate the herb layer. This community is found on north-facing slopes and shaded ravines in southern California (Holland 1986).

Coast live oak woodland occurs in a few locations on the project site, where coast live oak occurs on hillsides with moderately dense, tall structure and is not associated with a drainage. Understory species include species typical of southern mixed chaparral such as toyon (*Heteromeles arbutifolia*) and ropevine (*Clematis pauciflora*), and non-native annuals such as black mustard (*Brassica nigra*) and bull thistle (*Cirsium vulgare*) (Dudek 2005).

### **Southern Cactus Scrub**

Southern cactus scrub is not described in Holland (1986) or Oberbauer (1996) but is a distinct community occurring in relatively isolated areas throughout San Diego County. This vegetation community is recognized by Gray and Bramlet (1992) for Orange County. This community can be considered a subtype of coastal sage scrub, but generally consists of over 50% cover of cactus species (*Cylindropuntia* spp. or *Opuntia* spp.) with associated species often being typical coastal sage scrub species.

Portions of the southeastern study area are dominated by prickly-pear cactus (*Opuntia littoralis*) with relatively large gaps occupied by non-native grasses and coastal sage scrub shrubs (Dudek 2005).

### **Southern Mixed Chaparral**

Southern mixed chaparral is a drought- and fire-adapted community of woody shrubs, 1.5–3.0 meters tall, frequently forming dense, impenetrable stands. It develops primarily on mesic north-facing slopes and in canyons, and is characterized by crown- or stump-sprouting species that regenerate following burns or other ecological catastrophes. This association includes a

Ms. Sandy Marquez

Subject: Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California

---

mixture of chamise (*Adenostoma fasciculatum*), mission manzanita (*Xylococcus bicolor*), ceanothus (*Ceanothus* spp.), and black sage (*Salvia mellifera*).

Southern mixed chaparral occurs throughout the northern portions of the site, often in a mosaic with coastal sage scrub. Predominant species on site include chamise, mission manzanita, greenbark ceanothus (*Ceanothus tomentosus*), hoary-leaf ceanothus (*Ceanthous crassifolia*), and scrub oak (*Quercus berberidifolia*). Other associated species include poison oak (*Toxicodendron diversilobium*), San Diego bedstraw (*Galium nuttallii* ssp. *nuttallii*), caterpillar phacelia, littleseed muhly (*Muhlenbergia microsperma*), miner's lettuce (*Claytonia perfoliata* var. *perfoliata*), bull thistle, ropevine, and Nuttall's snapdragon (*Antirrhinum nuttallianum* ssp. *nuttallianum*) (Dudek 2005). Disturbed southern mixed chaparral was mapped where a higher percent cover of non-native grasses is present and a lower percent cover of this community's characteristic species occur.

### Scrub Oak Chaparral

Regionally, scrub oak chaparral is a dense chaparral up to 20 feet tall, dominated by scrub oak. Occurring on more mesic areas than other chaparrals, associated species may include manzanitas, ceanothus, bedstraw (*Galium angustifolium*), toyon, honeysuckle (*Lonicera* spp.), holly-leaf cherry (*Prunus ilicifolia*), redberry (*Rhamnus* spp.) and poison-oak (Holland 1986).

Scrub oak chaparral was identified in the west-central portion of the site on gentle to steep slopes east and west of Gomez Canyon Creek. Scrub oak is the dominant species with an open, tall stature (approximately 60% cover and 10–15 feet in height) on gentle slopes, where understory and gap species include purple needlegrass, California buckwheat, and bromes. On steep slopes, the composition of the scrub oaks is dense and of reduced height (approx. 90% cover and six to ten feet in height) with an understory dominated by poison oak with other species including common eucrypta (*Eucrypta chrysanthemifolia*), yellow bush-penstemon and toyon (Dudek 2005).

### Valley Needlegrass Grassland

Valley needlegrass grassland is a native grassland dominated by perennial bunchgrasses, such as needlegrass (*Nassella* spp.). This plant community typically alternates with coastal sage scrub on some heavy or clay soils, often on more mesic exposures and at the bases of slopes, but also may occur in large patches.

