APPENDICES

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

PLANT SPECIES LIST

APPENDIX 1

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

Appendix 1

Plant Species of Burton Mesa Ecological Reserve

List compiled by observations by Condor staff Mary Carroll, Katrina Burton, Elihu Gevirtz, with additions by Wayne Ferren, Larry Ballard, Frank Davis, and Diana Hickson

* = Non-native; *N = Noxious introduced weed

Plant Species of Burton Mesa Ecological Reserve 2004

Scientific Name	Common Name		Habit	Habitat						
				Chaparral	Pine Forest	Oak Woodland	Coastal Scrub	Wetland	Grassland	Open Sandy Areas; Disturbed Areas
Achillea millefolium	Common Yarrow		Herbaceous perennial	X		X	X		X	X
chyrachaena molli	Blow-wives		Annual				X			
cer negundo var. californicu	California Box Elder	?	Tree						X	
Acourtia microcephala	Sacapellote		Herbaceous perennial	X		X	X			
densostoma fasciculatu	Chamise		Shrub	X	X		X			
gave american	Century Plant	*	Herbaceous perennial							
goseris heterophylla	Mountain Dandelion		Annual			X			X	
grostis hoover	Hoover's Bentgrass		Perennial grass	X				X		
grostis pallen	Thin grass		Perennial grass	X		X				
grostis semiverticillat	Water Bent	*	Perennial grass					X		
lopecurus saccatu	Pacific Foxtail		Annual					X		
Amaranthus albus	Tumbleweed	*	Annual							X
mbrosia psilostachy	Western Ragweed		Herbaceous perennial				X	X	X	X
Amsinckia menziesii var. intermedia	Common Fiddleneck		Annual	X			X		X	X
Amsinckia specatablis var. microcarpa	Small-fruited Seaside Fiddleneck		Annual	X			X		X	X
Anagallis arvensis	Scarlet Pimpernel	*	Annual				X	X	X	X
Ancistrocarphus filaginea	Fishhooks		Annual	X			X		X	X
nthemis cotul	Mayweed	*	Annual						X	X
ntirrhinum coulterianu	Coulter's Snapdragon		Annual	X						
ntirrhinum kelloggi	Climbing Snapdragon		Annual	X			X			
ntirrhinum multifloru	Sticky Snapdragon		Herbaceous perennial	X			X			
phanes (Alchemilla) occidentali	Lady's Mantle		Annual			X	X		X	
Apiastrum angustifolium	Wild-celery		Annual				X		X	X
Arabis glabra	Tower Mustard		Biennial/herbaceous perennial	X		X	X			
rctostaphylos purissim	Purisima Manzanita		Shrub	X	X	X	X			
Arctostaphylos rudis	Shagbark Manzanita, Sand Mesa Manzanita		Shrub	X	X	X	X			

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Arctostaphylos tomentosa subsp. eastwoodian	Eastwood's Manzanita		Shrub		X					
Artemisia californica	Coastal Sagebrush, California Sagebrush		Shrub	X			X		X	
rtemisia douglasian	Mugwort		Herbaceous perennial			X		X		
rtemisia dracunculu	Tarragon		Herbaceous perennial				X			X
rundo dona	Giant Reed	* N	Perennial grass					X		
sphodelus fistulosu	Asphodel	* N	Annual/Perennial						X	X
stragalus gambelianu	Gambel's Locoweed		Annual			X	X		X	
Astragalus trichopodus var. phoxus	Santa Barbara Milk-vetch		Herbaceous perennial	X			X			X
Athysanus pusillus	Dwarf Athysanus		Annual	X		X	X			
triplex semibaccat	Australian Saltbush	*	Prostrate Perennial						X	X
triplex serenana var. serenana	Bracted Saltbush		Annual					X	X	
vena barbata	Slender Wild Oats	*	Annual grass	X		X	X	X	X	X
vena fatua	Wild Oats	*	Annual grass						X	X
vena sativa	Cultivated Oats	*	Annual grass							X
Azolla filiculoides	Mosquito Fern, Duckweed Fern							X		
Baccharis douglasi	Douglas' Baccharis		Herbaceous perennial					X		
Baccharis pilularis	Coyote Bush		Shrub	X		X	X	X	X	X
Baccharis salicifoli	Mule Fat		Shrub					X		
Bowlesia incana	Bowlesia		Annual	X		X	X			
Brassica nigra	Black Mustard	* N	Annual						X	X
Brassica rapa	Field Mustard	* N	Annual						X	X
Bromus carinatus var. carinatu	California Brome		Annual/Biennial			X	X	X	X	X
Bromus catharticu	Rescue Grass	*	Annual grass			X			X	X
Bromus diandru	Ripgut Brome	*	Annual grass	X		X	X	X	X	X
Bromus hordeaceu	Soft Chess	*	Annual grass	X		X	X	X	X	X
Bromus madritensis subsp. ruben	Red Brome	*	Annual grass	X		X	X		X	X
Calandrinia brewer	Brewer's Redmaids		Annual	X			X			X
Calandrinia ciliat	Red Maids		Annual	X			X		X	X
Callitriche marginat	Wallow Starwort		Annual					X		
Calochortus albu	Fairy Lanterns		Herbaceous perennial			X				
Calochortus splenden	Lilac Mariposa		Herbaceous perennial	X			X			X
Calyptridium monandrum	Pussypaws		Annual				X			X
Calystegia macrostegia subsp. cyclostegi	Chaparral Morning-Glory		Herbaceous perennial	X		X	X			
Camissonia intermedi	Intermediate Suncups		Annual	X			X			X
Camissonia micrantha	Miniature Suncups		Annual	X			X		X	X

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Camissonia strigulosa	Strigose Suncups		Annual	X			X			X
Cardamine oligosperm	Bitter Cress		Annual/Biennial	X		X				
Cardionema ramosissimu	Sand Mat		Herbaceous perennial	X			X			X
Carduus pynocephalu	Italian Thistle	* N	Annual	X		X	X		X	X
Carduus tenuiflorus	Slender Thistle	*	Annual				X		X	X
Carex praegracili	Slender Sedge		Herbaceous perennial			X		X		
Carex barbarae	Santa Barbara Sedge		Herbaceous perennial			X		X		
Carex globosa	Round-fruited Sedge		Herbaceous perennial	X		X				
Carex senta	Rough Sedge		Herbaceous perennial					X		
Carex triquetra	Triangular-fruited Sedge		Herbaceous perennial	X		X				
Carpobrotus eduli	Iceplant, Hottentot-fig	* N	Herbaceous perennial	X			X		X	X
Castilleja affini	Indian Paintbrush		Herbaceous perennial			X				
Castilleja exserta subsp. exserta	Purple Owl's Clover		Annual						X	
Ceanothus cuneatus var. fascicularis	Lompoc Ceanothus		Shrub	X	X		X			
Ceanothus impressus var. impressus	Santa Barbara Ceanothus		Shrub	X			X			
Centaurea melitensi	Tocalote	* N	Annual	X			X		X	X
Centaurium davy	Davy's Centaury		Annual				X		X	X
Centaurium venustu	Chanchalagua		Annual					X	X	
Centunculus minimus	Chaffweed, False Pimpernel		Annual					X	x	
Cerastium glomeratu	Mouse-eared Chickweed	*	Annual	X		X				
Cercocarpus betuloide	Mountain-mahagony		Shrub	X		X	X			
Chaenatctis glabriuscula var. glabriuscul	Yellow Pincushion		Annual	X			X		X	X
Chamomilla suaveolen	Pineapple Weed	*	Annual						X	X
Chenopodium berlandier	Bolander's Goosefoot		Annual					X	X	
Chenopodium californicum	Soap Plant, California Goosefoot		Herbaceous perennial	X		X			X	
Chenopodium multifidu	Cut-Leaved Goosefoot	*	Annual						X	
Chlorogalum pomeridianum var. pomeridianum	Soap Plant, Amole		Herbaceous perennial	X			X			
Chorizanthe angustifolia	Narrowleaf Spineflower		Annual				X			X
Chorizanthe diffusa	Spineflower		Annual	X			X			X
Chorizanthe rectispina	Prickly Spineflower		Annual	X			X			X
Ciclospermum leptophyllu	Marsh-parsley	*	Annual						X	
Cirsium brevistylu	Indian Thistle		Herbaceous perennial				X			X
Cirsium occidentale var. californicu	California Thistle		Annual	X	X		X			
Cirsium occidentale var. occidentale	Cobweb Thistle		Annual	X			X			X
Cirsium vulgar	Bull Thistle	* N	Annual						X	X
Cistus salvifoliu	Rock-rose	*	Shrub							X

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Clarkia cylindrica	Speckled Clarkia		Annual	X			X		X	
Clarkia purpurea subsp.quadrivulnera	Four-spot Clarkia, Wine Cups		Annual			X		X		
Clarkia unguiculata	Elegant Clarkia		Annual	X		X	X		X	
Claytonia parviflora subsp. parviflora	Narrow-leaved Miner's Lettuce		Annual	X		X				
Claytonia perfoliata subsp. perfoliata	Miner's Lettuce		Annual	X		X				
Cnicus benedictus	Blessed Thistle	*	Annual				X		X	X
Collinsia bartsiaefolia var. bartsifoli	Chinese Houses		Annual	X		X				X
Collinsia heterophylla	Bicolored Chinese Houses		Annual	X		X	X			X
Conicosia pugioniformis	narrow-leaved iceplant, pig root		Herbaceous perennial							X
Conium maculatu	Poison-hemlock	*	Annual			X		X	X	X
Conringia orientalis	Hare's Ear	*	Annual				X	X		
Convolvulus arvensi	Bindweed	*	Herbaceous perennial						X	
Conyza bonariensis	FlaX-leaved Fleabane	*	Annual						X	X
Conyza canadensis	Horseweed	*	Annual						X	X
Cordylanthus rigidis subsp. littorali	Seaside Bird's-Beak		Annual	X		X	X		X	X
Cortaderia jubata	Andean Pampas Grass	*	Perennial grass							X
Cotula australis	Australian Brass Buttons	*	Annual						X	X
Cotula coronopifolia	Brass Buttons	*	Herbaceous perennial					X		
Crassula connata	Sand Pygmy Weed		Annual			X			X	X
Crassula aquatica	Water Pygmy Weed		Annual					X		
Croton californicus	California Croton		Herbaceous perennial	X			X		X	X
Cryptantha clevelandii	Cleveland's Cryptantha		Annual	X			X			X
Cryptantha intermedia	Common Cryptantha		Annual	X			X			X
Cryptantha micromeres	Small-flowered Cryptantha		Annual	X			X			X
Cuscuta californica var. californica	California Dodder		Parasitic annual				X			
Cupressus macrocarpa	Monterey Cypress	*	Tree							X
Cynara cardunculu	Cardoon	*	Herbaceous perennial							X
Cynodon dactylon	Bermuda Grass	*N	Perennial grass					X	X	X

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Cyperus eragrosti	Yellow Nutsedge		Herbaceous perennial					X		
Daucus pusillu	Rattlesnake Weed		Annual	X			X			
Deinandra (Hemizonia) increscenes subsp. increscen	Coast Tarplant		Annual	X			X			X
Deinandra (Hemizonia) fasciculat	Common Tarweed		Annual			X		X	X	
Delphinium parryi subsp. blochmaniae	Blochman's Larkspur		Herbaceous perennial	X			X		X	
Dendromecon rigida ssp rigida	Bush Poppy		Shrub	X						
Descuraninia pinnata var. menziesii	Western Tansy Mustard		Annual				X		X	X
Dichelostemma capitatu	Blue Dicks		Herbaceous perennial	X			X		X	X
Dipsacus sativu	Fuller's Teasel	*	Biennial					X		
Distichlis spicata var. spicata	Salt Grass		Perennial grass					X	X	
Dryopteris arguta	Coastal Wood Fern		Perennial fern			X				
Dudleya lanceolata	Rock Lettuce		Herbaceous perennial	X		X	X			
Echinochloa crus-galli	Barnyard Grass	*	Annual grass					X		X
Ehrharta calycina	Veldt Grass	*N	Perennial grass	X		X	X			X
Ehrharta erecta	Upright Veldt Grass	*N	Perennial grass			X				
Elatine brachysperm	Short-seeded Waterwort		Annual					X		
Eleocharis macrostachy	Common Spikerush		Perennial rush					X		
Elymus glaucus subsp. glaucu	Western Rye		Perennial grass			X		X		
Elymus glaucus subsp. glaucu	Western Rye		Perennial grass					X		
Encelia californica	California Bush Sunflower, Chaparral Sunflower		Shrub				X			
Epilobium ciliatu	Common Willow Herb		Herbaceous perennial					X		
Erechtites glomerata	Australasian Fireweed	*N	Annual	X	X		X		X	
Eremocarpus (Croton) setigeru	Doveweed		Annual	X			X		X	X
Eriastrum densifolium subsp. densifoliu	Giant Woolly Star		Herbaceous perennial				X			
Eriastrum densifolium subsp. elongatum	Giant Woolly Star		Herbaceous perennial	X			X			X
Eriastrum filifoliu	Lavender Woolly Star		Annual	X			X			
Ericameria ericoides	Dune-heather, Mock-heather		Shrub	X	X		X			X
Erigeron foliosus subsp. foliosus	Leafy Daisy		Herbaceous perennial	X		X				
Erigeron sanctaru	Saint's Daisy		Herbaceous perennial	X		X				
Eriogonum elongatum	Long-stemmed Eriogonum		Herbaceous perennial				X			
Eriogonum fasciculatum	California Buckwheat		Shrub	X	X					
Eriogonum gracile	Slender Buckwheat		Annual	X			X			X
Eriogonum parvifolium	Seacliff Buckwheat		Shrub	X			X			X

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Eriophyllum confertifloru	Golden Yarrow		Subshrub	X			X			
Eriophyllum multicaul	Wooly Yarrow		Annual	X			X			X
Erodium botry	Broad-leaved Filaree	*	Annual	X			X		X	X
Erodium cicutariu	Redstem Filaree	*	Annual				X		X	X
Erodium moschatu	Whitestem Filaree	*	Annual				X		X	
Erysimum capitatum subsp. lompocense	San Luis Obispo Wallflower		Herbaceous perennial	X			X			X
Erysimum insulare subsp. suffrutescen	Suffrutescent Wallflower		Herbaceous perennial	X			X			X
Eschscholzia californica	California Poppy		Annual/Perennial				X		X	X
Eucalyptus globulu	Blue Gum Eucalyptus	* N	Tree					X		
Eucrypta chrysanthemifolia	Common Eucrypta		Annual	X		X	X			X
Euphorbia lathyri	Caper Spurge	*	Biennial					X		
Euphorbia peplus	Petty Spurge	*	Annual	X		X	X			
Euphorbia spathulata	Wart Spurge		Annual			X				
Euthamia occidentalis	Western Goldenrod		Herbaceous perennial					X		
Filago gallic	Narrow-leaved Filago	*	Annual	X			X		X	X
Fillago californica	California Filago		Annual	X	X		X		X	X
Foeniculum vulgare	Sweet Fennel, Sweet Anise	* N	Herbaceous perennial				X	X	X	X
Galium andrewsi	Pinemat Bedstraw		Herbaceous perennial	X		X				
Galium aparin	Bedstraw, Cleavers		Annual	X		X		X		
Galium nuttalli	Nuttall's Bedstraw		Herbaceous perennial	X		X	X			
Galium porrigen	Climbing Bedstraw		Herbaceous perennial	X			X			
Gastridium ventricosu	Nit Grass	*	Annual	X			X		X	X
Gazania longiscap	Gazania	*	Herbaceous perennial							X
Geranium carolinianu	Carolina Geranium		Annual	X		X	X	X	X	
Geranium dissectu	Cutleaf Geranium	*	Annual	X		X			X	X
Gilia achilleaefolia subsp. achilleaefolia	California Gilia		Annual				X		X	
Gilia clivorum			Annual				X		X	
Gnaphalium bicolor	Bicolored Everlasting		Biennial/herbaceous perennial	X			X			X
Gnaphalium californicum	Green Everlasting		Herbaceous perennial	X	X		X			X
Gnaphalium canescens subsp. beneolens	Fragrant Everlasting		Herbaceous perennial	X			X			X
Gnaphalium canescens subsp. microcephalum	White Everlasting		Herbaceous perennial	X			X			X

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Gnaphalium luteo-album	Cudweed	*	Annual					X	X	X
Gnaphalium palustr	Woolly Cudweed		Annual					X		
Gnaphalium purpureu	Purple Cudweed		Annual				X		X	X
Gnaphalium ramosissimum	Pink Everlasting		Herbaceous perennial	X		X	X			X
Gnaphalium stramineum	Cotton-batting plant		Annual, biennial						X	X
Grindelia camporum var. bracteosu	Gum Plant		Herbaceous perennial				X	X	X	
Hazardia squarros	Saw-toothed Goldenbush	*	Shrub		X		X			
Hedypnois cretica	Cretan Weed	*	Annual				X			
Helenium puberulu	Sneezeweed		Herbaceous perennial					X		
Helianthemum scopariu	Rush-rose		Herbaceous perennial	X	X		X			
Heliotropium curassavicu	Wild Heliotrope		Herbaceous perennial					X		
Hesperocnide tenella	Western Nettle		Annual	X		X				
Heteromeles arbutifoli	Toyon, Christmas Berry		Shrub	X	X	X	X			
Heterotheca grandiflora	Telegraph Weed		Annual	X			X		X	X
Heterotheca sessiliflora subsp.echioides	Hairy Golden Aster		Herbaceous perennial	X			X			X
Hirschfeldia incana	Summer Mustard	*	Annual				X		X	X
Holcus lanatus	Velvet Grass	*	Herbaceous perennial			X		X		
Holodiscus discolo	Creambush		Shrub	X						
Hordeum brachyantherum subsp. brachyantheru	Meadow Barley		Perennial grass					X		
Hordeum marinum subsp. gussoneanum	Mediterranean Barley	*	Annual grass						X	X
Hordeum murinum subsp. leporinum	FoXtail	*	Annual grass						X	X
Horkelia cuneata subsp. cuneata	Honeydew, Coast Horkelia		Herbaceous perennial	X		X	X		X	X
Hypochaeris glabra	Smooth Cat's Ears	*	Annual				X		X	X
Isocoma menziesii var. vernoniodes	Coastal Goldenbush		Subshrub, herbaceous perennial	X			X			X
Isoetes howelli	Howell's Quillwort		Herbaceous perennial					X		
Juncus balticu	Wire Rush		Perennial rush					X		
Juncus bufoniu	Toad Rush		Annual rush					X		
Juncus effusus	Bog Rush		Perennial rush					X		
Juncus falcatu	Sickle-leaved Rush		Perennial rush					X		
Juncus mexicanu	Mexican Rush		Perennial rush					X		
Juncus occidentali	Yard Rush		Perennial rush			X		X		
Juncus paten	Common Rush		Perennial rush			X	X	X		

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Juncus phaeocephalu	Brown-headed Rush		Perennial rush					X		
Juncus textili	Indian Rush		Perennial rush					X		
Keckiella cordifoli	Climbing Penstemon		Shrub	X		X				
Koeleria macranth	June Grass		Herbaceous perennial	X			X			
Koeleria phleoide	Annual June Grass	*	Annual	X			X		X	X
Lactuca serriola	Prickly Lettuce	*	Annual				X		X	X
Lagophylla ramosissim	Common Hareleaf		Annual		X	X				
Lamarckia aurea	Goldentop	*	Annual				X		X	X
Lastarriaea coriacea	Leather Spineflower		Annual	X			X			X
Lasthenia californica	Goldfields		Annual				X		X	X
Lathyrus vestitus	Wild Sweetpea		Herbaceous perennial	X		X	X	X		
Layia glandulosa	White Layia		Annual	X			X		X	X
Layia hieracioides	Slender Layia, Tall Layia		Annual	X			X			X
Lemna minuscula (L. minor	Duckweed		Herbaceous perennial					X		
Lepidium nitidu	Common Peppergrass		Annual				X		X	X
Lepidium oblongum var. oblongu	Wayside Pepper-grass		Annual				X			
Lepidium strictum	Prostrate Pepper-grass		Annual	X		X	X			
Leptodactylon californicum	Prickly Phlox		Subshrub	X			X			
Lessingia filaginifolia	California-aster, Cudweed-aster		Herbaceous perennial	X			X			X
Lessingia glandulifera var. pectinata	Valley Lessinigia		Annual	X			X		X	X
Leymus condensatu	Giant Rye		Perennial grass	X		X	X			
Leymus triticoide	Alkali Rye		Perennial grass					X		
Lilaea scilloide	Flowering Quillwort		Annual					X		
Linanthus dichotomu	Evening Snow		Annual	X			X			X
Linaria canadensis var. texana	Western Toadflax		Annual/Biennial	X			X		X	X
Lithophragma affine	Woodland Star		Herbaceous perennial			X	X			
Lithophragma cymbalari	Mission Star		Herbaceous perennial			X				
Lobularia maritim	Sweet Alyssum	*	Herbaceous perennial							X
Loeflingia squarrosa	California Loeflingia		Annual	X			X			X
Lolium multifloru	Mediterranean Rye	*	Annual grass					X	X	
Lonicera involucrata	Twinberry		Shrub					X		
Lonicera subspicata subsp. denudata	Chaparral Honeysuckle		Shrub	X		X	X			
Lotus oblongifolius var. oblongifolius	Stream Lotus		Herbaceous perennial					X		
Lotus hamatus	San Diego Lotus		Annual	X			X			X
Lotus junceu	Rush Broom		Shrub	X	X					

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Lotus purshianus subsp. purshianu	Spanish Clover		Annual				X	X	X	X
Lotus scopariu	Deerweed		Subshrub	X			X			
Lotus strigosus	Bishop's Lotus		Annual	X			X		X	X
Lotus wrangelianus	Chilean Clover		Annual	X						
Lupinus albifron	Silver Bush Lupine		Shrub	X			X			X
Lupinus arboreu	Coastal Bush Lupine		Shrub				X		X	X
Lupinus bicolo	Bicolored Lupine		Annual				X		X	X
Lupinus chamissoni	Dune Lupine		Shrub	X			X			X
Lu inus truncatu	Collar Lu ine		Annual	X		X	X		X	X
Lythrum hyssopifolium	Hyssop Loosestrife	*	Annual, herbaceous perennial					X		
Madia exigua	Miniature Tarweed		Annual	X						
Madia sativa	Coastal Tarweed		Annual	X			X		X	X
Malacothamnus fasciculatu	Chaparral Mallow		Shrub	X						
Malacothrix californica	California MalacothriX		Annual	X			X		X	X
Malacothrix clevelandi	Cleveland's Malacothrix		Annual	X			X			X
Malacothrix saxatili	Cliff-aster						X			
Malva nicaeensis	Bull Mallow	*	Annual/Biennial				X			X
Malva parviflora	Cheeseweed	*	Annual						X	X
Marah fabaceus	California Manroot		Herbaceous perennial	X	X	X	X			
Marrubium vulgare	Horehound	*	Subshrub, herbaceous perennial			X	X		X	X
Meconella linearis	Narrow-leaved Meconella		Annual	X			X			X
Medicago polymorph	Bur-clover	*	Annual					X	X	X
Melica imperfect	Coast Range Melic		Perennial tufted grass	X		X	X			
Melilotus indicu	Yellow sweet-clover	*	Annual					X	X	X
Mimulus aurantiacus subsp. lompocens	Lompoc Monkeyflower		Shrub	X	X	X	X			X
Mimulus brevipe	Yellow Monkey Flower		Annual	X	X		X			X
Mimulus floribundus	Many-flowered Monkey Flower		Annual	X			X			X
Mimulus fremonti	Fremont's Monkey Flower		Annual	X			X			X
Mimulus guttatus var. guttatu	Common Monkey Flower		Annual/Perennial					X		
Mimulus longiflorus var. longiflorus	Southern Bush Monkey Flower		Shrub	X		X	X			
Minuartia douglasi	Douglas' Sandwort		Annual	X		X	X			
Monardella undulata	Curly-Leaved Monardella		Annual	X			X		X	X
Morella californica	California Wax-myrtle		Shrub to Tree					X		
Mucronea californica	California Spineflower		Annual	X			X			X
Muhlenbergia rigen	Deer Grass		Herbaceous perennial					X		

* = Non-native; *N = Noxious introduced weed

Plant Species of Burton Mesa Ecological Reserve 2004

Scientific Name	Common Name		Habit	Habitat						
				Chaparral	Pine Forest	Oak Woodland	Coastal Scrub	Wetland	Grassland	Open Sandy Areas; Disturbed Areas
Nassella cernua	Nodding Needle Grass		Herbaceous perennial	X			X		X	
Nassella lepid	Foothill Needlegrass		Herbaceous perennial				X			
Nassella pulchra	Purple Needlegrass		Herbaceous perennial	X	X		X		X	
Navarretia atractyloides	Holly-leaved Navarretia		Annual	X	X		X		X	X
Nemacladus ramosissimus	Small-flowered Threadplant		Annual	X			X			X
Nicotiana quadrivalvis	Indian Tobacco		Annual	X			X			
Oenanthe sarmentosa	American Oenanthe		Herbaceous perennial					X		
Oenothera elata subsp. hookeri	Hooker's Evening Primrose		Biennial					X		
Opuntia phaeacantha	Mojave Prickly-pear		Succulent Shrub				X			
Opuntia ficus-indica	Indian Fig	*	Succulent Shrub				X		X	X
Opuntia megacantha	Indian Fig	*	Succulent Shrub				X			X
Orobanche bulbosa	Chaparral Broomrape		Herbaceous perennial	X			X			
Orobanche californica subsp. grandis	California Broomrape		Herbaceous perennial	X			X			
Orobanche fasciculata	Clustered Broomrape		Herbaceous perennial	X			X			
Oxalis pes-caprae	Bermuda-Buttercup	*	Herbaceous perennial			X			X	X
Paeonia californica	Peony		Herbaceous perennial	X			X			
Parapholis incurva	Sicklegrass	*	Annual					X		
Pectocar a enicillata	Win ed Pectocar a		Annual	X			X			X
Pedicularis densiflor	Indian Warrior		Herbaceous perennial	X		X				
Pellaea andromedifolia var. andromedifolia	Coffee Fern		Perennial fern	X						
Penstemon centranthifoliu	Scarlet Bugler		Herbaceous perennial	X			X			X
Pentagramma triangularis var. triangulari	Goldenback Fern		Perennial fern	X		X	X			
Phacelia distans	Wild Heliotrope		Annual	X			X		X	
Phacelia douglasii	Douglas' Phacelia		Annual	X			X			X
Phacelia imbricata	Rock Phacelia		Herbaceous perennial				X		X	
Phacelia ramosissima var. austrolittoralis	Branching Phacelia		Herbaceous perennial	X		X	X			
Phacelia viscida	Sticky Phacelia		Annual	X			X			
Phalaris aquatica	Harding grass	*	Perennial grass				X		X	X
Phalaris lemmoni	Lemmon's Canary-grass		Annual grass					X		
Phalaris mino	Littleseed Canary-grass	*	Annual grass							
Phalaris paradoxa	Hood Canary-grass	*	Annual grass					X		
Pholistoma auritum	Fiesta Flower		Annual			X				
Phoradendron villosum	Oak Mistletoe		Herbaceous perennial parasite		X	X				
Picris echioide	Bristly OX-tongue	* N	Annual/biennial						X	
Pinus muricata	Bishop Pine	*?	Tree							
Pinus radiata	Montere Pin	*	Tree							
Pinus torreyana	Torrey Pine	*	Tree							

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Plant Species of Burton Mesa Ecological Reserve 2004

Scientific Name	Common Name		Habit	Habitat						
				Chaparral	Pine Forest	Oak Woodland	Coastal Scrub	Wetland	Grassland	Open Sandy Areas; Disturbed Areas
Piperia elegan	Elegant Piperia		Herbaceous perennial	X		X				
Piptatherum miliaceu	Smilo	*	Perennial grass						X	X
Plagiobothrys undulatu	Coastal Popcorn Flower		Annual					X		
Plantago coronopus	Cut-leaved Plantain	*	Annual						X	X
Plantago erecta	California Plantain		Annual	X			X		X	X
Plantago lanceolata	English Plantain	*	Herbaceous perennial					X	X	X
Plantago major	Common Plantain	*	Herbaceous perennial					X		X
Platystemon californicus	Cream Cups		Annual						X	
Poa annua	Annual Bluegrass	*						X	X	X
Poa bulbosa	Bulbous Bluegrass	*	Herbaceous perennial			X			X	
Poa secunda	One-sided Bluegrass		Perennial grass	X						
Polycarpon depressu	California Polycarp		Annual					X	X	X
Polycarpon tetraphyllu	Four-Leaved All Seed	*	Annual							X
Polygonum amphibium var. emersum	Swamp Knotweed		Herbaceous perennial					X		
Polygonum arenastrum	Common Knotweed		Annual/Perennial						X	X
Polygonum punctatum	Water Smartweed		Herbaceous perennial					X		
Polypogon monspeliensi	Rabbit's foot grass	*	Annual					X		
Populus balsamifera var. trichocarpa	Black Cottonwood		Tree					X		
Portulaca oleracea	Purslane	*	Herbaceous perennial						X	
Potamogeton pectinatus	Pondweed		Herbaceous perennial					X		
Prunus fasciculata var. punctata	Sand Almond		Shrub	X			X			
Prunus ilicifoli	Holly-leaf Cherry		Shrub			X				
Psilocarphus tenellus	Woolly-heads		Annual	X			X	X	X	X
Pteridium aquilinum var. pubescens	Bracken Fern		Perennial fern	X		X				
Pterostegia drymarioides	Fairy Mist		Annual	X		X	X			X
Quercus agrifolia	Coast Live Oak		Tree	X	X	X	X	X		
Quercus parvula subsp. parvula	Santa Cruz Island Scrub Oak		Shrub	X		X	X			
Rafinesquia californic	California Chicory		Annual	X	X		X			X
Raphanus raphanistru	Jointed Charlock	*	Annual						X	X
Raphanus sativu	Wild Radish	*	Annual						X	X
Rhamnus californica	California Coffeeberry		Shrub	X		X	X	X		
Rhamnus croce	Redberry		Shrub	X		X	X			
Ribes divaricatum	Straggly Gooseberry		Shrub					X		
Ribes malvaceum	Chaparral Currant		Shrub	X			X			
Ribes speciosum	Fuchsia-flowered Gooseberry		Shrub	X						
Rosa californica	California Wild Rose		Shrub					X		

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Plant Species of Burton Mesa Ecological Reserve 2004

Scientific Name	Common Name		Habit	Habitat						
				Chaparral	Pine Forest	Oak Woodland	Coastal Scrub	Wetland	Grassland	Open Sandy Areas; Disturbed Areas
Rubus ursinus	California Blackberry		Viny shrub			X		X		
Rumex conglomeratus	Green Dock	*	Herbaceous perennial					X		
Rumex crispu	Curly Dock	* N	Herbaceous perennial					X	X	
Rumex salicifoliu	Green Dock		Herbaceous perennial					X		
Sagina decumbens subsp. occidentali	Western Pearlwort		Annual				X		X	
Salix laevigata	Red Willow		Shrub/Tree					X		
Salix lasiolepi	Arroyo Willow		Shrub					X		
Salix lucida subsp. lasiandr	Yellow Willow		Shrub/Tree					X		
Salvia columbariae	Chia Sage		Annual	X			X		X	X
Salvia mellifera	Black Sage		Shrub	X	X		X		X	X
Salvia spathacea	Humming-Bird Sage		Herbaceous perennial	X		X	X			
Sambucus mexicana	Mexican Elderberry		Shrub	X	X	X		X		
Sanicula crassicauli	Pacific Snakeroot		Herbaceous perennial	X		X				
Sanicula laciniat	Coastal Snakeroot		Herbaceous perennial	X		X				
Satureja douglasi	Yerba Buena		Herbaceous perennial	X		X	X	X		
Schinus moll	Peruvian Pepper Tree	*	Shrub/Tree				X			
Schismus barbatu	Mediterranean Grass	*N	Annual	X			X	X		X
Scirpus acutu	Common Tule		Herbaceous perennial					X		
Scirpus californicu	California Bulrush		Herbaceous perennial					X		
Scirpus cernuu	Low Clubrush		Annual					X		
Scirpus microcarpu	Small-fruited Bulrush		Herbaceous perennial					X		
Scrophularia atrata	Black-Flowered Figwort		Herbaceous perennial			X	X	X		
Scrophularia californica var. californica	California Figwort		Herbaceous perennial	X		X	X			
Senecio californicus	California Groundsel		Annual	X			X		X	X
Senecio flaccidus	Bush Groundsel		Shrub	X			X		X	X
Senecio vul ari	Common Groundsel	*	Annual						X	X
Silene gallic	Windmill Pink	*	Annual			X	X		X	
Silene laciniata subsp. majo	Indian Pink		Herbaceous perennial	X		X	X			
Silybum marianu	Milk Thistle	* N	Annual						X	X
Sisymbrium iri	London Rocket	*	Annual							
Sisyrinchium bellu	Blue-eyed Grass		Herbaceous perennial	X			X		X	X
Solanum douglasi	Douglas' Nightshade		Herbaceous perennial	X		X	X		X	
Solanum umbelliferum var. umbelliferu	Blue Witch Nightshade		Subshrub	X	X		X			
Solanum xant	Purple Nightshade		Subshrub			X		X		
Solidago californic	California Goldenrod		Herbaceous perennial			X				
Solidago confinu	Southern Goldenrod		Herbaceous perennial					X		

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Plant Species of Burton Mesa Ecological Reserve 2004

Scientific Name	Common Name		Habit	Habitat						
				Chaparral	Pine Forest	Oak Woodland	Coastal Scrub	Wetland	Grassland	Open Sandy Areas; Disturbed Areas
Sonchus asper	Prickly Sow-thistle	*	Annual						X	X
Sonchus oleraceu	Common Sow-thistle	*	Annual			X			X	X
Sparganium eurycarpu	Broad-fruited Bur-Reed		Herbaceous perennial					X		
Spergula arvensi	Corn Spurrey	*	Annual						X	X
Spergularia bocconi	Sand Spurrey	*	Annual					X		X
Spergularia marina	Annual Saline Sand Spurrey		Annual					X		
S er ularia villos	Sand S urre	*	Herbaceous erennial							X
Stachys bullata	Common Wood Mint		Herbaceous perennial	X		X	X			
Stachys chamissonis	Chamisso's Wood Mint		Herbaceous perennial					X		
Stellaria medi	Chickweed	*	Annual	X		X	X		X	
Stephanomeria virgata	Rod Wire-lettuce, Twiggy Wreath Plant		Annual	X	X		X		X	X
Stylocline gnaphalioides	Everlasting Net-straw		Annual	X			X		X	X
S m horicar os molli	Nuttall's Snowberr		Shrub			X				
Symphyotrichum (Aster) chilense	Chilean Aster		Herbaceous perennial				X			
Taraxacum officinal	Dandelion		Annual							X
Thysanocarpus curvipe	Hairy Lace Pod		Annual			X			X	
Torilis nodosa	Knotted Hedge Parsley	*	Annual						X	
Toxicodendron diversilobu	Poison-oak		Shrub	X		X	X	X		
Tragopogon porrifoliu	Salsify, Oyster Plant		Biennial							X
Trifolium fragiferu	Strawberry Clover	*	Herbaceous perennial							X
Trifolium gracilentum var. gracilentu	Pinpoint Clover		Annual			X			X	
Trifolium microcephalu	Small-headed Clover		Annual	X			X			
Trifolium repen	White Clover	*	Perennial						X	X
Triodanis biflora	Venus Looking-Glass		Annual			X		X		
Triticum aestivu	Cultivated Wheat	*	Annual						X	
Typha latifolia	Broad-leaved Cattail		Herbaceous perennial					X		
Typha domingensi	Southern Cat-tail		Herbaceous perennial					X		
Uropappus lindleyi	Silver Puffs		Annual	X			X		X	X
Urtica urens	Dwarf Nettle	*	Annual			X		X		
Urtica dioca var. holosericea	Giant Nettle		Herbaceous perennial					X		
Verbena lasiostachys var. lasiostachy	Western Vervain		Perennial			X	X	X		
Veronica peregrina subsp. xalapensi	Purslane Speedwell		Annual					X		
Vicia ludovician	Slender Vetch		Annual			X		X		
Vicia sativa subsp. sativa	Common Vetch	*	Annual						X	X
Vicia villos	Winter Vetch	*	Annual						X	X
Vinca majo	Periwinkle	*N	Herbaceous perennial			X		X		
Vulpia bromoide	SiX-weeks Fescue	*	Annual	X			X		X	

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Plant Species of Burton Mesa Ecological Reserve 2004

Scientific Name	Common Name		Habit	Habitat						
				Chaparral	Pine Forest	Oak Woodland	Coastal Scrub	Wetland	Grassland	Open Sandy Areas; Disturbed Areas
Vulpia microstachys var. microstachy	Nuttall's Fescue		Annual	X		X	X		X	
Vulpia myuros var. hirsuta	FoXtail Fescue	*	Annual	X		X	X		X	
Vulpia myuros var. myuro	Rattail Fescue	*	Annual grass	X		X	X	X	X	X
Vulpia octoflora var. octoflora	Slender Fescue		Annual grass	X			X		X	
Woodwardia fimbriat	Giant Chain Fern		Perennial fern					X		
anthium strumariu	Cocklebur		Herbaceous perennial						X	X
Yabea microcarp	California hedge-parsley		Annual	X		X	X	X		
Zigadenus fremontii var. fremonti	Chaparral Zygadene		Herbaceous perennial	X		X				

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WILDLIFE SPECIES LIST

APPENDIX 2

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

Appendix 2
Burton Mesa Ecological Reserve
Wildlife Species List

12-Jul-05

								Habitat									
Order	**Family**	**Species**	**Common Name**	**Status**	**Seasonal Status (Birds only)**	**Site Specific Status**	**Observed in 2004**	**Vernal Wetland**	**Marsh**	**Riparian**	**Maritime Chaparral**	**Coastal Scrub**	**Oak Woodland**	**Grassland**	**Bishop Pine Forest**	**Non-Native Woodland**	**Agricultural Flds**
INVERTEBRATES																	
Coleoptera	Dytiscidae	*Acilius abbreviatus*	Small Flat Diving Beetle	Not Listed	-	O		X									
		Ceratophyus gopherinus	Burton Mesa Dung Beetle	Not Listed	-	O											
Lepidoptera	Lycaenidae	*Philotiella speciosa purisima*	Small Lycaenid Butterfly	Locally Important	-	O					X						
Anostraca	Branchinectidae	*Branchinecta lynchi*	Vernal Pool Fairy Shrimp	Federal Threatened	-	O*	PC; EG	X									
Total Number		***4***					***1***	***2***	***0***	***0***	***1***	***0***	***0***	***0***	***0***	***0***	***0***
AMPHIBIANS																	
Caudata	Ambystomatidae	*Ambystoma californiense*	California Tiger Salamander	Federal Threatened; State Species of Special Concern	-	Unlikely		X									
	Plethodontidae	*Aneides lugubris*	Arboreal Salamander	Not Listed	-	O	MH			X	X		X				
		Batrachoceps nigriventris	Black-bellied Slender Salamander	Not Listed	-	E				X	X		X		X		
		Ensatina eschscholtzii	Ensatina	Not Listed	-	E				X	X		X			X	
Anura	Pelobatidae	*Spea hammondii*	Western Spadefoot	Federal and State Species of Special Concern	-	O*	PC	X		X	X		X	X			
	Bufonidae	*Bufo boreas*	Western Toad	Not Listed	-	O*	PC	X		X	X	X	X	X		X	
	Hylidae	*Hyla regilla*	Pacific Tree Frog	Not Listed	-	O	PC	X	X	X	X	X	X	X		X	
	Ranidae	*Rana catesbeiana*	Bullfrog	Not Listed	-	O* (I)	PC	X	X								
		Rana draytonii	California Red-legged Frog	Federal Threatened; State Species of Special Concern	-	O		X	X	X							
Total Number		***9***					***5***	***6***	***3***	***7***	***6***	***2***	***6***	***3***	***1***	***3***	***0***

Wildlife Species List

								Habitat									
Order	**Family**	**Species**	**Common Name**	**Status**	**Seasonal Status (Birds only)**	**Site Specific Status**	**Observed in 2004**	**Vernal Wetland**	**Marsh**	**Riparian**	**Maritime Chaparral**	**Coastal Scrub**	**Oak Woodland**	**Grassland**	**Bishop Pine Forest**	**Non-Native Woodland**	**Agricultural Flds**
REPTILES																	
Testudines	Emydidae	*Actinemys marmorata pallida*	Southwestern Pond Turtle	Federal Species of Concern (former Category 2 candidate species); State Species of Special Concern	-	O*	LG		X	X							
Squamata	Phrynosomatidae	*Phrynosoma coronatum frontale*	California Horned Lizard	Federal Species of Concern (former Category 2 candidate species); State Species of Special Concern	-	O	MH; PC;EG				X	X					
		Sceloporus occidentalis	Westen Fence Lizard	Not Listed	-	O	MH; PC;EG			X	X	X	X	X	X	X	X
		Uta stansburiana	Common Side-blotched Lizard	Not Listed	-	O	PC;EG				X	X		X			X
	Scincidae	*Eumeces skiltonianus*	Westen Skink	Not Listed	-	O*	MH; PC				X	X	X	X	X	X	
	Teiidae	*Cnemidophorus tigris*	Western Whiptail	Locally Important	-	O	MH; PC				X	X		X			
	Anguidae	*Anniella pulchra pulchra*	Silvery Legless Lizard	Federal Species of Concern (former Category 2 candidate species); State Species of Special Concern	-	O	VS(Near BMER)			X	X	X	X		X		
		Elgaria m. multicarinata	California Alligator Lizard	Not Listed	-	O	MH; PC			X	X	X	X	X	X	X	
	Colubridae	*Coluber constrictor*	Racer	Not Listed	-	O				X	X	X	X		X	X	
		Diadophis punctatus	Ring-necked Snake	Not Listed	-	O*	LG; MH;EG			X	X		X			X	
		Hypsiglena torquata	Night Snake	Not Listed	-	Unlikely									X		

Wildlife Species List

								Habitat									
Order	**Family**	**Species**	**Common Name**	**Status**	**Seasonal Status (Birds only)**	**Site Specific Status**	**Observed in 2004**	**Vernal Wetland**	**Marsh**	**Riparian**	**Maritime Chaparral**	**Coastal Scrub**	**Oak Woodland**	**Grassland**	**Bishop Pine Forest**	**Non-Native Woodland**	**Agricultural Flds**
Squamata	Colubridae	*Lampropeltis getulus*	Common Kingsnake	Not Listed	-	E	EG(Near BMER)			X	X	X	X	X	X	X	
		Masticophis lateralis	Striped Racer	Not Listed	-	E					X	X	X	X			
		Pituophis catenifer annectens	San Diego Gopher Snake	Not Listed	-	O	PC; EG			X	X	X	X	X	X	X	X
		Rhinocheilus lecontei	Long-nosed Snake	Locally Important	-	E*	EG(Near BMER)				X	X					
		Salvadora hexalepis virgultea	Coast Patch-nosed Snake	State Species of Special Concern	-	E*	PC(Near BMER)				X	X		X			
		Thamnophis elegans terrestris	Coast Gartersnake	Not Listed	-	O				X		X	X	X	X	X	
		Thamnophis hammondii	Two-striped Gartersnake	State Species of Special Concern	-	Unlikely		X	X	X							
		Thamnophis sirtalis invernalis	California Red-sided Gartersnake	Not Listed	-	E				X	X	X	X	X			
	Viperidae	*Crotalus oreganus helleri*	Southern Pacific Rattlesnake	Not Listed	-	O				X	X	X	X	X		X	
Total Number		***20***					***13***	***1***	***2***	***12***	***16***	***16***	***12***	***12***	***9***	***9***	***3***
BIRDS																	
Gaviiformes	Podicepedidae	*Podilymbus podiceps*	Pied-billed Grebe	Not Listed	T/WV	U		X	X								
Ciconiiformes	Ardeidae	*Ardea herodias*	Great Blue Heron	Not Listed	WV	U	MH; PC	X	X	X	X			X		X	X
		Botaurus lentiginosus	American Bittern	Not Listed	WV	Unlikely		X	X								X
		Bubulcus ibis	Cattle Egret	Not Listed	WV	U			X	X				X			X
		Butorides virescens	Green Heron	Not Listed	WV	U		X	X	X							

Wildlife Species List

								Habitat									
Order	Family	Species	Common Name	Status	Seasonal Status (Birds only)	Site Specific Status	Observed in 2004	Vernal Wetland	Marsh	Riparian	Maritime Chaparral	Coastal Scrub	Oak Woodland	Grassland	Bishop Pine Forest	Non-Native Woodland	Agricultural Flds
Ciconiiformes	Ardeidae	*Casmerodius albus*	Great Egret	Not Listed	WV	U		X	X							X	X
		Egretta thula	Snowy Egret	Not Listed	WV	U		X	X								
		Ixobrychus exilis	Least Bittern	CDFG Species of Special Concern (3rd priority)	SV	Unlikely		X	X								
		Nycticorax nycticorax	Black-crowned Night Heron	Not Listed	T/WV	Unlikely		X	X	X						X	
	Cathartidae	*Cathartes aura*	Turkey Vulture	Not Listed	T/SV	C	MH; PC;EG				X	X	X	X	X	X	X
Anseriformes	Anatidae	*Anas clypeata*	Northern Shoveler	Not Listed	WV	U		X	X								
		Anas crecca	Green-winged Teal	Not Listed	WV	U		X	X								
		Anas cyanoptera	Cinnamon Teal	Not Listed	WV	U		X	X								
		Anas discors	Blue-winged Teal	Not Listed	WV	Unlikely		X	X								
		Anas platyrhynchos	Mallard	Not Listed	WV	U	MH; PC;EG	X	X								
		Anas strepera	Gadwall	Not Listed	WV	U	MH	X	X								
		Oxyura jamaicensis	Ruddy Duck	Not Listed	WV	U	MH; PC;EG	X	X								
Falconiformes	Accipitridae	*Accipiter cooperii*	Cooper's Hawk	CDFG Species of Special Concern (3rd priority)	WV	U	MH; PC;EG			X			X		X	X	
		Accipiter striatus	Sharp-shinned Hawk	CDFG Species of Special Concern (3rd priority)	WV	U			X	X			X		X	X	
		Aquila chrysaetos	Golden Eagle	Not Listed	T	Unlikely					X	X	X	X	X		
		Buteo jamaicensis	Red-tailed Hawk	Not Listed	RB	C	MH; PC;EG			X			X				X
		Buteo lineatus	Red-shouldered Hawk	Not Listed	SV	U	MH;EG			X			X				X