Native grasslands on the project site are found only in three locations, on an east-facing exposure, mid-slope above Gomez Canyon Creek. Shrub cover is below 20%, native grasses

Ms. Sandy Marquez

Subject: Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California

---

compose at least 10% cover, with the remainder of the plant cover composed of a combination of native and non-native annuals such as osmadenia (*Osmadenia tennela*), soft chess (*Bromus hordeaceus*), dot-seed plantain (*Plantago erecta*), narrow-leaf filago (*Filago gallica*), slender wild oat, Douglas' microseris (*Microseris douglasii* ssp. *douglasii*), everlasting nest straw (*Stylocline gnaphalioides*), and canchalagua (*Centaurium venustum*). The development of this vegetation community in this area, based on observations of general site conditions in those areas, may be an artifact of previous mechanical disturbance or repeated fires (Dudek 2005).

### **Mule Fat Scrub**

This relatively depauperate riparian community typically is dominated by mule fat (*Baccharis salicifolia*) and develops along intermittent stream channels. This vegetation type can withstand frequent flooding and frequently occurs as an understory between patches of sycamore stands. Common additional species in this community include arroyo willow (*Salix lasiolepis*), narrow-leaved willow (*Salix exigua*), hoary nettle (*Urtica dioica* ssp. *holosericea*) and Barbara sedge (*Carex barbarae*) (Holland 1986).

Mule fat scrub is found within the southern, downstream segment of Gomez Canyon Creek, from below the existing concrete dip crossing of the creek within the ranch to State Route 76 along the southern border. This segment is characterized by an approximately 5- to 15-foot-deep, steeply incised channel. Vegetation cover varies from 5%-100% generally with lower cover, isolated to channel bed margins, occurring in more highly scoured (i.e., less topsoil) situations. It is likely, based on the general hydrological character observed, that this segment is subject to high storm water flow velocities and therefore may be particularly affected by winter storm events. Additional species within this community include salt-cedar (*Tamarisk ramossisma*), Mexican-tea (*Chenopodium ambrosioides*), cockle-bur (*Xanthium strumarium*), Parish's monkeyflower (*Mimulus parishii*), and dock (*Rumex conglomerates*) (Dudek 2005).

### **Southern Coast Live Oak Riparian Forest**

Southern coast live oak riparian forest (oak riparian forest) is an open to locally dense evergreen riparian woodland dominated by coast live oak. It develops on fine-grained rich alluvium on the outer floodplains along larger streams. This community often contains relatively more herbs and fewer shrubs than other riparian communities. Understory species commonly observed within oak riparian forest include poison-oak and toyon (Holland 1986).

Oak riparian forest on the Warner Ranch project site occurs as two subtypes according to wetlands jurisdictional designation; each also occurs in disturbed phases for a total of four

Ms. Sandy Marquez

Subject: *Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California*

---

mapping categories. However, for the purpose of this report, the acreages for all four categories were combined in Table 1.

Coast live oak riparian forest, under the jurisdiction of the U.S. Army Corps of Engineers, California Department of Fish and Game (CDFG), Regional Water Quality Control Board, and County as a wetlands community, occupies the ordinary high water mark (OHWM) within the northern tributary to Gomez Canyon Creek. In this area the channel also contains arroyo willow, mule fat, and an herbaceous understory. Along the small stretch of Pala Creek on site, oaks occur sparsely along an open sandy channel. Although no substantial populations of invasive exotic species were found in this creek segment on site, off-road vehicular activity was observed and appears to be a regular occurrence and therefore the area is mapped as disturbed.

Coast live oak riparian forest, under the jurisdiction of CDFG only, occurs on slopes on either side of Gomez Canyon Creek, above the OHWM. Associated species in this community include poison oak, prickly ox-tongue (*Picris echioides*), California mugwort (*Artemisia douglasii*), and bull thistle. The disturbed phase of this subtype, located on the east side of the channel, has been altered by mechanical disturbance (apparently regular mowing and parking/driving) creating a compacted soil condition substantially reducing understory cover and oak recruitment (Dudek 2005). Disturbed coast live oak riparian forest was mapped where characteristic species provide a lower percent cover and a higher percent cover of non-native grasses are present.

### **Southern Cottonwood Willow Riparian Forest**

Southern cottonwood-willow riparian forest is a tall, open, broadleafed winter-deciduous riparian community dominated by cottonwoods (*Populus* spp.) and willow trees (*Salix* spp.) with shrubby willows occurring in the understory. This community is typically found along perennially wet rivers and streams where receding flood waters leave behind moist, bare mineral soils required for the germination and establishment of the dominant species. In addition to the dominant cottonwood and willow species, other species occurring within this community include California mugwort, mule fat, wild cucumber (*Marah macrocarpus*) and hoary nettle (Holland 1986).