Wildlife Species List

								Habitat									
Order	Family	Species	Common Name	Status	Seasonal Status (Birds only)	Site Specific Status	Observed in 2004	Vernal Wetland	Marsh	Riparian	Maritime Chaparral	Coastal Scrub	Oak Woodland	Grassland	Bishop Pine Forest	Non-Native Woodland	Agricultural Flds
Falconiformes	Accipitridae	*Buteo regalis*	Ferruginous Hawk	CDFG Species of Special Concern (Addition)	WV	U					X	X		X			X
		Circus cyaneus	Northern Harrier	CDFG Species of Special Concern (2nd priority)	RB	U	MH	X	X			X		X			X
		Elanus leucurus	White-tailed Kite	CDFG Fully Protected Species	RB	U	MH;EG		X	X			X	X			
		Haliaeetus leucocephalus	Bald Eagle	Not Listed	T	Unlikely		X	X								
	Falconidae	*Falco columbarius*	Merlin	Not Listed	WV	Unlikely		X	X	X			X	X		X	X
		Falco mexicanus	Prairie Falcon	Not Listed	T	Unlikely		X	X	X	X	X	X	X	X	X	X
		Falco peregrinus	Peregrine Falcon	Not Listed	T/SUN	Unlikely			X	X	X	X	X	X	X	X	X
		Falco sparverius	American Kestrel	Not Listed	RB	C	MH; PC;EG		X	X	X	X	X	X	X	X	X
Galliformes	Odontophoridae	*Callipepla californica*	California Quail	Not Listed	RB	A	MH; PC;EG			X	X	X	X	X	X	X	X
Gruiformes	Rallidae	*Fulica americana*	American Coot	Not Listed	WV	U	MH; PC;EG	X	X								
		Gallinula chloropus	Common Moorhen	Not Listed	WV	Unlikely		X	X								
		Porzana carolina	Sora	Not Listed	WV	U		X	X								
		Rallus limicola	Virginia Rail	Not Listed	WV	U		X	X								
Charadriiformes	Charadriidae	*Charadrius montanus*	Mountain Plover	CDFG Species of Special Concern (Addition)	WV	Unlikely								X			X
		Charadrius vociferus	Killdeer	Not Listed	RB	U	MH; EG	X	X					X			X
	Scolopacidae	*Gallinago gallinago*	Wilson's Snipe	Not Listed	WV	Unlikely	MH; PC	X	X								
Columbiformes	Columbidae	*Columba livia*	Rock Pigeon	Not Listed	RB (I)	C	MH								X	X	X

Wildlife Species List

								Habitat									
Order	Family	Species	Common Name	Status	Seasonal Status (Birds only)	Site Specific Status	Observed in 2004	Vernal Wetland	Marsh	Riparian	Maritime Chaparral	Coastal Scrub	Oak Woodland	Grassland	Bishop Pine Forest	Non-Native Woodland	Agricultural Flds
Columbiformes	Columbidae	*Patagioenas fasciata*	Band-tailed Pigeon	Not Listed	T	Unlikely							X		X	X	
		Zenaida macroura	Mourning Dove	Not Listed	RB	C	MH; PC;EG			X	X	X	X	X	X	X	X
Cuculiformes	Cuculidae	*Geococcyx californianus*	Greater Road Runner	Not Listed	RB	C	MH;EG				X	X	X	X	X		
Strigiformes	Tytonidae	*Tyto alba*	Barn Owl	Not Listed	RB	U	MH; PC						X	X		X	X
	Strigidae	*Asio flammeus*	Short-eared Owl	Not Listed	WV	Unlikely								X			X
		Asio otus	Long-eared Owl	CDFG Species of Special Concern (2nd priority)	SUN	Unlikely			X	X			X			X	
		Athene cunicularia	Burrowing Owl	CDFG Species of Special Concern (2nd priority)	WV	Unlikely	MH?				X	X		X			X
		Bubo virginianus	Great Horned Owl	Not Listed	RB	C	MH; PC	X	X	X	X	X	X	X	X	X	X
		Glaucidium gnoma	Northern Pygmy Owl	Not Listed	T	Unlikely							X				
		Megascops kennicottii	Western Screech Owl	Not Listed	SUN	U	PC						X				
Caprimulgiformes	Caprimulgidae	*Phalaenoptilus nuttallii*	Common Poorwill	Not Listed	SV	U					X	X	X	X			
Apodiformes	Apodidae	*Aeronautes saxatalis*	White-throated Swift	Not Listed	T	U	MH; PC						X	X	X		
		Chaetura vauxi	Vaux's Swift	Not Listed	M	U							X	X			
	Trochilidae	*Archilochus alexandri*	Black-chinned Hummingbird	Not Listed	SV	U					X		X		X		
		Calypte anna	Anna's Hummingbird	Not Listed	RB	C	MH; PC; EG		X	X	X	X	X		X	X	
		Calypte costae	Costa's Hummingbird	Not Listed	SR	U	MH				X	X					
		Selasphorus rufus	Rufous Hummingbird	Not Listed	M	U					X	X	X			X	

Wildlife Species List

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Apodiformes	Trochilidae	*Selasphorus sasin*	Allen's Hummingbird	Not Listed	SV	C	MH		X	X	X	X				X	
Coraciiformes	Alcedinidae	*Ceryle alcyon*	Belted Kingfisher	Not Listed	T/WV	U	MH; EG	X	X	X							
Piciformes	Picidae	*Colaptes auratus*	Northern Flicker	Not Listed	RB	C	MH; PC; EG			X	X		X		X	X	
		Melanerpes formicivorus	Acorn Woodpecker	Not Listed	T	C	MH			X			X		X	X	
		Picoides nuttallii	Nuttall's Woodpecker	Not Listed	RB	C	MH; PC			X	X		X		X	X	
		Picoides pubescens	Downy Woodpecker	Not Listed	RB	U	MH; PC			X			X		X	X	
		Picoides villosus	Hairy Woodpecker	Not Listed	RB	U	MH; PC			X			X		X	X	
		Sphyrapicus ruber	Red-breasted Sapsucker	Not Listed	WV	U				X			X		X	X	
Passeriformes	Tyrannidae	*Contopus cooperi*	Olive-sided Flycatcher	Not Listed	M	U				X			X		X	X	
		Contopus sordidulus	Western Wood Pewee	Not Listed	M	U	MH; PC			X			X		X	X	
		Empidonax hammondii	Hammond's Flycatcher	Not Listed	M	Unlikely			X	X							
		Empidonax trailii	Willow Flycatcher	Not Listed	M	Unlikely			X	X							
		Myiarchus cinerascens	Ash-throated Flycatcher	Not Listed	T/SV	U	MH; PC; EG			X	X	X	X		X	X	
		Sayornis nigricans	Black Phoebe	Not Listed	RB	C	MH; PC; EG	X	X	X			X			X	X
		Sayornis saya	Say's Phoebe	Not Listed	WV	C	MH				X	X	X	X			X
		Tyrannus verticalis	Western Kingbird	Not Listed	M	U	MH; PC						X		X	X	X
		Tyrannus vociferans	Cassin's Kingbird	Not Listed	SV	U	MH						X		X	X	
	Laniidae	*Lanius ludovicianus*	Loggerhead Shrike	CDFG Species of Special Concern (Addition)	WV	U	MH; PC;EG				X	X		X		X	X

Wildlife Species List

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Passeriformes	Vireonidae	*Vireo bellii*	Bell's Vireo	Not Listed	M	Unlikely			X	X							
		Vireo flavifrons	Yellow-throated Vireo	Not Listed	T	U	MH			X							
		Vireo gilvus	Warbling Vireo	Locally Important	SV	C	MH; PC			X			X				
		Vireo huttoni	Hutton's Vireo	Not Listed	RB	C	MH; PC			X			X				
		Vireo solitarius	Solitary Vireo	Not Listed	M	U				X			X		X	X	
	Corvidae	*Aphelocoma californica*	Western Scrub Jay	Not Listed	RB	A	MH; PC;EG			X	X	X	X	X	X	X	X
		Corvus brach rh ncho	American Crow	Not Listed	RB	C	MH; PC;EG			X	X	X	X	X	X	X	X
		Corvus corax	Common Raven	Not Listed	SUN	U	MH				X						X
	Alaudidae	*Eremophila alpestris*	Horned Lark	CDFG Species of Special Concern (Addition)	WV	C	MH; PC							X			X
	Hirundinidae	*Hirundo rustica*	Barn Swallow	Not Listed	M	U	MH;EG	X	X	X	X	X	X	X	X	X	X
		Petrochelidon pyrrhonota	Cliff Swallow	Not Listed	RB	C	MH; PC;EG	X	X	X	X	X	X	X	X	X	X
		Stelgidopteryx serripennis	No. Rough-winged Swallow	Not Listed	RB	U	MH; PC	X	X	X	X	X	X	X	X	X	X
		Tachycineta bicolor	Tree Swallow	Not Listed	M	U	MH	X	X	X	X	X	X	X	X	X	X
		Tachycineta thalassina	Violet-green Swallow	Not Listed	M	U	MH; PC	X	X	X	X	X	X	X	X	X	X
	Paridae	*Baeolophus inornatus*	Oak Titmouse	Not Listed	RB	C	MH; PC			X			X		X		
	Aegithalidae	*Psaltriparus minimus*	Bushtit	Not Listed	RB	A	MH; PC		X	X	X	X	X		X	X	
	Sittidae	*Sitta canadensis*	Red-breasted Nuthatch	Not Listed	WV	Unlikely									X		
		Sitta carolinensis	White-breasted Nuthatch	Not Listed	SUN	U				X			X		X	X	
	Certhiidae	*Certhia americana*	Brown Creeper	Not Listed	WV	Unlikely							X		X		
	Troglodytidae	*Catherpes mexicanus*	Canyon Wren	Not Listed	SUN	Unlikely	MH (Near BMER); PC								X		

Wildlife Species List

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Passeriformes	Troglodytidae	*Cistothorus palustris*	Marsh Wren	Not Listed	WV	U	MH; PC	X	X								
		Salpinctes obsoletus	Rock Wren	Not Listed	SUN	U	MH (Near BMER)						X		X		
		Thryomanes bewickii	Bewick's Wren	Not Listed	RB	C	MH; PC			X	X	X	X		X	X	
		Troglodytes aedon	House Wren	Not Listed	SV	C	MH; PC			X	X	X	X			X	
		Troglodytes troglodytes	Winter Wren	Not Listed	WV	Unlikely				X							
	Regulidae	*Regulus calendula*	Ruby-crowned Kinglet	Not Listed	WV	C	MH			X	X		X		X		
		Regulus satrapa	Golden-crowned Kinglet	Not Listed	WV	Unlikely									X		
	Sylviidae	*Polioptila caerulea*	Blue-gray Gnatcatcher	Not Listed	M	U	MH; PC			X	X	X	X			X	
	Turdidae	*Catharus guttatus*	Hermit Thrush	Not Listed	WV	U	MH			X	X		X		X	X	
		Catharus ustulatus	Swainson's Thrush	Locally Important	SV	U	MH			X			X				
		Siala currucoides	Mountain Bluebird	Not Listed	WV	Unlikely								X			
		Siala mexicana	Western Bluebird	Not Listed	T	U	MH; PC			X			X	X	X		X
		Turdus migratorius	American Robin	Not Listed	WV	C	MH									X	X
	Timaliidae	*Chamaea fasciata*	Wrentit	Not Listed	RB	C	MH; PC			X	X	X					
	Mimidae	*Mimus polyglottos*	Northern Mockingbird	Not Listed	RB	U	MH						X			X	X
		Toxostoma redivivum	California Thrasher	Not Listed	RB	C	MH; PC			X	X	X					
	Sturnidae	*Sturnus vulgaris*	European Starling	Not Listed	RB (I)	C	MH; PC									X	X
	Motacillidae	*Anthus rubescens*	American Pipit	Not Listed	WV	U	MH							X			X
	Bombycillidae	*Bombycilla cedrorum*	Cedar Waxwing	Not Listed	WV	U	MH; PC			X	X					X	

Wildlife Species List

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Passeriformes	Ptilogonatidae	*Phainopepla nitens*	Phainopepla	Not Listed	SUN	Unlikely	MH; PC			X	X		X			X	
	Parulidae	*Dendroica coronata*	Yellow-rumped Warbler	Not Listed	WV	A	MH			X	X		X	X	X	X	X
		Dendroica nigrescens	Black-throated Gray Warbler	Not Listed	T	U				X			X		X		
		Dendroica occidentalis	Hermit Warbler	Not Listed	T	U							X		X		
		Dendroica petechia	Yellow Warbler	CDFG Species of Special Concern (2nd priority)	M/SV	C	MH		X	X						X	
		Dendroica townsendi	Townsend's Warbler	Not Listed	T/WV	U	MH						X		X		
		Geothlypis trichas	Common Yellowthroat	Not Listed	RB	C	MH; PC	X	X	X							X
		Icteria virens	Yellow-breasted Chat	CDFG Species of Special Concern (2nd priority)	T	Unlikely				X							
		Oporornis tolmiei	MacGillivray's Warbler	Not Listed	M	U				X	X						
		Vermivora celata	Orange-crowned Warbler	Not Listed	SV	C	MH; PC			X			X			X	
		Vermivora peregrina	Tennessee Warbler	Not Listed	T	Unlikely				X						X	
		Vermivora ruficapilla	Nashville Warbler	Not Listed	M	U				X						X	
		Wilsonia citrina	Hooded Warbler	Not Listed	T	U	MH			X							
		Wilsonia pusilla	Wilson's Warbler	Not Listed	T	U	MH; PC			X							
	Thraupidae	*Piranga ludoviciana*	Western Tanager	Not Listed	M	U	MH						X		X		

Wildlife Species List

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Passeriformes	Emberizidae	*Aimophila ruficeps ruficeps*	California Rufous-crowned Sparrow	Locally Important	SUN	U	MH; PC				X	X					
		Ammodramus savannarum	Grasshopper Sparrow	CDFG Species of Special Concern; Locally Important	SV	Unlikely	MH; PC							X			
		Amphispiza belli	Bell's Sage Sparrow	CDFG Species of Special Concern; Federally sensitive	M	U	MH; PC;EG				X	X					
		Chondestes grammacus	Lark Sparrow	Not Listed	RB	U	MH; PC						X	X			X
		Junco hyemalis	Dark-eyed Junco	Not Listed	T/WV	C	MH; PC						X	X	X	X	X
		Melospiza lincolnii	Lincoln's Sparrow	Not Listed	RB	U	MH				X	X					X
		Melospiza melodia	Song Sparrow	Not Listed	RB	C	MH; PC	X	X	X		X				X	X
		Passerculus sandwichensis	Savannah Sparrow	Not Listed	WV	U	MH							X			
		Passerella iliaca	Fox Sparrow	Not Listed	WV	U					X	X	X				
		Pipilo crissalis	California Towhee	Not Listed	RB	A	MH; PC;EG			X	X	X	X	X	X	X	X
		Pipilo maculatus	Spotted Towhee	Not Listed	RB	A	MH; PC;EG			X	X	X	X		X	X	
		Spizella atrogularis	Black-chinned Sparrow	Not Listed	T	U	MH					X					
		Spizella passerina	Chipping Sparrow	Not Listed	SV	U	MH; PC						X	X	X		
		Zonotrichia atricapilla	Golden-crowned Sparrow	Not Listed	WV	A	MH				X	X	X				X
		Zonotrichia leucophrys	White-crowned Sparrow	Not Listed	WV	A	MH; PC			X	X	X	X		X	X	X

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Passeriformes	Cardinalidae	*Passerina amoena*	Lazuli Bunting	Not Listed	SV	U				X	X		X	X			X
		Passerina caerulea	Blue Grosbeak	Locally Important	SV	Unlikely	MH			X		X		X			X
		Pheucticus melanocephalus	Black-headed Grosbeak	Not Listed	SV	C	MH; PC			X			X		X		
	Icteridae	*Agelaius phoeniceus*	Red-winged Blackbird	Not Listed	RB	C	MH; PC;EG	X	X	X							X
		Agelaius tricolor	Tri-colored Blackbird	CDFG Species of Special Concern (Addition)	T	Unlikely		X	X								X
		Euphagus cyanocephalus	Brewer's Blackbird	Not Listed	RB	C	PC								X		X
		Icterus cucullatus	Hooded Oriole	Not Listed	SV	U	MH			X						X	
		Icterus galbula	Northern Oriole	Not Listed	M	U	MH; PC			X						X	
		Molothrus ater	Brown-headed Cowbird	Not Listed	RB	U	MH		X	X			X				X
		Quiscalus mexicanus	Great-tailed Grackle	Not Listed	?	O*	PC;MH;EG		X								
		Sturnella neglecta	Western Meadowlark	Not Listed	RB	C	MH; PC;EG					X		X			X
		X. xanthocephalus	Yellow-headed Blackbird	Not Listed	M	U		X	X					X			X
	Fringillidae	*Carduelis lawrencei*	Lawrence's Goldfinch	Not Listed	M	U	MH			X			X		X	X	
		Carduelis pinus	Pine Siskin	Not Listed	WV	Unlikely				X					X	X	X
		Carduelis psaltria	Lesser Goldfinch	Not Listed	RB	A	MH; PC			X			X		X		X
		Carduelis tristis	American Goldfinch	Not Listed	WV	C	MH			X						X	X
		Carpodacus mexicanus	House Finch	Not Listed	RB	A	MH; PC			X			X		X	X	X

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Passeriformes	Fringillidae	*Carpodacus purpureus*	Purple Finch	Not Listed	RB	U	MH; PC			X			X			X	
	Passeridae	*Passer domesticus*	House Sparrow	Not Listed	RB (I)	C	PC										X
Total Number		***141***					***108***	***38***	***54***	***87***	***52***	***45***	***84***	***47***	***63***	***69***	***62***
MAMMALS																	
Didelphimorphia	Didelphidae	*Didelphis virginiana*	Virginia Opossum	Not Listed	-	O	PC	X	X	X	X	X	X	X	X	X	X
Insectivora	Soricidae	*Sorex ornatus*	Ornate Shrew	Not Listed	-	E		X	X	X	X	X	X	X	X	X	
		Sorex trowbridgii	Trowbridge's Shrew	Not Listed	-	SUN		X	X	X	X	X	X	X	X	X	
	Talpidae	*Scapanus latimanus*	Broad-footed Mole	Not Listed	-	O	PC					X			X		
Chiroptera	Vespertilionidae	*Antrozous pallidus*	Pallid Bat	State Species of Special Concern; USFS Region 5 Sensitive Species	-	E				X			X		X		
		Corynorhinus townsendii	Townsend's Big-eared Bat	Federal Species of Concern (former Category 2 candidate species); State Species of Special Concern	-	E				X			X		X		
		Eptesicus fuscus	Big Brown Bat	Not Listed	-	E			X								
		Myotis californicus	California Myotis	Not Listed	-	E			X				X				
		Myotis yumanensis	Yuma Myotis	Not Listed	-	E			X								
	Molossidae	*Tadarida brasiliensis*	Brazilian Free-tailed Bat	Not Listed	-	E			X								
Lagomorpha	Leporidae	*Lepus californicus*	Black-tailed Jackrabbit	Not Listed	-	O*	MH; PC;EG				X	X	X	X			X
		Sylvilagus audubonii	Desert Cottontail	Not Listed	-	O*	PC				X	X	X	X			

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Lagomorpha	Leporidae	*Sylvilagus bachmani*	Brush Rabbit	Not Listed	-	O	MH; PC;EG		X	X	X	X	X				
Rodentia	Sciuridae	*Sciurus griseus*	Western Gray Squirrel	Locally Important	-	O*	MH			X			X		X	X	
		Spermophilus beecheyi	California Ground Squirrel	Not Listed	-	O	MH; PC					X	X	X		X	X
		Neotamias merrimi	Merriam's Chipmunk	Not Listed	-	Unlikely								X		X	
	Geomyidae	*Thomomys bottae*	Botta's Pocket Gopher	Not Listed	-	O	PC			X	X	X	X	X	X	X	X
	Heteromyidae	*Chaetodipus californicus*	California Pocket Mouse	Not Listed	-	O*	EG (Near BMER)					X	X	X	X		
		Dipodomys agilis	Agile Kangaroo Rat	Not Listed	-	O*	PC				X	X	X	X			
	Muridae	*Microtus californicus*	California Vole	Not Listed	-	O*	PC					X	X	X			
		Mus musculus	House Mouse	Not Listed	-	SUN (I)						X	X	X	X	X	X
		Neotoma macrotis	Big-eared Woodrat (formally Dusky footed woodrat	Not Listed	-	O	MH; PC;EG			X	X		X		X	X	
		Neotoma lepida intermedia	San Diego Desert Woodrat	Federal Sensitive Species; State Species of Special Concern (in review)	-	O*	MH; PC				X	X	X	X			
		Peromyscus boylii	Brush Mouse	Not Listed	-	E						X	X	X			
		Peromyscus californicus	California Mouse	Not Listed	-	E						X	X	X			
		Peromyscus maniculatus	Deer Mouse	Not Listed	-	O	PC		X	X	X	X	X	X	X	X	X
		Peromyscus truei	Pinyon Mouse	Not Listed	-	E						X	X	X			
		Rattus rattus	Black Rat	Not Listed	-	SUN (I)				X	X	X	X	X	X	X	X
		Reithrodontomys megalotis	Western Harvest Mouse	Not Listed	-	E						X	X		X		

Wildlife Species List

								Habitat									
Order	**Family**	**Species**	**Common Name**	**Status**	**Seasonal Status (Birds only)**	**Site Specific Status**	**Observed in 2004**	**Vernal Wetland**	**Marsh**	**Riparian**	**Maritime Chaparral**	**Coastal Scrub**	**Oak Woodland**	**Grassland**	**Bishop Pine Forest**	**Non-Native Woodland**	**Agricultural Flds**
Carnivora	Canidae	*Canis latrans*	Coyote	Not Listed	-	O	MH; PC			X	X	X	X	X	X	X	X
		Urocyon cinereoargenteus	Common Gray Fox	Not Listed	-	O*	MH; PC			X	X	X	X		X	X	X
		Vulpes vulpes	Red Fox	Not Listed	-	SUN (I)			X	X		X	X				
	Procyonidae	*Bassariscus astutus*	Ringtail	CDFG Fully Protected Species; State Species of Special Concern	-	Unlikely				X			X				
		Procyon lotor	Northern Raccoon	Not Listed	-	O	PC	X	X	X	X	X	X	X	X	X	X
	Mustelidae	*Mustela frenata*	Long-tailed Weasel	Not Listed	-	O*	PC			X	X	X	X		X	X	X
		Taxidea taxus	American Badger	State Species of Special Concern; Locally Important	-	O*	MH;EG; PC				X	X	X	X	X		
	Mephitidae	*Mephitis mephitis*	Striped Skunk	Not Listed	-	O	MH			X	X	X	X	X	X	X	X
		Spilogale gracilis	Western Spotted Skunk	Not Listed	-	O*	PC				X	X	X	X	X	X	X
	Felidae	*Puma concolor*	Mountain Lion	Not Listed	-	O*	EG (Near BMER)			X			X		X		
		Lynx rufus	Bobcat	Not Listed	-	O	MH			X	X	X	X		X	X	
Artiodactlya	Suidae	*Sus scrofa*	Feral Pig	Not Listed	-	O*	MH	X	X	X			X			X	
	Cervidae	*Odocoileus hemionus*	Mule Deer	Not Listed	-	O	MH; PC;EG		X	X	X	X	X	X	X	X	X
Total Number		***42***					***25***	***5***	***9***	***26***	***21***	***30***	***37***	***24***	***24***	***20***	***16***
		220	***Total Number of Species***	***-***	***-***	***-***	***152***	***52***	***72***	***134***	***96***	***93***	***140***	***86***	***97***	***101***	***81***

Wildlife Species List

								Habitat									
Order	Family	Species	Common Name	Status	Seasonal Status (Birds only)	Site Specific Status	Observed in 2004	Vernal Wetland	Marsh	Riparian	Maritime Chaparral	Coastal Scrub	Oak Woodland	Grassland	Bishop Pine Forest	Non-Native Woodland	Agricultural Flds

Site Specific Status Designations: Invertebrates, Amphibians, Reptiles, Mammals

Observed	O	The species has been recorded in the project area.
Observed first time in 2004	O*	The species has been recorded in the project area.
Expected	E	The species is expected to occur in the project area within the indicated habitats.
Unlikely	Unlikely	Though the project area lies withing the species' know distributional range, suitable habitat is limited or of marginal quality so, its occurrence is possible but unlikely.
Status Uncertain	SUN	The species may occur in the project area though its regional distribution is poorly understood. Suitable habitat is present.
Introduced	(I)	The species is not native to the project region.