The majority of vegetation within Gomez Canyon Creek, within the OHWM, is mapped as southern cottonwood willow riparian forest. Species composition includes a mixture of arroyo willow, Fremont's cottonwood (*Populus fremontii*), and coast live oak in the tree layer, a shrub layer of mule fat and giant cane (*Arundo donax*) which varies from sparse to dense, and a herbaceous layer that varies in cover according to shrub density and rock exposure and includes

Ms. Sandy Marquez

Subject: Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California

---

dwarf nettle (*Urtica urens*), water speedwell (*Veronica angallis-aquatica*), Parish's monkeyflower, narrow-leaved willow, and cocklebur (*Xanthium strumarium*) (Dudek 2005).

### **Sycamore Alluvial Woodland**

Sycamore alluvial woodland is described in Holland (1986) for the central California coastal areas. The variant that occurs in San Diego County is found in wide, cobble, braided channels that are subject to scour during flooding events and support an open canopy of mature western sycamore (*Platanus racemosa*). Understory species typically include mule fat, non-native grasses, California mugwort, and Mexican elderberry (*Sambucus mexicana*).

Sycamore alluvial woodland occurs both along side Gomez Canyon Creek and the eastern tributary channel, but clearly above the OHWM for both channels. Mature western sycamores are the predominant species, occurring as an open, tall structure with a relatively dense non-native understory along Gomez Canyon Creek and a sparser understory along the eastern tributary channel. Associated species in both locations include bull thistle, bristly ox-tongue, wild mustard (*Hirschfeldia incana*), and rip-gut grass (*Bromus diandrus*). Soils in both areas are sandy. Habitat disturbance, likely through mowing and grazing, appears have been more intensive in the western areas (Dudek 2005).

### **Agriculture**

Agricultural areas on site include pasture fields throughout the southern-central portion of the project area. These areas support mostly non-native grasses or are planted with turf and appear often disturbed by ranch activities (Dudek 2005). These areas support little to no bare ground or nectar sources for QCB.

### **Developed Land**

This land cover type is used for areas occupied by buildings or roads that preclude the establishment of plant communities. The developed areas are in the south central portion of the property (Dudek 2005).

### **Disturbed Habitat**

Disturbed habitat is used mainly to describe dirt roads and cleared areas where regular mechanical activity precludes the establishment of plant communities (Dudek 2005).

*Ms. Sandy Marquez*

*Subject: Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California*

---

## **Orchard**

Orchards are present in the central portion of the site and include citrus and avocado trees (Dudek 2005).

## **QUINO CHECKESPOT BUTTERFLY SURVEY**

### **Methods**

Focused QCB surveys were conducted over 26 visits within a five week period between March 19 and April 18, 2008. Surveys were conducted by Dudek biologists Jeffrey D. Priest (JDP; permit #TE-840619-2), Brock A. Ortega (BAO; permit #TE-813545-4), David W. Flietner (DWF; permit #TE-008031-0), Kamarul J. Muri (KJM; permit #TE-51250-0), Paul M. Lemons (PML; permit # TE-051248-1), Tricia L. Wotipka (TLW; independent investigator under permit #TE 840619-2), and Vipul R. Joshi (VRJ; permit #TE 019949-0) in accordance with current USFWS protocol (USFWS 2002a, 2002b).

The project site was divided into five survey areas, each of which was surveyed generally once per week during the 5-week flight season. If poor weather conditions precluded completion of a survey during a particular week, the portion that was missed was surveyed the following week in addition to the regularly scheduled survey.

The survey methods consisted of slowly walking roughly parallel transects throughout all potential habitat within the survey area (i.e., all areas that are not excluded per the survey protocol, generally including sage scrub, open chaparral, grasslands, open or sparsely vegetated areas, hilltops, ridgelines, rocky outcrops, trails and dirt roads). Survey routes were arranged to thoroughly cover the survey area at a rate of no more than 10–15 acres per hour.

Unsuitable habitat areas were identified during the first three survey passes and excluded from the subsequent two survey passes. Per the survey protocol, unsuitable habitat areas that were excluded included active agricultural fields; closed canopy riparian habitat; dense, regularly mowed non-native grassland ranch pasture areas supporting little to no bare ground or nectar sources; and dense scrub habitats with vegetation so thick that it is inaccessible to humans except by destruction of woody vegetation for at least 100 meters. Acreages of suitable habitat and exclusions areas per survey area are provided in Table 2.

Ms. Sandy Marquez

Subject: *Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California*

---

**Table 2**  
**Suitable Habitat and Exclusion Areas Acreages**

Survey Area	Suitable Habitat Acreage	Excluded Acreage	Total Acreage
1	39.9	39.6	79.5
2	76.8	58.9	135.7
3	39.7	81.8	121.5
4	41.2	40.4	81.6
5	52.6	40.3	92.9

Surveys were conducted only during acceptable weather conditions (i.e., surveys were not conducted during fog, drizzle, or rain; sustained winds greater than 15 miles per hour measured 4–6 feet above ground level; temperature in the shade at ground level less than 60°F on a clear, sunny day; or temperature in the shade at ground level less than 70°F on an overcast or cloudy day). A 200-scale (1 inch = 200 feet) aerial photographic base of the project site overlain with vegetation communities was used to map any detected QCB or host plants. Binoculars (7x50 and 10x42) were used to aid in detecting and identifying butterfly and other wildlife species.

Survey times, personnel, and conditions for each of the five QCB survey subareas are shown in Tables 3a–3e. Photocopies of the surveyor’s field notes are included as Appendix A.

**Table 3a**  
**Schedule of Quino Checkerspot Butterfly Surveys - Area 1 (39.9 acres)**

Week	Date	Time	Hours; Acres / Hour	Staff	Starting Conditions	Ending Conditions
1	3/19/08	1130-1530	4.0; 10 ac/hr	BAO	69°F; 4–7 miles per hour (mph); 0% cloud cover (cc)	68°F; 1–3 mph; 0% cc
2	3/27/08	1115-1557	4.73; 8.5 ac/hr	KJM	70°F; 2– 4 mph; 0% cc	76°F; 4–6 mph; 0% cc
3	3/31/08	1637-1853	3.67; 10.9 ac/hr	KJM	68°F; 2 –4 mph; 0% cc	61°F; 0–1 mph; 0% cc
	4/7/08	1505-1630		TLW	76°F; 0 –2 kph; 10% cc	95°F; 2–3 kph; 5% cc
4	4/9/08	1215-1630	4.25; 9.4 ac/hr	DWF	74°F; 1 – 3 mph; 50% cc	74°F; 0–3 mph; 60% cc
5	4/18/08	1115-1400	2.75; 14.5 ac/hr	JDP	80°F; 3 kph; 0% cc	93°F; 5 kph; 50% cc

Ms. Sandy Marquez

Subject: Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California

**Table 3b**  
**Schedule of Quino Checkerspot Butterfly Surveys - Area 2 (76.8 acres)**

Week	Date	Time	Hours; Acres / Hour	Staff	Starting Conditions	Ending Conditions
1	3/20/08	1045-1700	6.25; 12.3 ac/hr	DWF	64°F; 2 – 4 mph; 0% cc	69° F; 3–6 mph; 10% cc
2	3/25/08	1000-1500	5.0; 15 ac/hr	PML	73°F; 0-3 mph; 0% cc	84° F; 1–3 mph, gusts to 5-7 mph; 5% cc
3	3/31/08	1132-1634	5.0; 15 ac/hr	KJM	70°F; 1-3 mph; 0% cc	68° F; 4–7 mph; 0% cc
4	4/7/08	0940-1500	5.33; 14.4 ac/hr	PML	69°F; 0-3 mph; 20% cc	77° F; 3–5 mph gusts to 6-8 mph; 5% cc
5	4/15/08	1120-1630	5.17; 14.9 ac/hr	DWF	76°F; 3-7 mph; 10% cc	78° F; 4–7 mph; 10% cc

**Table 3c**  
**Schedule of Quino Checkerspot Butterfly Surveys - Area 3 (39.7 acres)**

Week	Date	Time	Hours; Acres / Hour	Staff	Starting Conditions	Ending Conditions
1	3/20/08	1130-1600	4.5; 8.8 ac/hr	VRJ	81°F; 1-3 mph; 0% cc	84°F; 1–3 mph; 0% cc
2	3/25/08	1012-1430	4.3; 9.2 ac/hr	TLW	69°F; 2-4 kph; 10% cc	87°F; 4–6 kph; 0% cc
3	3/31/08	1030-1400	3.5; 11.3 ac/hr	PML	66°F; 1-3 mph; 10% cc	70°F; 3–5 mph gusts to 6-8 mph; 5% cc
4	4/9/08	1100-1345	2.75; 14.4 ac/hr	JDP	78°F; 0-1 kph; 50% cc	89°F; 6 kph; 25% cc
5	4/14/08	1347-1644	2.95; 13.5 ac/hr	KJM	88°F; 6-8 mph; 0% cc	80°F; 4–7 mph; 0% cc