Seasonal Status Designations: Birds

Resident Breeder	RB	The species is a year-round resident and nests in the project site area.
Summer Visitor	SV	The species is migratory, occurring regionally within the indicated habitats during the breeding season but is not present year-round. Nesting activity was observed or is expected in the project site area.
Winter Visitor	WV	The species is migratory, occurring in the project site area during the non-breeding season. No nesting records are known from the vicinity of the project area.
Migrant	M	The species occurs in the project site area only as a spring and/or fall migrant. Its presence should be considered as strictly transitory.
Transient	T	The species may occur with regular or irregular frequency during all seasons as a visitor to the project area.
Status Uncertain	SUN	The species may occur in the project area though its regional distribution and/or seasonal status are poorly understood.
Introduced	(I)	The species is not native to the project region.

Abundance Designations:

Abundant	A	The species is regularly encountered in the indicated habitats in moderate to large numbers.
Common	C	The species is often encountered in the indicated habitats but not in large numbers.
Uncommon	U	The species may be encountered in the project area but occurrence can be irregular in small numbers.
Unlikely	Unlikely	The species may occur in the project area but likelihood of encountering it, though possible, is very unlikely. Records suggest irregular and/or seasonally transitory occupation.

Wildlife Species List

								Habitat									
Order	Family	Species	Common Name	Status	Seasonal Status (Birds only)	Site Specific Status	Observed in 2004	Vernal Wetland	Marsh	Riparian	Maritime Chaparral	Coastal Scrub	Oak Woodland	Grassland	Bishop Pine Forest	Non-Native Woodland	Agricultural Flds

No focused surveys for bats were conducted on the BMER. Rather, data on the distribution and habitat affinities of bats at VAFB gathered during an intensive study of bats at VAFB (Pierson et al.2002) was used to identify the bat fauna expected to occur at the BMER.

Reference

Complete List of Amphibians, Reptiles, Birds, and Mammals in California

William E. Grenfell, Monica D. Parisi, Darlene McGriff August, 20

Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding

Committee on Standard English and Scientific Names, Brian I. Crother, Chair

Jennings, M.R. 2004. An Annotated Checklist of the Amphibians and Reptiles of California and Adjacent Waters.
CDFG 90 (4): 161-213

Observers

Paul Collins	PC
Mark Holmgren	MH
Elihu Gevirtz	EG
Leticia Gallardo	LG
Vinice Semonsen	VS

WILDLIFE SURVEY OBSERVATIONS:

2004 GIS DATA

APPENDIX 3A

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

Appendix 3a

Wildlife Survey Observations on Burton Mesa Ecological Reserve 2004 GIS Data

TYPE	REF_NO	WP_NO	SPECIES	LATITUDE	LONGITUDE	ELEVATION	DATE	OBSERVER	COMMENTS	EVIDENCE
Crustacean	210	39	Vernal Pool Fairy Shrimp	34.70569	-120.48566	381	3/13/2004	Paul W. Collins	voucher sample collected	adults
Amphibians	228	5	Western Spadefoot	34.70505	-120.48462	373	3/13/2004	Paul W. Collins	Fairy Shrimp	Tadpoles
Amphibians	229	6	Western Spadefoot	34.70304	-120.48130	373	3/13/2004	Paul W. Collins	Pseudacris regilla tadpole	Tadpoles
Amphibians	230	24	Western Spadefoot	34.70435	-120.48618	360	3/13/2004	Paul W. Collins	Fairy Shrimp, Bufo boreas	tadpoles
Amphibians	223	22	Western Toad	34.70357	-120.48236	362	3/13/2004	Paul W. Collins	adult female seen	scat
Amphibians	224	33	Western Toad	34.70066	-120.48793	358	3/13/2004	Paul W. Collins		scat
Reptiles	205	52	Coast Horned Lizard	34.73218	-120.47197	394	4/16/2004	Paul W. Collins	voucher specimen	1 Male
Reptiles	208	55	Coast Horned Lizard	34.73166	-120.47365	381	4/16/2004	Paul W. Collins	caught and released	1 subAd male
Reptiles	168	4	Coast Horned Lizard	0.00000	0.00000		4/30/2004	Leticia Gallardo		
Reptiles	266	111	Coast Horned Lizard	34.71000	-120.39	897	5/15/2004	Paul W. Collins	found along old oil field road	1 F subAd; Specimen
Reptiles	195	140	Coast Horned Lizard	34.72337	-120.47459	411	5/29/2004	Paul W. Collins	(SVL 76 mm TL 118mm)	1 Ad
Reptiles	181	17	Coast Horned Lizard	0.00000	0.00000		5/31/2004	Elihu Gevirtz		Adult
Reptiles	197	142	Coast Horned Lizard	34.73331	-120.47053	411	5/31/2004	Paul W. Collins		1 Adult
Reptiles	198	143	Coast Horned Lizard	34.73326	-120.47122	462	5/31/2004	Paul W. Collins	(TL 112mm SVL 73 mm)	1 Ad Male
Reptiles	202	148	Coast Horned Lizard	34.73145	-120.47550	395	5/31/2004	Paul W. Collins		1 fresh scat
Reptiles	262	107	Coast Patch-nosed Snake	34.70000	-120.39	864	5/15/2004	Paul W. Collins	in open coastal sage scrub	1 Adult; Sighting
Reptiles	170	6	Ringneck Snake	0.00000	0.00000		4/30/2004	Leticia Gallardo		
Reptiles	167	3	Side-blotched Lizard	0.00000	0.00000		4/30/2004	Leticia Gallardo		
Reptiles	176	12	Side-blotched Lizard	0.00000	0.00000		5/24/2004	Elihu Gevirtz		
Reptiles	180	16	Side-blotched Lizard	0.00000	0.00000		5/31/2004	Elihu Gevirtz		Two
Reptiles	172	8	Striped Racer	0.00000	0.00000		4/30/2004	Leticia Gallardo		
Reptiles	171	7	Western Fence Lizard	0.00000	0.00000		4/30/2004	Leticia Gallardo		
Reptiles	174	10	Western Fence Lizard	0.00000	0.00000		5/24/2004	Elihu Gevirtz		
Reptiles	22	240	Western Pond Turtle	34.72318	-120.47343		4/30/2004	Leticia Gallardo		v
Reptiles	169	5	Western Pond Turtle	0.00000	0.00000		4/30/2004	Leticia Gallardo		
Reptiles	76	610	Western Skink	34.70910	-120.40947		6/6/2004	Mark Holmgren	imm, very small, under old farm implements	
Reptiles	173	9	Western Whiptail	0.00000	0.00000		4/30/2004	Leticia Gallardo		
Reptiles	278	125	Western Whiptail	34.74	-120.47	480	5/16/2004	Paul W. Collins	sandy area adj paved road	1 Ad; Sighting
Reptiles	199	144	Western Whiptail	34.73303	-120.47224	441	5/31/2004	Paul W. Collins		1 Adult
Reptiles	203	149	Western Whiptail	34.73275	-120.47092	414	5/31/2004	Paul W. Collins	(TL ~8-10 inches)	1 Ad
Mammals	3	239	American Badger	34.72369	-120.47330		2/16/2004	Mark Holmgren	well-desiccated pelvis and spine salvaged (in MSE)	salvaged
Mammals	217	49	American Badger	34.70950	-120.48025	362	3/13/2004	Paul W. Collins		tracks
Mammals	231	3	American Badger	34.70535	-120.48772	352	3/13/2004	Paul W. Collins		digging-recent
Mammals	232	4	American Badger	34.70471	-120.48706	362	3/13/2004	Paul W. Collins		digging-recent
Mammals	233	21	American Badger	34.70204	-120.48052	323	3/13/2004	Paul W. Collins		digging-recent
Mammals	234	23	American Badger	34.70388	-120.48208	398	3/13/2004	Paul W. Collins		digging-recent
Mammals	235	34	American Badger	34.70068	-120.48902	353	3/13/2004	Paul W. Collins		digging-recent
Mammals	211	40	American Badger	34.70458	-120.48314	373	4/8/2004	Paul W. Collins		den & digging
Mammals	268	114	American Badger	34.71	-120.42	466	5/15/2004	Paul W. Collins	in annual grassland	recent excavation; Sign
Mammals	269	115	American Badger	34.71	-120.42	429	5/15/2004	Paul W. Collins		active den; Sign
Mammals	270	118	American Badger	34.74	-120.47	580	5/16/2004	Paul W. Collins	in grassland/coastal sage scrub	recent excavation; Sign
Mammals	271	119	American Badger	34.74	-120.47	652	5/16/2004	Paul W. Collins	in grassland/coastal sage scrub	recently active den; Sign
Mammals	275	123	American Badger	34.74	-120.46	940	5/16/2004	Paul W. Collins	in middle of road	1 active den; Sign
Mammals	175	11	American Badger	0.00000	0.00000		5/24/2004	Elihu Gevirtz	Inactive den	Inactive den
Mammals	185	130	American Badger	34.73631	-120.47966	412	5/29/2004	Paul W. Collins		1 active den, recent excavations
Mammals	186	131	American Badger	34.73487	-120.47996	362	5/29/2004	Paul W. Collins		excavations
Mammals	187	132	American Badger	34.73694	-120.47871	387	5/29/2004	Paul W. Collins		1 active den
Mammals	188	133	American Badger	34.73765	-120.47806	406	5/29/2004	Paul W. Collins		1 old den site
Mammals	189	134	American Badger	34.73757	-120.47776	418	5/29/2004	Paul W. Collins		recent excavations
Mammals	190	135	American Badger	34.73703	-120.47779	418	5/29/2004	Paul W. Collins		recently active den
Mammals	191	136	American Badger	34.73678	-120.47520	471	5/29/2004	Paul W. Collins		open den, recent excavations
Mammals	194	139	American Badger	34.73841	-120.47250	509	5/29/2004	Paul W. Collins		1 open den, recent excavations
Mammals	200	145	American Badger	34.73333	-120.47280	472	5/31/2004	Paul W. Collins		1 old den site
Mammals	91	7	American Badger	34.70581	-120.44374		6/11/2004	Mark Holmgren	claw marks on side of small burrow; photo taken.	
Mammals	99	8	American Badger	34.70538	-120.48425		6/13/2004	Mark Holmgren	looked like a juvenile by size	v
Mammals	100	0	American Badger	34.69338	-120.48174		6/13/2004	Mark Holmgren	dead end 2' wide burrow, no recent activity.	digging marks at side of oval hole
Mammals	218	50	Black-tailed Jackrabbit	34.70452	-120.48723	399	4/8/2004	Paul W. Collins	in road ruts on s side	scat
Mammals	206	53	Black-tailed Jackrabbit	34.73044	-120.47545	367	4/16/2004	Paul W. Collins	flushed	1 Adult
Mammals	32	278	Black-tailed Jackrabbit	34.74114	-120.45368		5/22/2004	Mark Holmgren	flushed	v
Mammals	33	281	Black-tailed Jackrabbit	34.74524	-120.45685		5/22/2004	Mark Holmgren	flushed	v

Wildlife Survey Observations on Burton Mesa Ecological Reserve 2004 GIS Data

TYPE	REF_NO	WP_NO	SPECIES	LATITUDE	LONGITUDE	ELEVATION	DATE	OBSERVER	COMMENTS	EVIDENCE
Mammals	34	284	Black-tailed Jackrabbit	34.74307	-120.45179		5/22/2004	Mark Holmgren	flushed	v
Mammals	201	147	Black-tailed Jackrabbit	34.73200	-120.47414	409	5/31/2004	Paul W. Collins		scat
Mammals	164	0	Black-tailed Jackrabbit	0.00000	0.00000		6/13/2004	Mark Holmgren	no GPS pt. Near SW wetland in Vandenberg Management Unit.	2v
Mammals	166	2	Bobcat	0.00000	0.00000		4/30/2004	Leticia Gallardo		
Mammals	158	222	Coyote	34.71855	-120.44657		7/4/2004	Mark Holmgren		Visual
Mammals	264	109	San Diego Desert Woodrat	34.71	-120.39	938	5/15/2004	Paul W. Collins	in rock outcrops	nest structures; Sign
Mammals	78	609	San Diego Desert Woodrat	34.71049	-120.40901		6/6/2004	Mark Holmgren	Rocky outcrop, off site. some water in creek and cottonwoods. Upper Los Berros Ck.	
Mammals	79	611	San Diego Desert Woodrat	34.71018	-120.40907		6/6/2004	Mark Holmgren	nest twigs; to be verified with PWC using 2 photos	
Mammals	4	224	Gray Fox	34.73271	-120.47003		2/16/2004	Mark Holmgren	apparently active on slope W of Ag field	den
Mammals	165	1	Gray Fox	0.00000	0.00000		4/30/2004	Leticia Gallardo		Adult
Mammals	245	107	Mountain Lion?	34.73746	-120.47781		7/25/2004	Mark Holmgren	scat; photos taken and need to be reviewed by PWC	
Mammals	139	0	Western Gray Squirrel	34.70609	-120.44302		6/27/2004	Mark Holmgren		
Mammals	265	110	Spotted Skunk	34.71	-120.39	917	5/15/2004	Paul W. Collins	scorpions and other insects	Scat; Sign
Birds	31	282	American Kestrel	34.74503	-120.45859		5/22/2004	Mark Holmgren		v
Birds	162	0	American Robin	0.00000	0.00000		4/30/2004	Mark Holmgren	nest in large oak, 5", 3 blue plain eggs, adult tending. Check point location.	v
Birds	219	2	Bell's Sage Sparrow	34.70617	-120.48857	367	3/13/2004	Paul W. Collins		1 pair
Birds	220	25	Bell's Sage Sparrow	34.69937	-120.48375	350	3/13/2004	Paul W. Collins		1 flushed
Birds	221	27	Bell's Sage Sparrow	34.69881	-120.48390	359	3/13/2004	Paul W. Collins		1 pair, male
Birds	222	29	Bell's Sage Sparrow	34.69916	-120.48434	349	3/13/2004	Paul W. Collins		1 male singing
Birds	212	42	Bell's Sage Sparrow	34.70264	-120.48952	365	4/8/2004	Paul W. Collins		3 M singing, + 6 others
Birds	213	44	Bell's Sage Sparrow	34.69992	-120.48962	358	4/8/2004	Paul W. Collins		1M singing, + 1 other
Birds	215	46	Bell's Sage Sparrow	34.69892	-120.48691	369	4/8/2004	Paul W. Collins		1 M singing
Birds	263	108	Bell's Sage Sparrow	34.7	-120.39	802	5/15/2004	Paul W. Collins	in open coastal sage scrub	1 M singing; Sighting
Birds	272	120	Bell's Sage Sparrow	34.75	-120.47	909	5/16/2004	Paul W. Collins	in 3-5 yr old burned BMC	1 M singing + 1 f; Sighting
Birds	273	121	Bell's Sage Sparrow	34.75	-120.46	925	5/16/2004	Paul W. Collins	in 3-5 yr old burned BMC	1 M singing; Sighting
Birds	28	270	Bell's Sage Sparrow	34.70422	-120.48269		5/21/2004	Mark Holmgren		1s heard from W of pt
Birds	29	271	Bell's Sage Sparrow	34.69710	-120.47872		5/21/2004	Mark Holmgren	flew 35m to SE	v
Birds	30	272	Bell's Sage Sparrow	34.70232	-120.48026		5/21/2004	Mark Holmgren		2 indiv in close proximity
Birds	43	279	Bell's Sage Sparrow	34.74273	-120.45325		5/22/2004	Mark Holmgren		c and v
Birds	44	280	Bell's Sage Sparrow	34.74393	-120.45325		5/22/2004	Mark Holmgren		s
Birds	45	283	Bell's Sage Sparrow	34.74477	-120.45891		5/22/2004	Mark Holmgren	short list of spp	s
Birds	46	285	Bell's Sage Sparrow	34.74208	-120.46355		5/22/2004	Mark Holmgren	short list of spp	v
Birds	50	272	Bell's Sage Sparrow	34.70232	-120.48026		5/27/2004	Mark Holmgren	still present	2 indiv in close proximity
Birds	104	12	Bell's Sage Sparrow	34.70151	-120.48985		6/13/2004	Mark Holmgren	pr; 3rd individual possible.	v
Birds	105	20	Bell's Sage Sparrow	34.70391	-120.49058		6/13/2004	Mark Holmgren	perched	s
Birds	106	20	Bell's Sage Sparrow	34.70391	-120.49058		6/13/2004	Mark Holmgren	for 3 min tried to get into presumed nest site	cf
Birds	107	21	Bell's Sage Sparrow	34.70414	-120.48976		6/13/2004	Mark Holmgren	tic' notes	c
Birds	108	10	Bell's Sage Sparrow	34.70028	-120.48476		6/13/2004	Mark Holmgren		s
Birds	109	15	Bell's Sage Sparrow	34.69898	-120.48687		6/13/2004	Mark Holmgren	pr	v
Birds	110	18	Bell's Sage Sparrow	34.69570	-120.48207		6/13/2004	Mark Holmgren	1 individual, responded to pb	v, c
Birds	111	19	Bell's Sage Sparrow	34.69655	-120.48376		6/13/2004	Mark Holmgren	heard from a distance; no response to pb once I got there.	v
Birds	112	0	Bell's Sage Sparrow	34.69640	-120.48186		6/13/2004	Mark Holmgren	from W of this pt. (is this same territory as 271?)	s
Birds	113	0	Bell's Sage Sparrow	34.70189	-120.48463		6/13/2004	Mark Holmgren		s
Birds	179	15	Black-shouldered Kite	0.00000	0.00000		5/24/2004	Elihu Gevirtz		Adult
Birds	35	274	Blue Grosbeak	34.73391	-120.46636		5/22/2004	Mark Holmgren		sub-ad m s
Birds	36	274	Blue Grosbeak	34.73391	-120.46636		5/22/2004	Mark Holmgren		sub-ad m s
Birds	60	304	Blue Grosbeak	34.74340	-120.47617		6/1/2004	Mark Holmgren		s
Birds	61	317	Blue Grosbeak	34.74301	-120.47578		6/1/2004	Mark Holmgren		v family group
Birds	62	318	Blue Grosbeak	34.74524	-120.47588		6/1/2004	Mark Holmgren	off property	s
Birds	123	93	Blue Grosbeak	34.70628	-120.41526		6/20/2004	Mark Holmgren	perched on fence, then flew down creek.	v
Birds	124	0	Blue Grosbeak	34.74762	-120.46888		6/20/2004	Mark Holmgren	pair present. later m comes within 30m of pt	s
Birds	132	100	Blue Grosbeak	34.73239	-120.47063		6/27/2004	Mark Holmgren	Pair. male is sub-adult. No breeding evidence.	v
Birds	133	100	Blue Grosbeak	34.73239	-120.47063		6/27/2004	Mark Holmgren	Pair. male is sub-adult. No evidence of breeding.	v
Birds	246	107	Blue Grosbeak	34.73746	-120.47781		7/25/2004	Mark Holmgren	s heard from one of them.	
Birds	251	110	Blue Grosbeak	34.73900	-120.47501		7/25/2004	Mark Holmgren	very agitated	
Birds	214	45	California Quail	34.69929	-120.48660	355	4/8/2004	Paul W. Collins	female was sitting	1 nest w/9 eggs