**Table 3d**  
**Schedule of Quino Checkerspot Butterfly Surveys - Area 4 (41.2 acres)**

Week	Date	Time	Hours; Acres / Hour	Staff	Starting conditions	Ending conditions
1	3/20/08	1100-1630	5.5; 7.5 ac/hr	KJM	64°F; 1-2 mph; 0% cc	72°F; 3–5 mph; 0% cc
2	3/26/08	1000-1500	5.0; 8.2 ac/hr	VRJ	79°F; 0-1 mph; 0% cc	82°F; 1–3 mph; 0% cc
3	4/7/08	1205-1455	2.83; 14.6 ac/hr	TLW	76°F; 0-4 kph; 10% cc	95°F; 4–6 kph; 5% cc
4	4/12/08	1100-1400	3.0; 13.7 ac/hr	JDP	92°F; 10 kph; 0% cc	94°F; 5 kph; 0% cc
5	4/15/08	1102-1410	3.13; 13.2 ac/hr	KJM	72°F; 4-9 mph; 0% cc	78°F; 6–12 mph; 0% cc

Ms. Sandy Marquez

Subject: Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California

**Table 3e**  
**Schedule of Quino Checkerspot Butterfly Surveys - Area 5 (52.6 acres)**

Week	Date	Time	Hours; Acres / Hour	Staff	Starting Conditions	Ending Conditions
1	3/19/08	1000-1530	5.5; 9.6 ac/hr	PML	65°F; 2-5 mph; 10% cc	71°F; 3-5 mph gusts to 7-8 mph; 5% cc
2	3/28/08	1040-1530	4.83; 10.9 ac/hr	PML	72°F; 2-4 mph gusts to 5-8 mph; 0% cc	77°F; 1-3 mph gusts to 5-8 mph; 0% cc
3	4/1/08	1000-1530	5.5; 9.6 ac/hr	BAO	60°F; 1-3 mph; partly cloudy	65°F; 1-3 mph; partly cloudy
4	4/7/08	1332-1737	4.08; 12.9 ac/hr	KJM	74°F; 4-6 mph; 0% cc	68°F; 2-4 mph; 0% cc
5	4/15/08	1220-1550	3.5; 15 ac/hr	JDP	84°F; 0-3 kph; 0% cc	85°F; 10kph; 0% cc

BAO = Brock Ortega  
DWF = David W. Flietner  
JDP = Jeffrey D. Priest  
KLM = Kam L. Muri

PML = Paul M. Lemons  
TLW = Tricia L. Wotipka  
VRJ = Vipul R. Joshi

## RESULTS AND DISCUSSION

No QCB were observed during the focused survey. Twenty-four butterfly species were observed during the surveys. The weeks and areas in which these butterflies were observed are shown in Table 4.

**Table 4**  
**Butterflies Observed on Site**

Scientific Name	Common Name	Area 1					Area 2					Area 3					Area 4					Area 5				
		Week #					Week #					Week #					Week #					Week #				
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
<b>Nymphalidae</b>	<b>Brush-footed Butterflies</b>																									
<i>Adelphia bredowii</i>	California sister																X			X				X		
<i>Juonia coenia</i>	Buckeye	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		X	
<i>Nymphalis antiope</i>	Mourning cloak																							X		
<i>Vanessa atalanta</i>	Red Admiral																							X		
<i>Vanessa annabella</i>	West Coast lady	X										X	X				X	X					X	X		
<i>Vanessa virginiensis</i>	American lady															X										
<i>Vanessa cardui</i>	Painted lady	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X

Ms. Sandy Marquez

Subject: Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California

Table 4 (Continued)