Wildlife Survey Observations on Burton Mesa Ecological Reserve 2004 GIS Data

TYPE	REF_NO	WP_NO	SPECIES	LATITUDE	LONGITUDE	ELEVATION	DATE	OBSERVER	COMMENTS	EVIDENCE
Birds	63	318	California Thrasher	34.74524	-120.47588		6/1/2004	Mark Holmgren	breeding record	carrying large dargonfly and emerging w/o it
Birds	37	282	Common Raven	34.74503	-120.45859		5/22/2004	Mark Holmgren		pr fo
Birds	163	0	Common Yellowthroat	0.00000	0.00000		4/30/2004	Mark Holmgren	nest, Elymus, Stachys, and Snowberry, 8". Check point location.	v
Birds	9	245	Cooper's Hawk	34.71181	-120.48193		3/27/2004	Mark Holmgren	ad flying from N to S	v
Birds	19	0	Cooper's Hawk	34.69533	-120.45618		4/30/2004	Mark Holmgren	Cooper's Hawk (some uncertainty re: it being a Shaprshinned Hawk)	seen flying
Birds	183	128	Cooper's Hawk	34.72146	-120.43788	679	5/29/2004	Paul W. Collins		1 Ad foraging
Birds	184	129	Cooper's Hawk	34.73781	-120.47300	492	5/29/2004	Paul W. Collins		1 Ad foraging
Birds	77	608	Cooper's Hawk	34.70546	-120.40052		6/6/2004	Mark Holmgren	took goldfinch in flight, returned to oaks E of pt	vm
Birds	92	7	Cooper's Hawk	34.70581	-120.44374		6/11/2004	Mark Holmgren	nest found, 15m from creek in oak riparian	
Birds	101	16	Cooper's Hawk	34.69886	-120.48104		6/13/2004	Mark Holmgren	chasing possible owl up canyon.	
Birds	102	11	Cooper's Hawk	34.70287	-120.48560		6/13/2004	Mark Holmgren	plucked prey item from ground, flew NNE to line of oaks.	m
Birds	125	608	Cooper's Hawk	34.70546	-120.40052		6/20/2004	Mark Holmgren	small bird, looked like a Sharp-shinned Hawk but not well seen.	v m
Birds	134	834	Cooper's Hawk	34.72969	-120.48101		6/27/2004	Mark Holmgren	local flyover, sub-adult plumage	v
Birds	135	6	Cooper's Hawk	34.70574	-120.44417		6/27/2004	Mark Holmgren	Nest with 3 nestlings (branchers)	v
Birds	136	6	Cooper's Hawk	34.70574	-120.44417		6/27/2004	Mark Holmgren	ad with 3 branchers	
Birds	137	0	Cooper's Hawk	34.70624	-120.40019		6/27/2004	Mark Holmgren	moving with food SW toward known nest	cf
Birds	138	0	Downy Woodpecker	34.70609	-120.44302		6/27/2004	Mark Holmgren	dependent juvenile	
Birds	52	834	European Starling	34.72970	-120.48101		5/28/2004	Mark Holmgren		1 indiv emerging from cavity in Euc
Birds	64	304	Grasshopper Sparrow	34.74340	-120.47617		6/1/2004	Mark Holmgren	on fence	s
Birds	126	0	Grasshopper Sparrow	34.70399	-120.40024		6/20/2004	Mark Holmgren	Ad very nervous, I thought 1 flying bird had fresh plummage. Birds acted like a family group. Therefore, breeding support here.	s once. v apparant fam
Birds	248	109	Grasshopper Sparrow	34.73870	-120.47701		7/25/2004	Mark Holmgren	1 of 3 was a juv	
Birds	249	109	Grasshopper Sparrow	34.73870	-120.47701		7/25/2004	Mark Holmgren	1 was a juv	
Birds	267	113	Grasshopper Sparrow	34.7	-120.4	551	5/15/2004	Paul W. Collins	in annual grassland	1 M singing; Sighting
Birds	65	302	Greater Roadrunner	34.72137	-120.43751		6/1/2004	Mark Holmgren	Suggests family group.	saw group of 3 indiv. of which 2 were ad.
Birds	103	0	Greater Roadrunner	34.70056	-120.48238		6/13/2004	Mark Holmgren		v
Birds	5	224	Horned Lark	34.73271	-120.47003		2/16/2004	Mark Holmgren	25 min indiv seen in field	c and v
Birds	216	47	Horned Lark	34.70051	-120.48759	362	4/8/2004	Paul W. Collins	probably same individ	1 seen & 1 heard
Birds	21	239	Horned Lark	34.72369	-120.47330		4/30/2004	Mark Holmgren	heard by MAH	c
Birds	192	137	Horned Lark	34.73823	-120.47480	461	5/29/2004	Paul W. Collins		5+ birds (2-3 pairs)
Birds	193	138	Horned Lark	34.73878	-120.47848	401	5/29/2004	Paul W. Collins		1 M singing + 1 possible F
Birds	66	304	Horned Lark	34.74340	-120.47617		6/1/2004	Mark Holmgren	in ag field	s
Birds	247	108	Horned Lark	34.73840	-120.47739		7/25/2004	Mark Holmgren	2min are juvs	
Birds	53	834	House Finch	34.72970	-120.48101		5/28/2004	Mark Holmgren		3 juvs under pc
Birds	67	317	Lark Sparrow	34.74301	-120.47578		6/1/2004	Mark Holmgren	apparent nest building	v of bird cnm and weaving it for sev mins
Birds	10	243	Lesser Goldfinch	34.72968	-120.46413		3/27/2004	Mark Holmgren	nest 16' in oak over asphalt pavement; presumeed feeding nestl.	v
Birds	225	35	Loggerhead Shrike	34.70256	-120.48470	371	3/13/2004	Paul W. Collins		1 Adult
Birds	27	270	Loggerhead Shrike	34.70422	-120.48269		5/21/2004	Mark Holmgren		cluster of 3
Birds	140	0	Loggerhead Shrike	34.73256	-120.48048		6/27/2004	Mark Holmgren	This pt is 0.32km N pt 834. This may not idicate breeding because this sp is moving off territories now.	s
Birds	243	106	Loggerhead Shrike	34.72713	-120.48258		7/25/2004	Mark Holmgren		
Birds	250	109	Loggerhead Shrike	34.73870	-120.47701		7/25/2004	Mark Holmgren		
Birds	177	13	Long-billed Marsh Wren	0.00000	0.00000		5/24/2004	Elihu Gevirtz	Nest material in mouth	
Birds	9/30/1900	5/1/1900	Rufous-crowned Sparrow	2/3/1900	-120.46000	7/24/1902	5/16/2004	Paul W. Collins	in CSC on S & SW facing slope	2 M singing, 1 F; Sighting
Birds	239	137	Multiple	34.72306	-120.45393		11/7/2003	Mark Holmgren		
Birds	240	138	Multiple	34.72280	-120.45348		11/7/2003	Mark Holmgren	PC done	
Birds	241	139	Multiple	34.72544	-120.47283		11/7/2003	Mark Holmgren	Incidental Surveys at ag field and nearby uplands	
Birds	242	142	Multiple	34.72490	-120.47651		11/7/2003	Mark Holmgren	Big Marsh survey	
Birds	1	224	Multiple	34.73271	-120.47003		2/16/2004	Mark Holmgren	in the course of a 1 mi walk along the ditch (remnant of Santa Lucia Creek)	s
Birds	2	225	Multiple	34.72297	-120.47348		2/16/2004	Mark Holmgren	species using marsh	v
Birds	237	219	Multiple	34.72220	-120.43304		2/16/2004	Mark Holmgren	Pond below refining facility E of Rucker Road	
Birds	238	223	Multiple	34.72420	-120.45343		2/16/2004	Mark Holmgren	end of survey route, I think	

Wildlife Survey Observations on Burton Mesa Ecological Reserve 2004 GIS Data

TYPE	REF_NO	WP_NO	SPECIES	LATITUDE	LONGITUDE	ELEVATION	DATE	OBSERVER	COMMENTS	EVIDENCE
Birds	226	32	Multiple	34.69939	-120.48614	354	3/13/2004	Elihu Gevirtz	Pampas grass	
Birds	227	20	Multiple	34.70149	-120.47957	352	3/13/2004	Elihu Gevirtz		
Birds	7	239	Multiple	34.72369	-120.47330		3/26/2004	Mark Holmgren	Camp site	
Birds	8	240	Multiple	34.72318	-120.47343		3/27/2004	Mark Holmgren	Observation pt E of marsh	v
Birds	11	244	Multiple	34.70333	-120.45705		3/27/2004	Mark Holmgren	Davis Creek off property	
Birds	12	241	Multiple	34.72221	-120.47286		3/27/2004	Mark Holmgren	2nd Observation pt E of marsh. 4 photos taken.	
Birds	13	242	Multiple	34.72947	-120.46562		3/27/2004	Mark Holmgren	Raptor nest search site	
Birds	209	38	Multiple	34.70722	-120.48635	395	4/8/2004	Paul W. Collins		
Birds	204	51	Multiple	34.68965	-120.45838	199	4/16/2004	Paul W. Collins		Start Point
Birds	14	0	Multiple	34.69533	-120.45618		4/30/2004	Mark Holmgren	Start point of Chaparral survey.	
Birds	15	0	Multiple	34.70362	-120.46110		4/30/2004	Mark Holmgren	End point of Chaparral survey.	
Birds	16	251	Multiple	34.70113	-120.45338		4/30/2004	Mark Holmgren	Start point and N end Davis Creek riparian survey. At Burton Mesa Blvd.	
Birds	17	252	Multiple	34.69649	-120.45483		4/30/2004	Mark Holmgren	Intermediate-point of riparian survey. Two breeding recordes: Song Sparrow and Common Yellowthroat.	
Birds	18	253	Multiple	34.69382	-120.45622		4/30/2004	Mark Holmgren	Intermediate-point of riparian survey	
Birds	161	0	Multiple	0.00000	0.00000		4/30/2004	Mark Holmgren	End point and S extreme of riparian survey. At highway 1.	
Birds	23	254	Multiple	34.68862	-120.47761		5/5/2004	Mark Holmgren	Start point and S end of riparian survey extending 1110m	
Birds	25	255	Multiple	34.69250	-120.47711		5/5/2004	Mark Holmgren	Approx mid-point of riparian survey	
Birds	26	256	Multiple	34.69588	-120.47509		5/5/2004	Mark Holmgren	N end point of riparian survey	
Birds	47	275	Multiple	34.73590	-120.45979		5/22/2004	Mark Holmgren	Point Count conducted	
Birds	48	276	Multiple	34.73729	-120.45521		5/22/2004	Mark Holmgren	List of species detected	
Birds	49	286	Multiple	34.73924	-120.46615		5/22/2004	Mark Holmgren	playback conducted; target spp lacking here	no positive reponse
Birds	51	834	Multiple	34.72970	-120.48101		5/28/2004	Mark Holmgren	From this point notes were taken on the birds 50-90m E and NE in the wooded wetland arching S of the Euc woodland.	
Birds	182	126	Multiple	34.72218	-120.43579	655	5/29/2004	Paul W. Collins		
Birds	196	141	Multiple	34.72212	-120.43582	653	5/31/2004	Paul W. Collins		
Birds	54	136	Multiple	34.72383	-120.45466		6/1/2004	Mark Holmgren	5 min PC with 6 min extra on site. Interrupted by Nuevo Energy employees. Coastal Sage Scrub 100% characterized by Bp, A. californica. Veg sample point	
Birds	55	299	Multiple	34.70679	-120.44189		6/1/2004	Mark Holmgren	5 min PC with 4 extra min on site. Chamise Chaparral 60%, scattered with Oaks 35%, trail 5%	
Birds	56	301	Multiple	34.69695	-120.44135		6/1/2004	Mark Holmgren	5 min PC with 5 extra min on site. Chamise Chaparral with Arcto.	
Birds	57	300	Multiple	34.70523	-120.44228		6/1/2004	Mark Holmgren	5 min PC with 10 extra min on site. Oak Woodland 100% but understory here was of nettles, PO, Rubus, Saltmarsh Baccharis. 1 photo.	
Birds	58	303	Multiple	34.72945	-120.46499		6/1/2004	Mark Holmgren	5 min PC with 36 min extra on site. Euc woodland 60%, CSS 15%, oaks scattered 20%, road 5%. Surrounded by oak woodland. Breeding support evidence for Warbling Vireo. Very active.	WaVi ads feeding dep juv.
Birds	59	240	Multiple	34.72318	-120.47343		6/1/2004	Mark Holmgren	5 min PC with 14 extra min on site. Big Marsh	
Birds	69	609	Multiple	34.71049	-120.40901		6/6/2004	Mark Holmgren	on BMP. On Upper Los Berros Ck.	
Birds	70	604	Multiple	34.71170	-120.39923		6/6/2004	Mark Holmgren	5 min PC with 9 extra min on site. S-facing Chaparral with some Elderberry, Nicotiana, Toxicodendron.	
Birds	71	609	Multiple	34.71049	-120.40901		6/6/2004	Mark Holmgren	Off-site. Upper Los Berros Ck	
Birds	72	603	Multiple	34.71102	-120.41393		6/6/2004	Mark Holmgren	5 min PC with 14 extra min on site. Salvia mellifera Scrub with many middle aged scattered oaks.	
Birds	73	602	Multiple	34.70551	-120.41940		6/6/2004	Mark Holmgren	5 min PC with 6 extra min on site. Salvia melifera Scrub with many middle aged scattered oaks.	
Birds	74	608	Multiple	34.70546	-120.40052		6/6/2004	Mark Holmgren	5 min PC with 38 extra min on site. Grassland with few remnant oaks, Rhamnus, Elderberry.	
Birds	75	607	Multiple	34.71336	-120.39602		6/6/2004	Mark Holmgren		

Wildlife Survey Observations on Burton Mesa Ecological Reserve 2004 GIS Data

TYPE	REF_NO	WP_NO	SPECIES	LATITUDE	LONGITUDE	ELEVATION	DATE	OBSERVER	COMMENTS	EVIDENCE
Birds	83	605	Multiple	34.71277	-120.39469		6/6/2004	Mark Holmgren	5 min PC with 22 extra min on site. S-facing Chaparral. Photo taken.	
Birds	84	612	Multiple	34.68971	-120.45801		6/10/2004	Mark Holmgren	340m of Davis Creek S of highway 1.	
Birds	89	6	Multiple	34.70574	-120.44417		6/11/2004	Mark Holmgren	mostly oak riparian spp.	
Birds	90	0	Multiple	34.70609	-120.44302		6/11/2004	Mark Holmgren		
Birds	93	7	Multiple	34.70581	-120.44374		6/11/2004	Mark Holmgren		
Birds	95	4	Multiple	34.68971	-120.45801		6/11/2004	Mark Holmgren		
Birds	96	9	Multiple	34.70056	-120.48629		6/13/2004	Mark Holmgren	Western Meadowlark here (3). pb done here for Sage Sparrow and Horned Lark.	
Birds	97	16	Multiple	34.69886	-120.48104		6/13/2004	Mark Holmgren	survey end pt was 280m 'from' pt 254(??)	
Birds	98	13	Multiple	34.70127	-120.49182		6/13/2004	Mark Holmgren	~15 yr since burn Chaparral with mod large oaks, Salvia mellifera, Adenostoma, Mimulus, re-sprouting Arctostaphylos, lots Horkelia.	
Birds	115	90	Multiple	34.70444	-120.41838		6/20/2004	Mark Holmgren		
Birds	116	97	Multiple	34.70111	0.00000		6/20/2004	Mark Holmgren	100% Chaparral old and not burned recently	
Birds	117	95	Multiple	34.70964	-120.41073		6/20/2004	Mark Holmgren	Los Berros Ck from pt 95 to 96	
Birds	118	96	Multiple	34.71097	-120.40727		6/20/2004	Mark Holmgren	Los Berros Ck from pt 95 to 96	
Birds	119	94	Multiple	34.70770	-120.41298		6/20/2004	Mark Holmgren	Los Berros Creek	
Birds	120	0	Multiple	34.74762	-120.46888		6/20/2004	Mark Holmgren	E-W directed cyn in far northern Nokok	
Birds	121	608	Multiple	34.70546	-120.40052		6/20/2004	Mark Holmgren	Area surveyed is grassland mix with oaks and extends up to 333m W of pt. Fam groups seen of Grasshopper Sparrow, Phainopepla, Lark Sparrow.	
Birds	122	93	Multiple	34.70628	-120.41526		6/20/2004	Mark Holmgren	Los Berros Creek	
Birds	255	97	Multiple	34.70111	-120.41203		6/20/2004	Mark Holmgren	100% Chaparral old and not burned recently	
Birds	129	0	Multiple	34.70624	-120.40019		6/27/2004	Mark Holmgren	5+ min PC conducted. 2 photos taken looking NE and SW from pt.	
Birds	130	99	Multiple	34.70465	-120.44761		6/27/2004	Mark Holmgren	Oak Riparian	
Birds	131	98	Multiple	34.70517	-120.44518		6/27/2004	Mark Holmgren	Oak Riparian with some standing water.	
Birds	143	0	Multiple	34.73256	-120.48048		6/27/2004	Mark Holmgren	Site where Mark thought he had Salix goodingii (it was Myrica)	
Birds	144	834	Multiple	34.72969	-120.48101		6/27/2004	Mark Holmgren	Purpose: Long-eared Owl survey; 2 probably Great Horned Owls detected.	
Birds	153	251	Multiple	34.70113	-120.45338		7/4/2004	Mark Holmgren	Start point and N end Davis Creek riparian survey. At Burton Mesa Blvd. 4 Warbling Vireo detected in upper section.	
Birds	154	252	Multiple	34.69649	-120.45483		7/4/2004	Mark Holmgren	Intermediate-point of riparian survey. Two breeding records: Song Sparrow and Common Yellowthroat. 2 Warbling Vireo in second section.	
Birds	155	253	Multiple	34.69382	-120.45622		7/4/2004	Mark Holmgren	Intermediate-point of riparian survey. 3 Warbling Vireo in third section.	
Birds	156	0	Multiple	0.00000	0.00000		7/4/2004	Mark Holmgren	End point and S extreme of riparian survey. At highway 1.	
Birds	157	103	Multiple	34.72813	-120.45283		7/4/2004	Mark Holmgren	We sampled in this Pine forest	Visual
Birds	244	106	Multiple	34.72713	-120.48258		7/25/2004	Mark Holmgren	Survey from pt 106 to trail on W side of Big Marsh	
Birds	256	112	Multiple	34.74282	-120.46894		7/25/2004	Mark Holmgren	with 2 very small fawns	
Birds	257	105	Multiple	34.76257	-120.47951		7/25/2004	Mark Holmgren	2 probable juvs flying w/in 200m, 'pweet' clear from one, slightly raspy with the other	
Birds	236	201	Multiple	34.72270	-120.42708		11/7/2004	Mark Holmgren	Bell's Sage Sparrow playback done here; negative results	
Birds	160	273	Multiple	34.70717	-120.48535			Mark Holmgren	Start point; car parked here.	
Birds	80	608	Northern Harrier	34.70546	-120.40052		6/6/2004	Mark Holmgren	not a good view, flying W.	v
Birds	68	317	Phainopepla	34.74301	-120.47578		6/1/2004	Mark Holmgren	burned dead oak mixed with css post-fire colonizer spp.	
Birds	178	14	Red Wing Black Bird	0.00000	0.00000		5/24/2004	Elihu Gevirtz		Singing
Birds	6	221	Red-tailed Hawk	34.72308	-120.44727		2/16/2004	Mark Holmgren		v ad
Birds	38	283	Rufous-crowned Sparrow	34.74477	-120.45891		5/22/2004	Mark Holmgren		s and v
Birds	39	283	Rufous-crowned Sparrow	34.74477	-120.45891		5/22/2004	Mark Holmgren	short list of spp	s and v
Birds	40	277	Rufous-crowned Sparrow	34.73964	-120.45539		5/22/2004	Mark Holmgren	short list of spp	s
Birds	41	285	Rufous-crowned Sparrow	34.74208	-120.46355		5/22/2004	Mark Holmgren	short list of spp	v
Birds	42	287	Rufous-crowned Sparrow	34.73723	-120.46600		5/22/2004	Mark Holmgren		
Birds	81	607	Rufous-crowned Sparrow	34.71336	-120.39602		6/6/2004	Mark Holmgren	heard from pt 605 and recorded at 607.	s

Wildlife Survey Observations on Burton Mesa Ecological Reserve 2004 GIS Data

TYPE	REF_NO	WP_NO	SPECIES	LATITUDE	LONGITUDE	ELEVATION	DATE	OBSERVER	COMMENTS	EVIDENCE
Birds	127	0	Rufous-crowned Sparrow	34.74762	-120.46888		6/20/2004	Mark Holmgren	first heard here.	s
Birds	141	100	Rufous-crowned Sparrow	34.73239	-120.47063		6/27/2004	Mark Holmgren		s
Birds	142	102	Rufous-crowned Sparrow	34.72895	-120.47802		6/27/2004	Mark Holmgren	indep. juv.	v
Birds	252	111	Rufous-crowned Sparrow	34.74250	-120.47090		7/25/2004	Mark Holmgren		
Birds	253	112	Rufous-crowned Sparrow	34.74282	-120.46894		7/25/2004	Mark Holmgren	heard c up cyn	
Birds	85	612	Swainson's Thrush	34.68971	-120.45801		6/10/2004	Mark Holmgren	On BMP	s
Birds	94	6	Swainson's Thrush	34.70574	-120.44417		6/11/2004	Mark Holmgren	at oak riparian/Coastal Dune Scrub	
Birds	145	6	Swainson's Thrush	34.70574	-120.44417		6/27/2004	Mark Holmgren		s
Birds	146	98	Swainson's Thrush	34.70517	-120.44518		6/27/2004	Mark Holmgren	defensive chatter suggests breeding	s
Birds	82	609	Violet-green Swallow	34.71049	-120.40901		6/6/2004	Mark Holmgren	Rocky outcrop, off site. some water in creek and cottonwoods. Upper Los Berros Ck.	
Birds	86	612	Warbling Vireo	34.68971	-120.45801		6/10/2004	Mark Holmgren	On BMP at southern border	s
Birds	87	612	Warbling Vireo	34.68971	-120.45801		6/10/2004	Mark Holmgren	S of BMP	s
Birds	128	95	Warbling Vireo	34.70964	-120.41073		6/20/2004	Mark Holmgren	in oak	s
Birds	147	99	Warbling Vireo	34.70465	-120.44761		6/27/2004	Mark Holmgren		s and scold
Birds	148	0	Warbling Vireo	34.70341	-120.45019		6/27/2004	Mark Holmgren	on pc. Detected in 45% riparian, 55% Coastal Sage Scrub	s
Birds	149	0	Warbling Vireo	34.73193	-120.48021		6/27/2004	Mark Holmgren	in willows at spring	s
Birds	150	0	Warbling Vireo	34.73256	-120.48048		6/27/2004	Mark Holmgren	This pt is 0.32km N pt 834	s
Birds	151	834	Warbling Vireo	34.72969	-120.48101		6/27/2004	Mark Holmgren	2 songs	s
Birds	159	0	Warbling Vireo	0.00000	0.00000		7/4/2004	Mark Holmgren	No GPS point. In willows on N edge Big Marsh	s
Birds	254	105	Warbling Vireo	34.76257	-120.47951		7/25/2004	Mark Holmgren	Ad with dependent juv in willows	
Birds	207	54	Western Screech-Owl	34.73044	-120.47545	363	4/16/2004	Paul W. Collins	adj to spring box in wetland	1 pair
Birds	152	834	Western Wood-Pewee	34.72969	-120.48101		6/27/2004	Mark Holmgren	Pr, both calling on territory.	v
Birds	24	254	White-tailed Kite	34.68862	-120.47761		5/5/2004	Mark Holmgren	Over riparian and then spent most time over grassy area in Vandenberg Management Unit of W creek.	v ad
Birds	114	17	White-tailed Kite	34.69259	-120.47960		6/13/2004	Mark Holmgren	flew S or SE out of cyn, poor view of age of plumage.	v
Birds	88	612	Yellow Warbler	34.68971	-120.45801		6/10/2004	Mark Holmgren	On BMP at southern border	s

Evidence Codes

f	female
m	male
imm	immature individual
fo	flying over
v	visual
s	singing
c	calling
cnm	carrying nest material
cf	carrying food
pr	pair
pc	parental care

For detailed list please refer to Appendix 3b (Bird Species observed during Point Counts)

BIRD SPECIES OBSERVED

DURING POINT COUNTS

APPENDIX 3B

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

Appendix 3b
Bird Species Observed during Point Counts
Animal Lists from MAH Surveys on Burton Mesa Ecological Reserve

7 November 2003 09:37 to 09:50
Point 136 Coastal Scrub

Species	<50m	>50m
Northern Flicker	0	c
American Crow	0	4c
Hutton's Vireo	0	c
Bushtit	2c	0
Bewick's Wren	c	0
Ruby-crowned Kinglet	c	0
Hermit Thrush	c	0
Wrentit	c	2c
Yellow-rumped Warbler	0	c
California Thrasher	c	c
Spotted Towhee	c	0
Zonotrichia sp	2c	0
Deer tracks		

7 November 2003 10:02 to 10:24
Point 138 Arcto. Pu., Bishop Pine, Oak

Species	<50m	>50m
Red-tailed Hawk	v	0
California Quail	0	c
Hummingbird	c	0
Northern Flicker	v	0
Western Scrub Jay	v, 2fo	0
Wrentit	c	s
California Thrasher	c	c
Yellow-rumped Warbler	c	0
Spotted Towhee	c	0
Lesser Goldfinch	2c	0
American Goldfinch	c	c

7 November 2003 10:50 to 11:10
Point 139 Barren Agricultural field

Species	
Killdeer	9
Horned Lark	14
American Pipit	4

7 November 2003 10:50 to 11:10
Near Point 139 Uplands around Barren Agricultural field

Species
Red-tailed Hawk
Anna's Hummingbird
Nuttall's Woodpecker
SpPh (=Say's Phoebe)?
Wrentit
Bushtit
Oak Titmouse
California Towhee
Spotted Towhee

Zonotrichia
Song Sparrow
Amki (=American Kestrel?)

7 November 2003 11:56 to 12:20
Point 142 Big Marsh
Speices

American Coot	15v
Cinnamon Teal	8v
Ruddy Duck	5f, 1m
American Wigeon	2
Gadwall 1m, 2f	

7 November 2003
Nearby Point 142 in upland
Species
Western Scrub Jay
Wrentit
Bushtit
Black Phoebe
Spotted Towhee
Song Sparrow

16 February 2004 07:39 to ?
Point 201 Lat. 34.72269 Long. 120.42708
Species

Lesser Goldfinch	
Mourning Dove	1 or 2
Wrentit	
Spotted Towhee	
Nuttall's Woodpecker	

16 February 2004
Point 219 Pond below refining facility E of Rucker Rd.
Species

Turkey Vulture	lots
Mallard	pr
Killdeer pr	
Wilson's Snipe	1v
Ground Squirrel	

16 February 2004 09:10 to 10:05
Points 222 to 223 Oak Woodland that extends NE to SW and S of the big field
Species

Great Horned Owl?	Nest poss in cypress?
Nuttall's Woodpecker	
Acorn Woodpecker	
Black Phoebe	
Say's Phoebe	
American Crow	
Hutton's Vireo	
Oak Titmouse	
Western Bluebird	
Hermit Thrush	

Orange-crowned Warbler		
Yellow-rumped Warbler		
Song Sparrow		
Golden-crowned Sparrow		
Blackbird sp	fo	
Gray Squirrel		
Aniedes lugubris	under tin	

16 February 2004 10:28 to 11:40
Point 224 Agricultural field

Species		
Anna's Hummingbird	12	in trib Sta Lucia Creek in middle of ag field
Black Phoebe		
Horned Lark	25	in trib Sta Lucia Creek in middle of ag field
Blue-gray Gnatcatcher		
California Towhee		
Dark-eyed Junco		
White-crowned Sparrow		
American Goldfinch	2fo	in trib Sta Lucia Creek in middle of ag field
Savannah Sparrow	2	in trib Sta Lucia Creek in middle of ag field
Song Sparrow	2	in trib Sta Lucia Creek in middle of ag field

16 February 2004
Point 225 Big Marsh. This pond is depauperate at this time of year. Why?

Species	
Bufflehead	1
No other ducks	
Red-winged Blackbird	s
Marsh Wren	s
Common Yellowthroat	
Song Sparrow	
American Goldfinch	

27 March 2004 05:30 to 07:30
Near Points 240, 241 Spp seen or heard near Big marsh Photos: 4 taken

Species	
Eared Grebe	2 not in br plumage
Double-crested Cormorant	1 imm
Mallard	1 pr
Ruddy Duck	1m in br plumage
Bufflehead	1f
Ring-necked Duck	22
Hooded Merganser	1m, 4f
American Coot	2
Belted Kingfisher	1
N. Rough-winged Swallow	2 or 3
Tree Swallow	1
Marsh Wren	very few s
Common Yellowthroat	2s
Song Sparrow	s at dawn but not much later
Great-tailed Grackle	1m
Red-winged Blackbird	<16m, 5f

27 March 2004 05:30 to 07:30
Spp seen or heard in upland nr Points 240, 241

Species

Anna's Hummingbird	
Great Horned Owl	
Northern Flicker	
Bewick's Wren	
American Crow	10 flew NE at 0535
Cliff Swallow	
Wrentit	
Orange- crowned Warbler	
Spotted Towhee	
American Goldfinch	

27 March 04 08:01
Point 242 Euc, Monterey Cypress, Coast Live Oak
Species

Mourning Dove
Pacific-slope Flycatcher
Warbling Vireo
Oak Titmouse
Hutton's Vireo
Blue-gray Gnatcatcher
European Starling
Orange-crowned Warbler
Townsend's Warblers
Lesser Goldfinch
Purple Finch
House Finch
Woodrat nests of Euc material

27 March 2004 0908 hrs
Point 244. off property on Davis Creek
Species

Hairy Woodpecker
Mourning Dove
Wilson's Warbler
Song Sparrow
Anna's Hummingbird

27 March 2004 09:59
Point 245
Species

California Quail	pr
American Crow	5
Savannah Sparrow	1 c
Western Meadowlark	1
Brush rabbit	

27 March 2004 . 09:59 hrs
Point 245 In chaparral
Species

Anna's Hummingbird	
Wren	
Spotted Towhee	
American Crow	
Cooper's Hawk	ad m

White-crowned Sparrow in neighborhood nearby but not on BMP

30 April 2004

Point 251 to 253 in 4 sections not listed here. (See notes for breakdown by section.) Davis Creek

Species	30 April 2004 05:52-07:35	4 July 2004 05:50-07:50
Red-tailed Hawk	0	1
Red-shouldered Hawk	1 fo	1
Cooper's Hawk	0	1
California Quail	0	6
Greater Roadrunner	1c	0
Great Horned Owl	0	1
Anna's Hummingbird	3	1
Allen's Hummingbird	0	1
Mourning Dove	c	1
Nuttall's Woodpecker	3	0
Downy Woodpecker	0	2
Northern Flicker	0	1
Ash-throated Flycatcher	c	0
Pacific-slope Flycatcher	9c	8
Black Phoebe	1v	0
American Crow	6	10
Western Scrub Jay	3	4
Hutton's Vireo	1c	1
Warbling Vireo	18s	9
Yellow-throated Vireo	0	1
N. Rough-winged Swallow	0	2
Chestnut-backed Chickadee	1c	4
Oak Titmouse	2c	1
Bushtit	detected in 3 areas	2
Bewick's Wren	6	12
Swainson's Thrush	2s	6
American Robin	s?	
Wrentit	3s	8
California Thrasher	1s	1
Cedar Waxwing	52	0
Orange-crowned Warbler	7	1
Hooded Warbler	0	1s
Yellow Warbler	4s	0
Wilson's Warbler	7s	10
Common Yellowthroat	3, incl fl under pc, others suspected pc situations	4
Black-headed Grosbeak	9	0
California Towhee	3	4
Spotted Towhee	18	16
Song Sparrow	~14, incl fl under pc	4
Brown-headed Cowbird	2	0
Red-winged Blackbird	2c	1
Purple Finch	5	1
Lesser Goldfinch	11	7
Lawrence's Goldfinch	0	5
House Finch	4	12
Brush Rabbit	1	0

30 April 2004 07:46 to 08:56
Chaparral NW of Davis Creek
Start: Lat. 34.69533 Long. W120.45618 End: Lat. 34.70362 Long. 120.46110
Species

Mourning Dove	1 fo
Cliff Swallow	1 fo
Cooper's Hawk	1 fo high; some uncertainty re ID
Costa's Hummingbird	1c?
Chestnut-backed Chickadee	
Western Scrub Jay	
Bewick's Wren	8
Bushtit	4
Orange- crowned Warbler	1
Spotted Towhee	4
Hutton's Vireo	pr
Wrentit	s_m
California Thrasher	s
Purple Finch	1
Lesser Goldfinch	2c
Woodrat nests	
Fox	
Species' absences most interesting	
Quail, flicker, woodpeckers,	

30 April 2004 09:30 to 11:41
N boundary (Nuevo Rd) enroute to marsh

Species	
California Quail	small gp
Western Bluebird	pr
Red-tailed Hawk	on top tall cypress at site of 19 Feb trip

30 April 2004 09:59
Point 225, then around to W side of marsh. Spp seen in marsh only

Species	
Turkey Vulture	1
Mallard	3m
Gadwall 3 or 4	
Ruddy Duck	1pr, 4m, 3f
Bufflehead	1m
Ring-necked Duck	1m, 1f
American Coot	4
Mourning Dove	2
Western Kingbird	1
Cliff Swallow	10
N. Rough-winged Swallow	2
Tree Swallow	3
Marsh Wren	4 s
American Robin	nest in large oak, 3 large blue plain eggs, 5'
Common Yellowthroat	4s, nest f popped out, in Elymus, *Stachys*, and Snowberry, 8",
California Towhee	1
Song Sparrow	8
Great-tailed Grackle	1m
Red-winged Blackbird	<14m
Western Pond Turtle	
Diadophis punctatus 1	

Agricultural field N of marsh

Horned Lark	sev heard

5 May 2004	**06:25-07:18**	**07:18-07:39**	**07:39-09:00**	**Comment**
	254 to 255	255 to 256	256 to end of riparian	end pt is w/in 200m of highway 1

Turkey Vulture	0	1v	0	
Red-shouldered Hawk	0	c	0	
Red-tailed Hawk	1v	0	0	
White-tailed Kite	0	0	1 ad v	at 1010m N start pt. and again at 1140m, flew WSW of 1110m, hovered W of creek.
California Quail	4c	3c	0	
Greater Roadrunner	c	0	c	
Great Horned Owl	0	v	0	
Anna's Hummingbird	2s	s, v, c	0	
Nuttall's Woodpecker	0	1c	0	
Northern Flicker	c	3c	v	
Mourning Dove	2v, 2c	0	2c	
Rock Pigeon	1fo	0	0	
Ash-throated Flycatcher	0	c, v	c	picking at fragments of coyote poop
Pacific-slope Flycatcher	3c	s	0	
American Crow	2c, 3v	11v	12c, 3v	
Western Scrub Jay	3c, 5v	1c, 3v	c	
Hutton's Vireo	0	c	2c	
Warbling Vireo	s	0	0	
Cliff Swallow	1	0	0	
N. Rough-winged Swallow	2c	0	3	
Violet-green Swallow	0	3fo	0	
Oak Titmouse	c	0	c	
Bushtit	3c	2c	0	in separate areas
Bewick's Wren	1c, 1v	s	3c, s	
Blue-gray Gnatcatcher	2s	s	2c	
Wrentit	sm	s	0	
California Thrasher	1s	c	0	
Cedar Waxwing	4 fo	0	0	
Orange-crowned Warbler	6s	5s, 1c	4s	
Common Yellowthroat	0	s	0	on Federal land
California Towhee	0	s	0	
Spotted Towhee	3c	2v	c	
Song Sparrow	0	s	2s	
Black-chinned Sparrow	0	0	s	1 short, soft song heard
Brown-headed Cowbird	0	0	pr, f chatter	
Western Meadowlark	3s	0	0	
Purple Finch	3s, 3c	1v	s	
Lesser Goldfinch	3fo	1c, 1s	c	
Lawrence's Goldfinch	0	1fo	0	
House Finch	5c	1c	3c	
Brush Rabbit				v at 470, 450

Mule Deer	seen somwhere
Black-tailed Jackrabbit	to S on Federal property
Coyote	scat at 590

21 May 2004 10:30 to 11:15
Amuwu, Near GPS Point 273 Photo taken

Species	
Western Scrub Jay	1v
Cliff Swallow	6v
Wrentit	
Loggerhead Shrike	4 juv
Sage Sparrow	1s
Western Meadowlark	4 min (2s) in grassl.
Spotted Towhee	2v
Later, at 1128 hrs	
Sage Sparrow	s and v at pt 271, flew SE 35m
Alligator Lizard	DOR 140m NNW of pt 271

22 May 2004 06:25 to 06:30
Nokuk?, Harris Grade entrance gate on road that heads W to ag field.
odd thing was the apparently dry habitat and the apparent wetland-dependent birds present (SoSp and TrSw)

Species	
Tree Swallow	2
California Thrasher	
California Towhee	
Spotted Towhee	
Song Sparrow	
Purple Finch	
House Finch	
Sound of some nestlings or fledglings	

22 May 2004 06:46 to 07:00
Point 274

Species	
Turkey Vulture	
Red-tailed Hawk	ad to N
California Quail	
Pacific-slope Flycatcher	
Western Scrub Jay	
Bushtit	
Bewick's Wren	
Wrentit	
California Towhee	
Common Yellowthroat	
Blue Grosbeak	2 imm m s,
Lawrence's Goldfinch	

22 May 2004 07:29 to 07:38
Point Count at Point 275, 25% riparian but no standing water, otherwise low riparian scrub. I stood on top of dirt mound just N of cement pad.

Species	**<50m**	**>50m**	
Cooper's Hawk	0	c	sl more than 50m SE of pt
Mourning Dove	0	c	
Anna's Hummingbird	Vf	0	
Pacific-slope Flycatcher	c	0	

Warbling Vireo	v	0	flew to nest in oak 25' high, 10m E pt 275
Oak Titmouse	v	0	
House Wren	s,c	0	
Bewick's Wren	2s	0	
Wrentit	s	0	
Swainson's Thrush	c	0	
California Thrasher	s	0	
Common Yellowthroat	2s,Vm	0	
California Towhee	s	0	
Spotted Towhee	pr, c	0	
Rufous-crowned Sparrow	0	s	70-90m WNW pt 275
Song Sparrow	3s	0	
Brown-headed Cowbird	fw	0	
Lesser Goldfinch	c	0	
Purple Finch	0	s	
House Finch	s	0	
Gray Squirrel	c	0	

Photo taken

22 May 2004 07:40 to 08:20
Species
Birds detected on hike up cyn. Off property so not transcribed here.

22 May 2004 08:20 to 08:50
Species
Point Count done. Not transcribed due to off property. Very rich.

22 May 2004 09:33
All species seen are 100m N of Point 277. In canyon. Area count here in the course of hiking N to get on N part of BMP
Species

White-throated Swift	
Violet-green Swallow	
Cliff Swallow	4v
Rock Wren	1s
Bewick's Wren	
Common Yellowthroat	
Rufous-crowned Sparrow	
Song Sparrow	
House Finch	

Interesting that there is no evidence of nesting activity; probably too early?

22 May 2004
Species
American Kestrel pr seen E of pts 277 and 278.

22 May 2004 10:06 to 10:17
Point 279
Species

Turkey Vulture	
Ash-throated Flycatcher	
Cliff Swallow	
California Thrasher	
Spotted Towhee	
Sage Sparrow	pr

American Goldfinch
Cnemidophorus sev on S facing slope in the past 100+m or so.

22 May 2004 10:24 to 10:38
Point 280
Species
Ash-throated Flycatcher
Wrentit
California Towhee
Spotted Towhee
Sage Sparrow s
Lesser Goldfinch

22 May 2004 10:41
190m 303° from Point 280
Species
Lark Sparrow 2

22 May 2004
1041 hrs. Pt 282.
Common Raven pr flew overhead
Western Bluebird
American Kestrel

22 May 2004 11:00
W/in 60m of Point 283
Species
Rufous-crowned Sparrow 2s

22 May 2004
Point 283
Species
Turkey Vulture
Northern Flicker 80m S of pt283
Violet-green Swallow
Bewick's Wren
Wrentit
Western Bluebird
House Finch

22 May 2004 12:09
Point 285
Species
Violet-green Swallow
Bewick's Wren
Sage Sparrow s 90m NE of this pt
California Towhee
American Goldfinch

22 May 2004 12:45
Point 287
Species

Rufous-crowned Sparrow	cf and attempting to deliver it to dense Bedt Grass area with Lotus.
Phainopepla	f

28 May 2004 12:45 to 14:03
Spring W of Sta Lucia Creek tributary. Point 834 and vicinity

Species	
Turkey Vulture	7v
Red-tailed Hawk	ad
California Quail	1f
Killdeer	c
Anna's Hummingbird	Vf
Acorn Woodpecker	1 ad
Nuttall's Woodpecker	c
Cassin's Kingbird	s
Western Wood Pewee	s
Black Phoebe	1 ad, worn
Pacific-slope Flycatcher	c
Tree Swallow	6v
Cliff Swallow	3v
Barn Swallow	1v
Warbling Vireo	2s
Hutton's Vireo	v
Bushtit	2c
European Starling	3v emerging from cavity
Common Yellowthroat	c
Black-headed Grosbeak	s, Vf
Song Sparrow	2s
Bullock's Oriole	c, Vf
Purple Finch	s
Lesser Goldfinch	5v
House Finch	4s, 3 juvs under pc
Blue Grosbeak	2c
Red-winged Blackbird	many flying thru area to and from marsh and upland.

1 June 2004 07:52 to 08:01
Point Count at Pt 299..Chamise Chaparral 60%, Scattered Oaks 35%, trail 5%. Cloudy

Species	**<50m**	**>50m**
California Quail	0	c
Northern Flicker	0	c
American Crow	0	2v, c
Hutton's Vireo	0	c
Oak Titmouse	c	0
Bushtit	c	0
Bewick's Wren	s	0
Blue-gray Gnatcatcher	s	0
California Thrasher	0	2s
Wrentit	0	Sm,Sf
California Towhee	c,s	0
Spotted Towhee	3c	0
Song Sparrow	2s	0
Purple Finch	0	s

1 June 2004 08:17 to 08:32
Point Count at Point 300.. OW 100%. (Nettles, PO, *Rubus*, saltmarsh *Baccharis*, some open areas. Photo taken.

Species	**<50m**	**>50m**

Mourning Dove	0	c		
Allen's Hummingbird	s	0		
Pacific-slope Flycatcher	s	0		
American Crow	0	c		
Hutton's Vireo	s	0		
Cliff Swallow	c	0wiwa	s	0
Bewick's Wren	2s, c	0		
Wrentit	Sm	0		
California Thrasher	2s	0		
Orange-crowned Warbler	c,s	0		
Song Sparrow	s	0		
Common Yellowthroat	s	0		
Spotted Towhee	3c, v	0		
Black-headed Grosbeak	c	0		
Purple Finch	s	0		

1 June 2004 08:57 to 09:07
Point count at Point 301.. Chamise Chaparral with Arcto. 100%

Species	**<50m**	**>50m**
Turkey Vulture	v	0
Anna's Hummingbird	s	0
American Crow	0	c
Hutton's Vireo	0	c
Cliff Swallow	2c	0
Oak Titmouse	c	0
Bushtit	c	0
Bewick's Wren	2s	0
Wrentit	2Sm	Sm
California Thrasher	0	s
Blue-gray Gnatcatcher	c	0
California Towhee	v	0
Spotted Towhee	3c	2c
Purple Finch	s	0
House Finch	c	0

1 June 2004 09:34 to 09:45
Point count at Point 136. Coastal Scrub 100% (B.pil., Art. Cal.)

Species		
Turkey Vulture	5	0
Nuttall's Woodpecker	c	0
Ash-throated Flycatcher	0	c
Cliff Swallow	1v	0
N. Rough-winged Swallow	c	0
Hutton's Vireo	c	c
Bushtit	2c	0
Blue-gray Gnatcatcher	s	0
Wrentit	2Sm	Sm
Bewick's Wren	c	0
Spotted Towhee	3c	2c
California Towhee	c	0
?go	c	0

1 June 2004 09:56 to 10:37
Point count at Point 303. Euc woodland 60%, Css 15%, oaks scattered 20%, road 5%. Plenty of oak woodland nearby that may be conferring attributes on to this property. No visible water here. Overall very active; more so than oak woodland alone might be.

Species			
Mourning Dove	c	0	
Anna's Hummingbird	s	0	
Nuttall's Woodpecker	c	0	
Northern Flicker	pr	0	
Bewick's Wren	2s	0	
Pacific-slope Flycatcher	c	0	
House Wren	s	0	
Warbling Vireo	2s	0	
Hutton's Vireo	2c	0	
California Thrasher	0	c	
European Starling	2v	0	
American Robin	pr	0	in chase
Orange-crowned Warbler	0	s	
Blue-gray Gnatcatcher	v	0	
Dark-eyed Junco	s, c	0	
Spotted Towhee	2c	0	
House Finch	c,s	0	
Purple Finch	s	0	
Lesser Goldfinch	4c	0	
Cnemidophorus	1v	0	

1 June 2004 10:47 to 11:06
Point 136.

Species		
Ruddy Duck	0	2m, 1f
American Coot	v	v
Mourning Dove	v	0
White-throated Swift	v	0
Nuttall's Woodpecker	v	0
Black Phoebe	v	0
Chestnut-backed Chickadee	c	0
Cliff Swallow	4v	0
Tree Swallow	2v	0
N. Rough-winged Swallow	2v	0
Marsh Wren	2s	s
Yellow Warbler	0	s
Common Yellowthroat	0	3s
California Towhee	v	0
Spotted Towhee	c	0
Song Sparrow	s	0
Red-winged Blackbird	0	35v
Great-tailed Grackle	0	s
House Finch	s,c	0
Purple Finch	0	s
Lesser Goldfinch	3c	0
Bullfrog	0	c

6 June 2004 10:01 to 10:19
Point 609
Species
Pacific-slope Flycatcher
Nuttall's Woodpecker
White-throated Swift
Hutton's Vireo
Hairy Woodpecker
Pacific-slope Flycatcher

Lawrence's Goldfinch	
Spotted Towhee	
Bewick's Wren	
Turkey Vulture	
Orange-crowned Warbler	juv
Ash-throated Flycatcher	
Violet-green Swallow nest cavity	
Desert Woodrat nest	

6 June 2004 10:19 to 10:40
From Point 609 and 610 to Working Ranch

Species	
Hutton's Vireo	
Spotted Towhee	
Ash-throated Flycatcher	
Violet-green Swallow	
Pacific-slope Flycatcher	
Lawrence's Goldfinch	
Bewick's Wren	s
Bushtit	c
Purple Finch	s
Lesser Goldfinch	c
Blue-tailed Skink	at pt 610.

6 June 2004 10:43 to 10:50
Working Ranch area

Species	
Mourning Dove	2
Phainopepla	s
Western Bluebird	
Lark Sparrow	s
Lesser Goldfinch	
House Finch	

6 June 2004 06:19 to 06:35
Point Count at Point 602 Hab: ? Photos 2 taken

Species		
Eurasian Collared Dove	0	c
Mourning Dove	0	c
Anna's Hummingbird	s	0
Northern Flicker	0	c
Ash-throated Flycatcher	0	c
Western Scrub Jay	2v	0
American Crow	0	c
Hutton's Vireo	0	2c
Bewick's Wren	s	0
Bushtit	c	0
Blue-gray Gnatcatcher	0	c
Wrentit	c, Sm	Sf, 2Sm
California Thrasher	0	s
Orange-crowned Warbler	s	0
California Towhee	s	0
Spotted Towhee	3c	c
House Finch	c	0
Lesser Goldfinch	2c	0

6 June 2004 06:45 to 07:04
Point Count at Point 603.. Css 100%. Photos taken. No wetland present. No Giant Rye

Species			
Mourning Dove	2v	0	
Nuttall's Woodpecker	0	c	
Ash-throated Flycatcher	0	c	
American Crow	0	4c	
Western Scrub Jay	0	2c	
Oak Titmouse	c	c	
Bushtit	0	c	
Bewick's Wren	s	0	
Phainopepla	v	0	
Wrentit	Sm	2Sm	
Spotted Towhee	3c	0	
Common Yellowthroat	s	0	extra time spent finding odd CoYe song
House Finch	0	2s	
Jackrabbit	scat		

6 June 2004 07:16 to 07:30
Point count at Point 604 Foggy, 57° F. Chaparral S-facing in cyn 100% with some Elderberry, PO, Nicotiana glauca. One photo taken.

Species		
Anna's Hummingbird	2s subadults	
Northern Flicker	pr	0
Wrentit	Sm	0
Bewick's Wren	s	0
Blue-gray Gnatcatcher	s	0
California Towhee	pr	0
Spotted Towhee	3c	0
Lesser Goldfinch	c	0

6 June 2004
Point count at Point 605. Chaparral S-facing 100%. 57° F, 30% cloud cover. 2 photos taken

Species			
Anna's Hummingbird	c	0	
Oak Titmouse	c	c	
Bushtit	2c	0	
Wrentit	4Sm	0	
Orange-crowned Warbler	v	0	
Spotted Towhee	c	0	
Rufous-crowned Sparrow		s	~100m away from point at Pt 607.