Scientific Name	Common Name	Area 1					Area 2					Area 3					Area 4					Area 5				
		Week #					Week #					Week #					Week #					Week #				
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
<b>Danaidae</b>	<b>Milkweed Butterflies</b>																									
<i>Danaus glippus</i>	Queen																			X						
<i>Danaus plexippus</i>	Monarch												X						X							
<i>Erynnis funeralis</i>	Funeral duskywing		X				X	X				X	X	X			X			X		X	X			
<b>Lycaenidae</b>	<b>Blues</b>																									
<i>Glaucopsyche lygdamus</i>	Southern blue				X												X									
<i>Icarcia acmon</i>	Acmon blue	X									X										X	X		X		
<b>Lycaenidae</b>	<b>Hairstreaks</b>																									
<i>Callophrys augustinus</i>	Brown elfin					X	X										X		X			X				
<i>Callophrys dumetorum</i>	Bramble (green) hairstreak								X								X					X	X			
<i>Callophrys perplexa</i>	Perplexing hairstreak																							X		
<i>Strymon melinus</i>	Gray hairstreak																				X					
<b>Papilionidae</b>	<b>Swallowtails</b>																									
<i>Papilio eurymedon</i>	Pale swallowtail		X																		X					
<i>Papilio rutulus</i>	Western tiger swallowtail									X														X		
<i>Papilio zelicaon</i>	Anise swallowtail	X											X										X	X		
<b>Peiridae</b>	<b>Whites and Orangetips</b>																									
<i>Anthocharis sara</i>	Sara orangetip	X	X	X	X	X			X	X	X				X		X		X	X	X			X	X	X
<i>Artogeia rapae</i>	Cabbage white			X							X		X		X		X		X	X				X		X
<i>Colias eurytheme</i>	Orange sulfur						X		X	1	X															X
<i>Pontia protodice</i>	Checkered (common) white		X		X	X	X	X	X	X	X		X	X		X		X	X			X	X		X	X
<b>Riodinidae</b>	<b>Metalmarks</b>																									
<i>Apodemia virgulti</i>	Behr's metalmark	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X

QCB larval host plants (dot-seed plantain and common owl's-clover [*Castilleja exserta* ssp. *exserta*]) occurrences were mapped and are shown on Figure 3 (map pocket).

Ms. Sandy Marquez

Subject: Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California

QCB nectar plants (Mattoni et al. 1997, USFWS 2002a, USFWS 2002b, USFWS 2003) noted during the surveys are lomatium (*Lomatium* sp.), rancher's fireweed (*Amsinckia menziesii*), popcorn flower (*Cryptantha* spp., *Plagybothrys* spp.), annual lotus species (*Lotus salsuginosus*; *L. purshianus*), chia (*Salvia columbariae*), California buckwheat, and blue dicks (*Dichelostemma capitatum*). The areas where larval food plants and flowering nectar plants were recorded are shown in Table 5.

**Table 5.**  
**QCB Larval Food and Adult Nectar Plants<sup>1</sup> On Site**

Scientific Name	Common Name	Area #				
		1	2	3	4	5
<b>Apiaceae</b>	<b>Carrot Family</b>					
<i>Lomatium</i> spp.	Lomatium		X		X	
<b>Asteraceae</b>	<b>Sunflower Family</b>					
<i>Lasthenia</i> spp.	Goldfields	X	X		X	
<i>Layia platyglossa</i>	Tidy tips		X			
<b>Boraginaceae</b>	<b>Borage Family</b>					
<i>Amsinckia</i> spp.	Fireweed	X	X		X	
<i>Cryptantha</i> spp. or <i>Plagybothrys</i> spp.	Popcorn flower	X	X	X	X	X
<b>Fabaceae</b>	<b>Pea Family</b>					
annual <i>Lotus</i> spp.	Spanishclover, lotus		X		X	
<b>Lamiaceae</b>	<b>Mint Family</b>					
<i>Salvia columbariae</i>	Chia	X	X	X	X	X
<b>Plantaginaceae</b>	<b>Plantain Family</b>					
<i>Plantago erecta</i>	Dot-seed plantain	X	X	X	X	X
<b>Polemoniaceae</b>	<b>Phlox Family</b>					
<i>Gilia</i> spp.	Gilia	X	X			
<b>Polygonaceae</b>	<b>Buckwheat Family</b>					
<i>Eriogonum fasciculatum</i>	California buckwheat	X	X	X		X
<b>Scrophulariaceae</b>	<b>Figwort Family</b>					
<i>Antirrhinum coulterianum</i>	Coulter's snapdragon				X	
<i>Castilleja exserta</i>	Common owl's-clover	X	X		X	
<b>Liliaceae</b>	<b>Lily Family</b>					
<i>Dichelostemma capitatum</i>	Blue dicks	X	X	X	X	X
<i>Muilla</i> spp.	Goldenstar					