6 June 2004 08:22 to 09:05
Point count at Point 608 Grasslandwith few oaks, Elderberry 95%, 05% shrubs. 62oF. See thoughts on habitat on PC data page

Species			
Turkey Vulture	~12		
Cooper's Hawk	1mv	0	took goldfinch in flight; consumed it in oak E of pt,
Northern Harrier	0	f	flew from E-W over Southern grassland.
California Quail	fam	0	
Mourning Dove	0	c	
Anna's Hummingbird	v	0	
? Wo	0	c	
Nuttall's Woodpecker	0	c	
Western Scrub Jay	0	V	

? Sw	0	0	
Bewick's Wren	0	S	
Oak Titmouse	0	c	
Blue-gray Gnatcatcher	s	0	
Wrentit	0	Sm	
Western Bluebird	CF	0	nest in cavity in Elderberry, 6’
Phainopepla	m,f	0	
California Thrasher	2s	0	
Orange-crowned Warbler	1v	s	
California Towhee	c	0	
Spotted Towhee	c	c	
Lark Sparrow	s, 2v	0	fam gp
Black-headed Grosbeak	1	0	
Lawrence's Goldfinch	0	60v	many juvs, some feeding on Amsinkia.
House Finch	c	0	

10 June 2004 11:05 to 12:34
Davis Creek from Point 612 (highway 1) to 340m SSW. BMP boundary at ~120m S.

Species	
hummingbird sp	1v
Hairy Woodpecker	c
Pacific-slope Flycatcher	2c
American Crow	1 flew at me then away at deep riparian
Hutton's Vireo	2c
Warbling Vireo	2s (1 on BMP)
Chestnut-backed Chickadee	3c
Oak Titmouse	c
Bushtit	3c
Bewick's Wren	2c, 2s
Swainson's Thrush	c (on BMP)
Orange-crowned Warbler	c,s
Yellow Warbler	s, agitated f (on BMP) (seems to confirm intent to be terr)
Wilson's Warbler	3s
Common Yellowthroat	2s
Spotted Towhee	Vjuv (breeding evidence), 2c
Song Sparrow	c,v,s
Lesser Goldfinch	s
Purple Finch	Vm, s
woodrat nests	2

11 June 2004 12:24 to 12:30
E branch Davis Creek. Point 006.Oak Woodland/Oak Riparian

Species	
Pacific-slope Flycatcher	c
American Crow	2c
Hutton's Vireo	s
Bushtit	c
Blue-gray Gnatcatcher	s, pr
Swainson's Thrush	s
Orange-crowned Warbler	s
Wilson's Warbler	s
Common Yellowthroat	s
Spotted Towhee	c
Purple Finch	s

11 June 2004 12:46 to 13:00

E branch Davis Creek. Point 007 Oak Woodland/Oak Riparian

Species	
Cooper's Hawk	nest with ad
Allen's Hummingbird	
Bushtit	
Wrentit	s
Orange-crowned Warbler	
Wilson's Warbler	
Spotted Towhee	
California Towhee	
Song Sparrow	

13 June 2004 06:19 to 06:40

Amuwu Sector, Near Point 009. Grassland. We wandered fairly widely. Low visibility

Species	
American Kestrel	c
Mourning Dove	2v
Northern Flicker	c
Bushtit	c
Bewick's Wren	c not many
California Thrasher	s
Wrentit	s
Blue-gray Gnatcatcher	s
California Towhee	2c
Spotted Towhee	c most abundant. One was particularly defensive therefore prob nesting
Sage Sparrow	s
Lark Sparrow	s (m with brood patch)
Western Meadowlark	v,c

13 June 2004 08:55 to 09:57

Amuwu Sector, From Point 016 down cyn to 280m from Point 254. Sort of dry riparian cyn.

Species	
White-tailed Kite	1v, age unknown
Mourning Dove	
Barn Owl	
Allen's Hummingbird	v
Nuttall's Woodpecker	2c
Western Scrub Jay	
American Crow	
Cliff Swallow	4
Hutton's Vireo	v, 2c
Oak Titmouse	c
Bewick's Wren	3s
Bushtit	
Blue-gray Gnatcatcher	2pr, s
California Towhee	3v
Orange-crowned Warbler	s
Spotted Towhee	2c
Sage Sparrow	W of cyn rim
House Finch	6
Lesser Goldfinch	

13 June 2004 08:55 to 09:57

Amuwu Sector, Point Count at 013, ~15 yr old burned Chaparral with mod large Oaks.

Species		
Mourning Dove	c	0
Anna's Hummingbird	Sad	0

hummingbird sp	v	0
American Crow	0	c
Western Scrub Jay	0	c
Wrentit	0	3s
California Thrasher	0	s
Blue-gray Gnatcatcher	0	s
Spotted Towhee	3c	3c

20 June 2004 08:05 to 09:14
Grassland. Point 608 and I covered as far as 333m W of Point 608.

Species	
Cooper's Hawk	v
California Quail	
Mourning Dove	
Northern Flicker	v
Western Scrub Jay	2v
Hutton's Vireo	
Cliff Swallow	
Bushtit	
Bewick's Wren	
Phainopepla	pr, 1 fam, 10 total min
Western Bluebird	ad, juvs not seen
Blue-gray Gnatcatcher	2s
California Thrasher	c
California Towhee	
Spotted Towhee	
Black-headed Grosbeak	m
Grasshopper Sparrow	fam
Lark Sparrow	s as tho still breeding, juvs with ad
House Finch	3c
Purple Finch	s
Lawrence's Goldfinch	

20 June 2004 09:45 to 10:44
Nokok. Survey of southern of two northern-most cyns in Nokok.

Species	
Turkey Vulture	
Red-tailed Hawk	1
White-throated Swift	fo
Nuttall's Woodpecker	2C
Hairy Woodpecker	1V+C
Northern Flicker	c
Pacific-slope Flycatcher	sev in somewhat recovered oaks, post-fire
Violet-green Swallow	2
Oak Titmouse	fam in s-facing chaparral
Bewick's Wren	6S
Wrentit	2Sm
California Thrasher	2v
Common Yellowthroat	3s
California Towhee	6v, 2?ad, juv gettng fed
Spotted Towhee	C
Blue Grosbeak	c, s
Song Sparrow	s, 4c
Rufous-crowned Sparrow	
Lesser Goldfinch	c
Purple Finch	

20 June 2004 ~06:00 to 07:00
Los Berros Creek survey. Only focus on birds in riparian and near agriculture fields. Notes on condition of the creek.

Species	Pt 90-93	Pt 93-94	Pt 94-95	95 to 96
	06:00-06:22	06:22-06:39	06:39-06:59	06:59-07:35
Red-tailed Hawk	0	v	Vad	
Orange-crowned Warbler	c	0	0	
American Kestrel	fo	0	0	
California Quail	0	0	2c	fam
Anna's Hummingbird	0	0	s,c	
Nuttall's Woodpecker	0	c	0	
Northern Flicker	0	0	0	c
Ash-throated Flycatcher	0	0	c	4c
Pacific-slope Flycatcher	0	0	c	c
Western Scrub Jay	c	0	0	v
Warbling Vireo	0	0	c,s 83m N of pt 94	S 30m N pt 96 in oak
Violet-green Swallow	0	0	2v	4v
Oak Titmouse	c	2c	c	
Bushtit	0	c, 3v	c	C, 7v
Bewick's Wren	0	0	s	S, 3c, v
Canyon Wren	0	0	0	2s
Wrentit	v, Sm,c	0	c	
Western Bluebird	0	0	0	v
Phainopepla	0	0	v(s)	
Orange-crowned Warbler	0	0	0Vm	
California Thrasher	0	0	0	v
California Towhee	c	2c, 2v	2c	
Spotted Towhee	c	v	c	
Black-headed Grosbeak	0	0	0	s,c
Blue Grosbeak	0	v	0	
Lark Sparrow	0	0	2 in field	
Brown-headed Cowbird	0	0	Vm	c
Dark-eyed Junco	3v	0	0	
Lawrence's Goldfinch	fo	0	0	c
Lesser Goldfinch	c	0	v	
House Finch	2c	fo, 2c, 3v	4v	
Deer	0	v	0	
Woodrat evidence in oaks				

20 June 2004 07:50 to 07:56
Point Count at pt 97. ~50 m from property bndry in pure unburned chaparral, W of grassland

Species	<50m	>50m
Mourning Dove	0	2c
Hummingbird	v	0
Northern Flicker	0	c
Western Scrub Jay	0	c
Cliff Swallow	v	0

Bushtit	c	0
Bewick's Wren	0	s
Wrentit	Sm, Sf	2Sm
Spotted Towhee	c	2c
House Finch	c	0

27 June 2004 06:56 to 07:22
Trib to Davis Creek 0.22 km NE pt 300. 50% riparian, 50% Coastal Sage Scrub . 2 Photos taken

Species		
Cooper's Hawk	Vad	0
Anna's Hummingbird	c	0
Mourning Dove	0	c
Nuttall's Woodpecker	0	c
Pacific-slope Flycatcher	c	0
Western Scrub Jay	0	c
Bushtit	2c	0
Bewick's Wren	c	0
Wrentit	c, Sm	2 Sm
California Thrasher	0	s
Wilson's Warbler	0	s
California Towhee	0	s
Spotted Towhee	4c	0
Lesser Goldfinch	c	0
Lawrence's Goldfinch	c	0
Purple Finch	0	c

27 June 2004 07:42 to 08:04
Trib to Davis Creek 006

Species			
Cooper's Hawk	**V ad**	**0**	**with 3 branchers (fledglings)**
Allen's Hummingbird	0	0	
Pacific-slope Flycatcher	2c	0	
Hutton's Vireo	s	0	
Warbling Vireo	?	?	0
Bewick's Wren	c	s	
Bushtit	c	0	
Wrentit	c, Sm	0	
Wilson's Warbler	c	s	
Common Yellowthroat	s	0	
Spotted Towhee	0	c	
Song Sparrow	c	0	
Purple Finch	2s	s	

27 June 2004 08:11to 08:21
Trib to Davis Creek, N side, Point Count at pt 098.
100% oak riparian. Creek moist with some standing water.

Species		
Hummingbird	v (Allen's?)	0
Mourning Dove	0	c
Nuttall's Woodpecker	c	0
Pacific-slope Flycatcher	2c	0
Hutton's Vireo	c	0
Hutton's Vireo	Vad (same?)	0
Chestnut-backed Chickadee	2c	0
Bewick's Wren	s, Vjuv indep.	0
Wrentit	2v	Sm

Swainson's Thrush	2s	0	defensive chatter
Orange-crowned Warbler	Vadm (different from above bird)		
Orange-crowned Warbler	s (!)	0	
Wilson's Warbler	c	0	
Spotted Towhee	c	0	
Song Sparrow	2c	0	
Lesser Goldfinch	c	0	
Purple Finch	s	s	

27 June 2004 08:33 to 08:43
Point Count at 099

Species		
Turkey Vulture	v	0
Red-tailed Hawk	0	c
Anna's Hummingbird	s	0
Black Phoebe	v	0
Pacific-slope Flycatcher	?	?
Warbling Vireo	s and scold	0
Oak Titmouse	c	0
Bewick's Wren	s	0
Wrentit	2Sm	Sm
California Thrasher	c	0
Wilson's Warbler	c	0
Common Yellowthroat	s	0
California Towhee	s	0
Spotted Towhee	3c	0
Black-headed Grosbeak	s,c	0
Lesser Goldfinch	c	0
Purple Finch	0	s

27 June 2004 08:52 to 09:05
Trib. to Davis Creek ~0.27 km downstr. 099. 45% riparian (big willows), 55% Coastal Sage Scrub

Species		
Red-tailed Hawk	v	0
California Quail	c	0
Anna's Hummingbird	c	0
Downy Woodpecker	2c	0
Hairy Woodpecker	0	c
Western Scrub Jay	c	0
Hutton's Vireo	0	c
Warbling Vireo	s	0
California Thrasher	Vad, c	0
Wilson's Warbler	s	0
California Towhee	v	0
Spotted Towhee	2c	3c
Purple Finch	0	s
House Finch	c	0

27 June 2004 10:32
Near pt 834

Species	
Cooper's Hawk	sub-adult plumaged fo
Acorn Woodpecker	
uttall's Woodpecker	c
Northern Flicker	c at 1214 hrs
Black Phoebe	juv

Western Wood Pewee	c or s, ad V – both calling
Pacific-slope Flycatcher	v
Chestnut-backed Chickadee	c, v
Oak Titmouse	2v
European Starling	c sounds of begging still
Warbling Vireo	2s
Spotted Towhee	c
Purple Finch	s
House Finch	c
Lesser Goldfinch	fo, c
American Goldfinch	c while fo

I did pb of Yellow Warbler and Swainson's Thrush, but got no response.
I walk under dense, W-facing oak canopy to try to detect Long-eared Owl and flush 2 large owls, not well seen, assumed to be Great Horned Owl.

Getting too windy to bird productively.

11:11 I surveyed beneath the dense oak canopy N of 834 140m.
I kicked up 2 Great Horned Owls but no nest seen. Continuing N under the canopy the spring picks up again about 240m NNE of pt 834.

11:27 Warbling Vireo s N34.73193 W120.48021 at spring in willow; Western Scrub Jay.

11:57 N34.73256 W 120.48048 Loggerhead Shrike song. I emerged from canopy and spring are to road W of BMP. Enroute I found an odd will. No Long-eared Owl. This is 0.32 m N of pt 834. Another or same Warbling Vireo here.

12:16 Pt 102. A long walk back to car. Enroute I see independent juv Rufous-crowned Sparrow.

4 July 2004
See Davis Creek list under 30 April date where data are included with those totals. Breakdown by creek section has not been done.

4 July 2004 08:14 to 08:45
Pine Forest at pt 103 to pt 104

Species	
Mourning Dove	c
Anna's Hummingbird	v
Northern Flicker	c
Ash-throated Flycatcher	c, 2v
Bushtit	2c
Bewick's Wren	2c
Spotted Towhee	c
Lawrence's Goldfinch	fo

4 July 2004

Big Marsh	**09:07 to 09:29 on E side.**	**09:45 to 10:24 on W side**
Great Blue Heron	0	1
Mourning Dove	2v	
Black Phoebe	0	1
Marsh Wren	s, 6c	
N. Rough-winged Swallow	2v	
Cliff Swallow	0	1
American Coot	c	3 ad
Gadwall	3v, poss juv	
Mallard	2v	7 downy babies
Ruddy Duck	0	3 juv, 1 Mad, 1f

Cinnamon Teal	0		1f
Red-winged Blackbird	Fad, 1 juv, 5m		

4 July 2004 09:30?
In willows along N border of Big Marsh

Species			
Black Phoebe	v		
Warbling Vireo	s		
Common Yellowthroat	c		
Black-headed Grosbeak	Vm, fam	American Goldfinch	s
Song Sparrow	c		
House Finch	5v		
Bullfrog	c		

25 July 2004 05:30
E of pt 106

Species
Great Horned Owl
Pacific-slope Flycatcher
Bewick's Wren
Wrentit
Spotted Towhee
Hutton's Vireo

25 July 2004 07:00 to 07:59
Spring in vicinity of N34.72969 W120.48101

Species	
Red-tailed Hawk	sounds of juv for a long time coming from oaks N of spring but I could never see anything revealing in that direction. 1 ad present.
California Quail	c
Mourning Dove	2fo, s
Anna's Hummingbird	
Acorn Woodpecker	
Nuttall's Woodpecker	
Hairy Woodpecker	c
Pacific-slope Flycatcher	c
Black Phoebe	juv
Cassin's Kingbird	(some question if this was Ash-throated Flycatcher?)
Western Wood Pewee	pr on territory, frequently calling; did not see breeding evidence
Warbling Vireo	begging observed and juv being fed (perhaps same individuals); 2s, 2 adv (not singing).
Oak Titmouse	c
Chestnut-backed Chickadee	
Bewick's Wren	c
Wrentit	s
Loggerhead Shrike	2 c W of spring (same 2 as in early morning)
European Starling	4v
Orange-crowned Warbler	c
Wilson's Warbler	c
Common Yellowthroat	3c,v
Spotted Towhee	c
Black-headed Grosbeak	c
Dark-eyed Junco	2 juvs under pc; 3v
Hutton's Vireo	
House Finch	2v
Purple Finch	f
American Goldfinch	s,c

Lesser Goldfinch

25 July 2004 Summary

I visited 4 areas all in Cabrillo and Amuwu.

1. The N-facing oak woodland (E of N34.72713 W120.48258) on the S side of the large ag field was traversed twice before dawn in search of owls. Only Great Horned Owl and Barn Owl were detected in the vicinity.

2. The spring near N34.72969 W120.48101 adjacent to VAFB had 30 spp with Western Wood Pewee (no breeding evidence) and breeding evidence for Warbling Vireo and Dark-eyed Junco. Loggerhead Shrike also present near here.

3. I surveyed the ag field in Amuwu near pt 108 (N34.73838 W120.47739) where 4 target spp were present. Several Blue Grosbeak were GPS'ed, but no juvs. 5 Grasshopper Sparrows (min 2 juvs) were in a field with *Avena* and *Hordeum*. 9 Horned Lark (among which were 2 min juvs), were in the S end of this ag field. Loggerhead Shrike (1 calling) was also present near here. 3 photos taken of scat that is probably Bobcat, but could be Mtn. Lion.

4. I walked perhaps 200m into a recently burned canyon as far NE at N34.74281 W120.46894 in upper Amuwu. The lovely area should have been covered earlier in the season, but passage was very difficult today. 2 sites for Rufous-crowned Sparrow were recorded.

Evidence Codes

f	female
m	male
imm	immature
fo	individual flying over
v	visual
s	singing
c	calling
cnm	carrying nest material
cf	carrying food
pr	pair
pc	parental care

MUSEUM RECORDS OF SENSITIVE SPECIES OBSERVATIONS (PRE-2004)

APPENDIX 4A

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

Appendix 4a
Burton Mesa Ecological Reserve
Museum Records of Sensitive Species Observations (Pre 2004)*

MUSEUM	SPECIES	LOCALITY 1	LOCALITY 2	DATE	COLLECTOR/OBSERVER	STAGE	RECORD TYPE	SOURCE
SBMNH	Aniella pulchra	La Purisima Mission, High Trail	La Purisima Mission	13-Apr-1989	S. Barrymore	Adult	Specimen	SBMNH Herp Catalogue
	Anniella pulchra	Burton Mesa, 3065 Rucker Rd, Lompoc	Burton Mesa		Michel Barone	Adult	Sighting	SBMNH Sighting File
	Clemmys marmorata	La Purisima Mission State Historic Park, ~10 m w of dirt rd crossing Los Berros Cr, ~250 m NW of pond	Los Berros Creek	15-Oct-1996	Tom Olson	1 Adult	Sighting	T. Olson (pers. com.)
	Clemmys marmorata	Wetland 329 along oxbow of Santa Lucia Cyn	Wetland 329	7-May-2003	Susan V. Christopher	2 adults	Sighting	PWC Field Notes
SBMNH	Neotoma lepida intermedia	Lompoc Oil Field ~0.7 mi SSE jct Hwy 1 X summit Purisima Hills	Lompoc Oil Field	1-Oct-1984	Paul W. Collins	1 Ad female	Specimen	SBMNH Mammal Catalogue
	Phrynosoma coronatum	Burton Mesa 0.55 mi N jct Highway 1 and Lompoc-Casmalia Rd	Burton Mesa	25-Jun-1999	Kathy Rindlaub & Tom Olson	1 Ad	Sighting	T. Olson (pers. com.)
	Phrynosoma coronatum	CCWA pipeline ROW between Stations 455-495	Burton Mesa	24-Jun-1994	Vince Semonsen	1 relocated	Sighting	CCWA Preconstruction surveys
CNDDB	Phrynosoma coronatum	Burton Mesa Preserve 0.7mi SSE jct Santa Lucia Cyn Rd & Lompoc-Casmalia Rd.	Burton Mesa Preserve	1-Apr-2003	Paul W. Collins	1 Subadult	Carcass, DOR	CNDDB Record
SBMNH	Phrynosoma coronatum	SW jct Rucker Rd and Burton Mesa Blvd.	Burton Mesa Preserve	28-Feb-1985	John Storrer	1 Ad	Specimen	SBMNH Herp Catalogue
SBMNH	Phrynosoma coronatum	N. Vandenberg Village, 1,430 ft NNE jct Burton Mesa Blvd X Club House Rd	N. Vandenberg Village	14-Mar-1997	Paul W. Collins	1 Subadult	Sighting	PWC Field Notes
SBMNH	Phrynosoma coronatum	N. Vandenberg Village, 870 ft N jct Burton Mesa Blvd X Club House Rd	N. Vandenberg Village	7-Mar-1997	Paul W. Collins	1 juv	Sighting	PWC Field Notes
SBMNH	Phrynosoma coronatum	Santa Lucia Cyn, 1.5 mi NNE jct Santa Lucia Cr & Lompoc Casmalia Rd.	Santa Lucia Canyon	18-Apr-1985	P. W. Collins		Specimen	SBMNH Herp Catalogue
	Phrynosoma coronatum	E fork Santa Lucia Cyn ~1.2 mi NNE jct Santa Lucia Cyn X Lompoc-Casmalia Rd	Santa Lucia Canyon	1990s	John Storrer	1 Ad	Sighting	J. Storrer (pers. Comm.)
SBMNH	Phrynosoma coronatum	Vandenberg AFB, dirt rd along S side of Wetland 68B	Vandenberg AFB	3-May-2001	Paul W. Collins	1 juv	Sighting	PWC Field Notes
	Phrynosoma coronatum	CCWA Pipeline ROW, Station 460, ~0.25 mi NNW jct Santa Lucia Cyn X CCWA pipeline	Vandenberg AFB	24-Jun-1994	Vince Semonsen	1 relocated	Sighting	CCWA Preconstruction surveys
CNDDB	Rana aurora	E fork Santa Lucia Cyn 1.2 mi NNE jct Santa Lucia Cyn Rd X S20, spring box	Burton Mesa Preserve	1-Apr-2003	Paul W. Collins	1 SubAd, 1 juv	Sighting	PWC Field Notes
SBMNH	Rana aurora	E. fork Davis Cr along CCWA ROW N. of jct Burton Mesa Blvd	Davis Creek	3-Oct-1995	Vince Semonsen	5-6 Metamorphs	Sighting	CCWA Preconstruction surveys
SBMNH	Rana aurora	Vandenberg Village, 4478 Titan Ave.	N Vandenberg Village	26-Mar-1999	Linda Sehgal	1 Ad female	Specimen	SBMNH Herp Catalogue
SBMNH	Rana aurora	N. Vandenberg Village, 4412 Titan Ave.	N. Vandenberg Village	1-Jan-2000	Linda Sehgal	1 Subadult	Carcass, DOR	L. Sehgal (pers. comm.)
SBMNH	Rana aurora	N. Vandenberg Village, 4455 North Oaks Ave.	N. Vandenberg Village	30-Nov-1999	Linda Sehgal	1 Subadult	Carcass, DOR	L. Sehgal (pers. comm.)
SBMNH	Rana aurora	N. Vandenberg Village, Titan Ave. adj. Burton Mesa Reserve	N. Vandenberg Village	early Nov 1999	Ruth Adams	1 Subadult	Carcass, DOR	L. Sehgal (pers. comm.)
SBMNH	Rana aurora	W. fork Davis Cr 1,290 ft NNW jct Burton Mesa Blvd X Club House Rd	N. Vandenberg Village	7-Mar-1997	Paul W. Collins	2 SubAd	Sighting	PWC Field Notes
SBMNH	Rana aurora	W. fork Davis Cr 2,400 ft NNW jct Burton Mesa Blvd X Club House Rd	N. Vandenberg Village	7-Mar-1997	Paul W. Collins	1 SubAd	Sighting	PWC Field Notes
CNDDB	Rana aurora	Santa Ynez River, 70 ft dowstream of jct Floridale Ave Bridge	Santa Ynez River	3-Aug-2000	R. W. Meredith	2 Adults	Sighting	CBDDB Data Sheet
SBMNH	Rana aurora	Wetland 329 along oxbow of Santa Lucia Cyn	Wetland 329	7-May-2003	Paul W. Collins	2 adults	Sighting	PWC Field Notes
	Rana aurora	Wetland 329 along oxbow of Santa Lucia Cyn	Wetland 329	23-May-2002	Susan V. Christopher	2 Sadults	Sighting	SVC Compiled VAFB Data
SBMNH	Scaphiopus hammondii	Burton Mesa Preserve, Wetland 252, 0.65 air mi SSE jct S20 X Santa Lucia Canyon Rd	Burton Mesa Preserve	19-Apr-2001	Paul W. Collins	1 lot of tadpoles	Specimens	SBMNH Herp Catalogue
SBMNH	Scaphiopus hammondii	Lompoc Federal Penintentary, Upper Pond N. of Dair	Federal Penitentary	11-Apr-2001	Paul W. Collins	2 tadpoles	Specimen	SBMNH Herp Catalogue
	Taxidea taxus	Harris Grade Rd just SW of St. Mary's Episcopal Church	Burton Mesa	8-Feb-2001	Tom Olson	! Ad DOR	Sighting	T. Olson (pers. com.)
	Taxidea taxus	0.7 mi N jct Harris Grade Rd X Lompoc-Casmalia Rd	Burton Mesa	17-May-2002	Tom Olson	! Ad carcass	Sighting	T. Olson (pers. com.)
	Taxidea taxus	Burton Mesa 0.4 mi E jct Harris Grade Rd X Lompoc-Casmalia Rd	Burton Mesa	17-May-2002	Tom Olson	dens	Sighting	T. Olson (pers. com.)
	Taxidea taxus	Burton Mesa 0.5 mi NNE jct Harris Grade Rd X Lompoc-Casmalia Rd	Burton Mesa	17-May-2002	Tom Olson	dens	Sighting	T. Olson (pers. com.)