<sup>1</sup> List derived from Mattoni et al. 1997; USFWS 2002a, USFWS 2002b; USFWS 2003 (for *Euphydras editha*)

Ms. Sandy Marquez

Subject: *Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California*

---

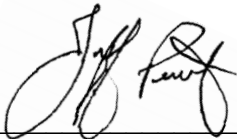
## Discussion

The primary constituents of QCB habitat are grassland and open-canopy woody plant communities with QCB larval food plants or adult nectar plants; undeveloped areas containing grassland or open-canopy woody plant communities between habitat patches that QCB may use for mating, basking, and movement; or prominent topographic features, such as hills and/or ridges, with an open woody or herbaceous canopy at the top (USFWS 2002a).

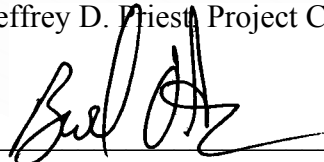
All five survey areas contained a variety of potential QCB adult nectar plants and dot-seed plantain, the primary QCB larval food plant. Most patches of dot-seed plantain were relatively small (less than 100 square feet). Area 2 supports a relatively large area (about 0.1 acre) containing dot-seed plantain, with some potential adult nectar plants (mostly popcorn flower) nearby, but does not contain extensive areas of open soils, cryptogammic soil crusts, and a wide diversity of adult nectar sources associated with high quality QCB habitat.

Please feel free to call me at 760.942.5147 if you have any questions regarding the contents of this letter.

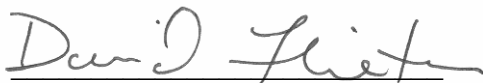
Sincerely,



Jeffrey D. Priest Project Coordinator; #TE-840619-2



Brock A. Ortega Permit #TE-813545-4



David W. Flietner Permit #TE-008031



Kamarul J. Muri Permit #TE-51250-0

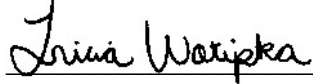


Paul M. Lemons Permit # TE-051248-1

*Ms. Sandy Marquez*

*Subject: Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California*

---



Tricia L. Wotipka Permit #TE-840619-2



Vipul R. Joshi Permit #TE 019949-0

*Att: Figures 1-3  
Appendix A - Warner Ranch 2008 QCB Survey Field Notes*

*cc: Brock A. Ortega, Dudek  
David W. Flietner, Dudek  
Kamarul L. Muri, Dudek  
Paul M. Lemons, Dudek  
Tricia L. Wotipka, Dudek  
Vipul R. Joshi, Dudek  
Carey Fernandez, Dudek*

Ms. Sandy Marquez

Subject: *Focused Quino Checkerspot Butterfly Survey for the Warner Ranch Project, Pala Area, County of San Diego, California*

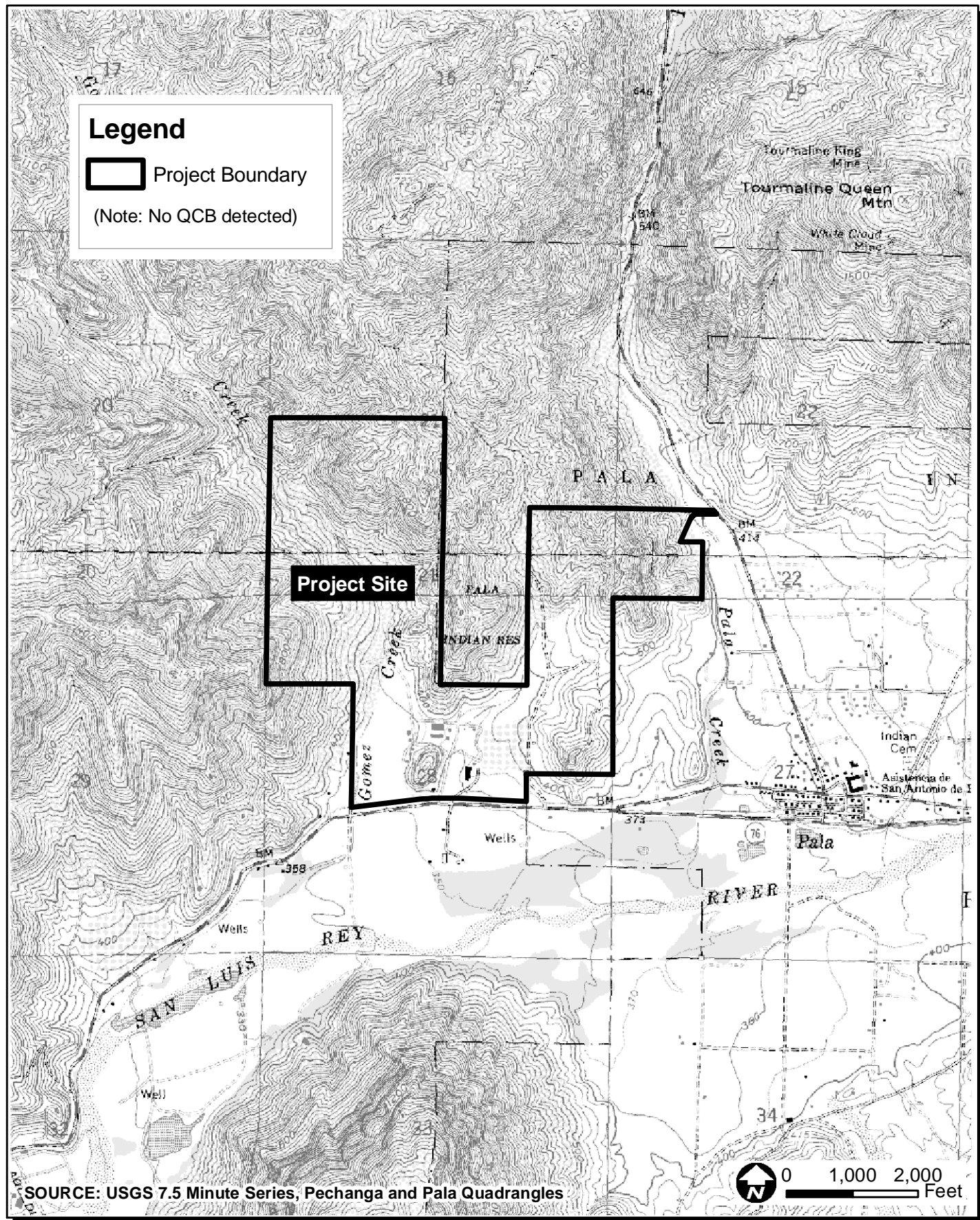
---

## REFERENCES CITED

- Bowman, R.H. 1973. Soil Survey, San Diego Area, California, Part 1. United States Department of the Agriculture. 104 pp. + appendices.
- Dudek. 2005. *Draft Existing Conditions Biological Resources Report & MSCP Hard Line Preserve Analysis - Warner Ranch Development*. August.
- Holland, R.F. 1986. *Preliminary descriptions of the terrestrial natural communities of California*. Nongame-Heritage Program, California Department of Fish and Game. 156 pp.
- Mattoni, R., G.F. Pratt, T.R. Longcore, J.F. Emmel, and J.N. George. 1997. The endangered quino checkerspot butterfly, *Euphydryas editha quino* (Lepidoptera: Nymphalidae). *Journal of Research on the Lepidoptera* 34:99–118, 1995(1997): 99–118
- Oberbauer, Thomas. 1996. Terrestrial Vegetation Communities in San Diego County, based on Holland's Descriptions. San Diego County Department of Planning and Land Use. San Diego, California.
- U.S. Fish and Wildlife Service (USFWS). 2002a. Quino Checkerspot Butterfly (*Euphydryas editha quino*) Survey Protocol Information. Carlsbad Field Office, California, February 2002.
- USFWS. 2002b. *Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Quino Checkerspot Butterfly (Euphydryas editha quino)*. Federal Register Vol 67: 18355- 18395. April 2.
- USFWS. 2003. *Recovery Plan for the Quino Checkerspot Butterfly (Euphydryas editha quino)*. Portland, Oregon. August 11.



Z:\Projects\588701\MAPDOC\MAPS\QCB Figs\QCB08\_Fig02\_vic.mxd



Warner Ranch - 2008 Focused Quino Checkerspot Butterfly Survey Report  
**Vicinity Map**

**FIGURE**  
**2**