Museum Records of Sensitive Species Observations (Pre 2004)*

MUSEUM	SPECIES	LOCALITY 1	LOCALITY 2	DATE	COLLECTOR/OBSERVER	STAGE	RECORD TYPE	SOURCE
SBMNH	Taxidea taxus	0.1 mi W. jct Hwy 1 & access rd into Lompoc Oil Field	Lompoc Oil Field	2-Oct-1984	Paul W. Collins	Adult skull	Specimen	SBMNH Mammal Catalogue
	Taxidea taxus	N end of Union Oil Processing Facility Site just W of old well site	Lompoc Oil Field	16-Jun-1986	Paul W. Collins	sign	Sighting	PWC Field Notes
	Taxidea taxus	0.2 mi nne jct Burton Mesa Blvd X Club House Rd	N. Vandenberg Village	7-Mar-1997	Paul W. Collins	digging	Sighting	PWC Field Notes
	Taxidea taxus	1/4 way down N-facing slope of Purisima Hills 100 yrds E. of Hwy 1 below crest	Purisima Hills	7-Nov-1987	Vernon L. Human	digging	Sighting	PWC Field Notes
	Taxidea taxus	1mi NNE jct Hwy 1 on summit of Purisima Hills (Trapline 162)	Purisima Hills	28-Oct-1984	Paul W. Collins	digging	Sighting	PWC Field Notes

* Source: Santa Barbara Museum of Natural History

MUSEUM RECORDS OF NON-SENSITIVE SPECIES OBSERVATIONS (PRE-2004)

APPENDIX 4B

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

Appendix 4b
Burton Mesa Ecological Reserve
Museum Records of Non-Sensitive Species Observations (Pre 2004)*

MUSEUM	SPECIES	LOCALITY 1	LOCALITY 2	DATE	COLLECTOR/OBSERVER	STAGE	RECORD TYPE	SOURCE
SBMNH	Ambystoma tigrinum mavortium	Lompoc Federal Penintentary, site 3 Lower Pond E of Dairy	Federal Penitentary	19-May-2000	John Storrer et al.	larvae	Specimen	SBMNH Herp Catalogue
SBMNH	Ambystoma tigrinum mavortium	Lompoc Federal Penintentary, site 2 vernal pool (Upper Pond N of Dairy	Federal Penitentary	19-May-2000	John Storrer et al.	larvae	Specimen	SBMNH Herp Catalogue
SBMNH	Ambystoma tigrinum mavortium	Lompoc Federal Penintentary, Upper Pond N. of Dairy	Federal Penitentary	11-Dec-2000	John Storrer et al.	larvae	Specimen	SBMNH Herp Catalogue
SBMNH	Ambystoma tigrinum mavortium	Lompoc Federal Penintentary, Upper Pond N. of Dairy	Federal Penitentary	11-Dec-2000	John Storrer et al.	28 larvae	Specimen	SBMNH Herp Catalogue
SBMNH	Ambystoma tigrinum mavortium	Lompoc Federal Penintentary, Upper Pond N. of Dairy	Federal Penitentary	15-Feb-2001	Paul W. Collins	16 larvae	Specimen	SBMNH Herp Catalogue
SBMNH	Ambystoma tigrinum mavortium	Lompoc Federal Penintentary, Upper Pond N. of Dairy	Federal Penitentary	11-Apr-2001	Paul W. Collins	larvae	Specimen	SBMNH Herp Catalogue
SBMNH	Ambystoma tigrinum melanostictum	pond on S side Hwy 246 jct Cebada Canyon Rd	Lompoc Valley	13-Dec-94	Vince Semonsen	8 larvae	Specimen	SBMNH Herp Catalogue
UCSB	Ambystoma tigrinum melanostictum	pond on S side Hwy 246 jct Cebada Canyon Rd	Lompoc Valley	14-Nov-94	Vince Semonsen	110 larvae	Specimen	UCSB Catalogue
MVZ	Aneides lugubris	Burton Mesa, 0.4 air mi N jct Hwy 1 & Burton Mesa Blvd	Burton Mesa Preserve	28-Feb-1987	Samuel S. Sweet & Larry Hunt	1 Ad/juv	Specimen	MVZ Catalogue
MVZ	Aneides lugubris	Burton Mesa, 0.4 air mi N jct Hwy 1 & Burton Mesa Blvd	Burton Mesa Preserve	28-Feb-1987	Samuel S. Sweet & Larry Hunt	1 Ad/juv	Specimen	MVZ Catalogue
MVZ	Aneides lugubris	Burton Mesa, 0.4 air mi N jct Hwy 1 & Burton Mesa Blvd	Burton Mesa Preserve	28-Feb-1987	Samuel S. Sweet & Larry Hunt	1 Ad/juv	Specimen	MVZ Catalogue
UCSB	Aneides lugubris	rock outcrop on Hwy. 1, ~ 3 mi N of Lompoc, 0.7 mi S. of crest	Purisima Hills	22-Feb-1980	Samuel S. Sweet		Specimen	UCSB Catalogue
UCSB	Aneides lugubris	S slope Purisima Hills, Hwy. 1, 0.7 mi S. of crest	Purisima Hills	7-Feb-1981	Samuel S. Sweet		Specimen	UCSB Catalogue
UCSB	Aneides lugubris	rock outcrop on Hwy. 1, 3 mi N of Lompoc, 0.7 mi S of crest	Purisima Hills	23-Feb-1980	Samuel S. Sweet		Specimen	UCSB Catalogue
UCSB	Aneides lugubris	W side of Hwy. 1 at jct. Rucker Rd.	Burton Mesa Preserve	25-Dec-1982	Samuel S. Sweet		Specimen	UCSB Catalogue
SBMNH	Bufo boreas	N. Vandenberg Village, Constellation Rd X North Oaks Ave.	N. Vandenberg Village	18-Jan-2000	Paul W. Collins	1 adult	Specimen	SBMNH Herp Catalogue
MVZ	Chaetodipus californicus dispar	1.5 mi N. La Purisima Mission		16-Feb-39	Richard M. Bond	1 female	Specimen	MVZ Catalogue
SBMNH	Cnemidophorus tigris	Purisima Hills, Lompoc Oil Field, 0.2 mi E of Hwy 1 at base of hills	Lompoc Oil Field	2-May-1991	John Storrer		Specimen	SBMNH Herp Catalogue
SBMNH	Coluber constrictor mormon	N. Vandenberg AFB, Santa Lucia Canyon 0.7 air mi N jct Lompoc-Casmalia Rd	Santa Lucia Canyon	7-May-2003	Paul W. Collins	1 Male Ad	Specimen	SBMNH Herp Catalogue
SBMNH	Crotalus viridis	Purisima Hills, Lompoc Oil Field, 0.2 mi E of Hwy 1 at base of hills	Lompoc Oil Field	1-Oct-1984	Paul W. Collins		Specimen	SBMNH Herp Catalogue
MVZ	Dipodomys agilis fuscus	Davis Ranch, 1.75 mi N of Lompoc	Davis Ranch	16-Feb-39	Richard M. Bond	1 Male Ad	Specimen	MVZ Catalogue
MVZ	Dipodomys agilis fuscus	1.5 mi N. La Purisima Mission		16-Feb-39	Richard M. Bond	1 Male, 1female	Specimen	MVZ Catalogue
SBMNH	Dipodomys agilis fuscus	Mission Hills area SW of Burton Mesa Blvd X Rucker Rd	Burton Mesa Preserve	6-Feb-86	John Storrer	1 male	Specimen	SBMNH Mammal Catalogue
MVZ	Dipodomys heermanni arenae	Davis Ranch, 1.75 mi N of Lompoc	Davis Ranch	16-Feb-39	Richard M. Bond	1 female	Specimen	MVZ Catalogue
MVZ	Dipodomys heermanni arenae	Davis Ranch, 1.75 mi N of Lompoc	Davis Ranch	16-Feb-39	Richard M. Bond	3 males	Specimen	MVZ Catalogue
MVZ	Dipodomys heermanni arenae	Davis Ranch, 3.5 mi NNW of Lompoc	Davis Ranch	16-Jan-40	Seth B. Benson & R. M. Bond	4 males, 3 females	Specimen	MVZ Catalogue
SBMNH	Dipodomys heermanni arenae	summit of Purisima Hills ~1 mi NNE jct Hwy 1	Purisima Hills	24-Oct-84	Paul W. Collins	6 males, 5 females	Specimen	SBMNH Mammal Catalogue
SBMNH	Elgaria multicarinata	Purisima Hills, 0.2 mi E of Hwy 1 at base of Hills, Lompoc Oil Field	Lompoc Oil Field	1-Oct-1984	Paul W. Collins		Specimen	SBMNH Herp Catalogue
SBMNH	Ensatina eschscholtzi	Purisima Hills, 0.2 mi E of Hwy 1 at base of Hills, Lompoc Oil Field	Lompoc Oil Field	1-Oct-1984	Paul W. Collins		Specimen	SBMNH Herp Catalogue

Museum Records of Non-Sensitive Species Observations (Pre 2004)*

MUSEUM	SPECIES	LOCALITY 1	LOCALITY 2	DATE	COLLECTOR/OBSERVER	STAGE	RECORD TYPE	SOURCE
SBMNH	Ensatina eschscholtzi	Santa Lucia Cr drainage, VAFB, under oak logs	Santa Lucia Canyon	19-Nov-1984	John Storrer		Specimen	SBMNH Herp Catalogue
UCSB	Ensatina eschscholtzii	Hwy 1, 1.5 mi N jct. Burton Mesa Blvd., N of Lompoc	Burton Mesa Preserve	11-Mar-1982	Samuel S. Sweet		Specimen	UCSB Catalogue
SBMNH	Masticophis lateralis	0.6 mi NNW jct Hwy 1 X Lompoc Casmalia Rd., 1/4 mi W. of Hwy 1	Burton Mesa Preserve	18-Apr-1985	Paul W. Collins		Specimen	SBMNH Herp Catalogue
MVZ	Peromyscus californicus californicus	Davis Ranch, 1.75 mi N of Lompoc	Davis Ranch	16-Feb-39	Richard M. Bond	2 males, 2 females	Specimen	MVZ Catalogue
MVZ	Peromyscus californicus californicus	1.5 mi N. La Purisima Mission		23-Feb-42	Ward C. Russell & R. M. Bond	1 male, 1 female	Specimen	MVZ Catalogue
SBMNH	Peromyscus californicus californicus	Mission Hills area SW of Burton Mesa Blvd X Rucker Rd	Burton Mesa Preserve	6-Feb-86	John Storrer	1 male	Specimen	SBMNH Mammal Catalogue
SBMNH	Peromyscus californicus californicus	Mission Hills area SW of Burton Mesa Blvd X Rucker Rd	Burton Mesa Preserve	6-Feb-86	John Storrer	1 female	Specimen	SBMNH Mammal Catalogue
SBMNH	Peromyscus californicus californicus	foot Purisima Hills 2 mi E. of S20 X main gate to VAFB	Union Oil Property	11-Dec-84	John Storrer	1 Ad male	Specimen	SBMNH Mammal Catalogue
SBMNH	Peromyscus californicus californicus	0.8 mi W of VABM 1204 near crest of Purisima Hills, 1.1 mi E jct Hwy 1 & access Rd into Union Oil Fee Property	Purisima Hills	1-Oct-84	Paul W. Collins	1 Ad female	Specimen	SBMNH Mammal Catalogue
SBMNH	Peromyscus californicus californicus	0.8 mi W of VABM 1204 near crest of Purisima Hills, 1.1 mi E jct Hwy 1 & access Rd into Union Oil Fee Property	Purisima Hills	1-Oct-84	Paul W. Collins	1 female	Specimen	SBMNH Mammal Catalogue
SBMNH	Peromyscus californicus californicus	0.8 mi W of VABM 1204 near crest of Purisima Hills	Purisima Hills	1-Oct-84	Paul W. Collins	1 male	Specimen	SBMNH Mammal Catalogue
SBMNH	Peromyscus californicus californicus	0.4 mi NNW of Vandenberg Village, adj E fork Santa Lucia Creek	Burton Mesa Preserve	24-Oct-84	Paul W. Collins	1 male	Specimen	SBMNH Mammal Catalogue
	Peromyscus californicus californicus	Mission Hills area SW of Burton Mesa Blvd X Rucker Rd	Burton Mesa Preserve	6-Feb-86	John Storrer	1 female	Trapping record	SBMNH Trapline data sheets
MVZ	Peromyscus maniculatus gambelii	Davis Ranch, 3.5 mi NNW of Lompoc	Davis Ranch	16-Jan-40	Seth B. Benson & R. M. Bond	1 female	Specimen	MVZ Catalogue
MVZ	Peromyscus maniculatus gambelii	1.5 mi N. La Purisima Mission		23-Feb-42	Ward C. Russell & R. M. Bond	1 male	Specimen	MVZ Catalogue
MVZ	Peromyscus maniculatus gambelii	Davis Ranch, 1.75 mi N of Lompoc	Davis Ranch	16-Feb-39	Richard M. Bond	3 males, 2 females	Specimen	MVZ Catalogue
MVZ	Peromyscus maniculatus gambelii	1.5 mi N. La Purisima Mission		16-Feb-39	Richard M. Bond	1 male, 1 female	Specimen	MVZ Catalogue
SBMNH	Peromyscus maniculatus gambelii	foot Purisima Hills 2 mi E. of S20 X main gate to VAFB	Union Oil Property	11-Dec-84	John Storrer	1 male	Specimen	SBMNH Mammal Catalogue
SBMNH	Peromyscus maniculatus gambelii	Lompoc Oil Field ~0.4 mi NNE jct Hwy 1	Lompoc Oil Field	1-Oct-84	Paul W. Collins	1 male	Specimen	SBMNH Mammal Catalogue
SBMNH	Peromyscus maniculatus gambelii	summit of Purisima Hills ~1 mi NNE jct Hwy 1	Purisima Hills	24-Oct-84	Paul W. Collins	1 skin/skull	Specimen	SBMNH Mammal Catalogue
SBMNH	Peromyscus maniculatus gambelii	0.4 mi NNW of Vandenberg Village, adj E fork Santa Lucia Creek	Burton Mesa Preserve	24-Oct-84	Paul W. Collins	1 male	Specimen	SBMNH Mammal Catalogue
SBMNH	Peromyscus maniculatus gambelii	0.4 mi NNW of Vandenberg Village, adj E fork Santa Lucia Creek	Burton Mesa Preserve	24-Oct-84	Paul W. Collins	1 male	Specimen	SBMNH Mammal Catalogue
	Peromyscus maniculatus gambelii	Vandenberg AFB, adj CDT Rd (south) 0.5 mi W jct S20	Vandenberg AFB	11-Dec-84	John Storrer	1 female	Trapping record	SBMNH Trapline data sheets
	Peromyscus maniculatus gambelii	Mission Hills area SW of Burton Mesa Blvd X Rucker Rd	Burton Mesa Preserve	6-Feb-86	John Storrer	1 male	Trapping record	SBMNH Trapline data sheets
	Peromyscus maniculatus gambelii	Mission Hills area SW of Burton Mesa Blvd X Rucker Rd	Burton Mesa Preserve	6-Feb-86	John Storrer	1 Imm male	Trapping record	SBMNH Trapline data sheets
	Peromyscus maniculatus gambelii	Mission Hills area SW of Burton Mesa Blvd X Rucker Rd	Burton Mesa Preserve	6-Feb-86	John Storrer	1 male	Trapping record	SBMNH Trapline data sheets
	Peromyscus maniculatus gambelii	Mission Hills area SW of Burton Mesa Blvd X Rucker Rd	Burton Mesa Preserve	6-Feb-86	John Storrer	1 male	Trapping record	SBMNH Trapline data sheets
	Peromyscus maniculatus gambelii	Mission Hills area SW of Burton Mesa Blvd X Rucker Rd	Burton Mesa Preserve	6-Feb-86	John Storrer	1 female	Trapping record	SBMNH Trapline data sheets
	Peromyscus maniculatus gambelii	Mission Hills area SW of Burton Mesa Blvd X Rucker Rd	Burton Mesa Preserve	6-Feb-86	John Storrer	1 female	Trapping record	SBMNH Trapline data sheets

Museum Records of Non-Sensitive Species Observations (Pre 2004)*

MUSEUM	SPECIES	LOCALITY 1	LOCALITY 2	DATE	COLLECTOR/OBSERVER	STAGE	RECORD TYPE	SOURCE
MVZ	Peromyscus truei gilberti	1.5 mi N. La Purisima Mission		16-Feb-39	Richard M. Bond	2 males, 1 female	Specimen	MVZ Catalogue
MVZ	Peromyscus truei gilberti	1.5 mi N. La Purisima Mission		23-Feb-42	Ward C. Russell & R. M. Bond	1 male, 2 females	Specimen	MVZ Catalogue
SBMNH	Peromyscus truei gilberti	crest of Purisima Hills ~0.8 mi E jct Hwy 1 and crest	Purisima Hills	1-Oct-84	Paul W. Collins	1 male	Specimen	SBMNH Mammal Catalogue
SBMNH	Peromyscus truei gilberti	crest of Purisima Hills ~0.9 mi E jct Hwy 1 and crest	Purisima Hills	1-Oct-84	Paul W. Collins	1 male	Specimen	SBMNH Mammal Catalogue
SBMNH	Pseudacris regilla	Santa Lucia Cr drainage, VAFB, inside rotting log	Santa Lucia Canyon	19-Nov-1984	John Storrer	1 Adult	Specimen	SBMNH Herp Catalogue
SBMNH	Pseudacris regilla	wetland 1 mi NNE jct Lompoc-Casmalia Rd X Santa Lucia Cyn Rd	Santa Lucia Canyon	25-May-2000	Paul W. Collins	11 tadpoles	Specimen	SBMNH Herp Catalogue
SBMNH	Pseudacris regilla	ephemeral wetland 0.6 mi SSE jct Lompoc-Casmalia Rd X Santa Lucia Cyn Rd	Burton Mesa Preserve	25-May-2000	Paul W. Collins	4 tadpoles	Specimen	SBMNH Herp Catalogue
LACM	Rana catesbeiana	Pine Cyn Lake Lower, Vandenberg Air Force Base	Pine Canyon	None		Tads		
UCSB	Rana catesbeiana	Purisima Cyn. Reservoir, 0.8 air mi N. La Purisima	La Purisima Mission	4-Dec-1982	Samuel S. Sweet		Specimen	UCSB Catalogue
MVZ	Reithrodontomys megalotis longicaudus	1.5 mi N. La Purisima Mission		23-Feb-42	Ward C. Russell & R. M. Bond	1 male	Specimen	MVZ Catalogue
MVZ	Reithrodontomys megalotis longicaudus	1.5 mi N. La Purisima Mission		16-Feb-39	Richard M. Bond	1 male, 1 female	Specimen	MVZ Catalogue
SBMNH	Sceloporus occidentalis	0.2mi E. of Hwy 1 in Lompoc Oil Field	Lompoc Oil Field	1-Oct-1984	Paul W. Collins	1 Male Ad	Specimen	SBMNH Herp Catalogue
SBMNH	Sceloporus occidentalis	0.7 mi SSE of Purisima Hills, Lompoc Oil Field	Lompoc Oil Field	2-Oct-1984	Paul W. Collins		Specimen	SBMNH Herp Catalogue
SBMNH	Urocyon cinereoargenteus californicus	0.25 mi N Burton Mesa Blvd, Lompoc	Burton Mesa Preserve	13-Nov-82	Jocelyn Hyatt	1 Imm male	Specimen	SBMNH Mammal Catalogue

* Source: Santa Barbara Museum of Natural History

CALIFORNIA NATURAL DIVERSITY DATABASE RECORDS

APPENDIX 5

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Charadrius alexandrinus nivosus

western snowy plover

Element Code: ABNNB03031

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	**Global:** G4T3	**CDFG Status:** SC
State: None	**State:** S2	

Habitat Associations

General: (NESTING) FEDERAL LISTING APPLIES ONLY TO THE PACIFIC COASTAL POPULATION.

Micro: SANDY BEACHES, SALT POND LEVEES & SHORES OF LARGE ALKALI LAKES. NEEDS SANDY, GRAVELLY OR FRIABLE SOILS FOR NESTING.

Occurrence No. 50 **Map Index:** 12955 **EO Index:** 25756

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: PAGE, G. & L. STENZEL 1981 (LIT)

Dates Last Seen
Element: 1986-02-XX
Site: 1986-02-XX

Record Last Updated: 1998-09-15

Quad Summary: CASMALIA (3412075/196D)

County Summary: SANTA BARBARA

Lat/Long: 34.80027° / -120.61954°
UTM: Zone-10 N3853476 E717769
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Area: 723.7 ac

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 20 ft

Location: PURISIMA POINT BEACH, VANDENBERG AFB.

Location Detail: 1977: LARGE NUMBERS OF BREEDING BIRDS ON BEACHES & RIVER MOUTHS OF NORTHERN SANTA BARBARA CO., PRIMARILY PURISIMA POINT BEACH. 1986: MAJOR CONCENTRATION OF WINTERING BIRDS FOUND AT SHUMAN CR NORTH, SAN ANTONIO CR NORTH & PURISIMA PT NORTH.

Ecological: DUNE BACKED BEACH. DUNES INTERRUPTED BY A RIVER OR CREEK.

Threat:

General: 55 BREEDING PAIRS OBSERVED BETWEEN 16 MAY & 11 JUNE 1977. AREA ALSO USED BY WINTERING BIRDS. THIS AREA IS OFF-LIMITS TO THE PUBLIC.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Emys (=Clemmys) marmorata pallida

southwestern pond turtle

Element Code: ARAAD02032

Status

Federal: None
State: None

NDDB Element Ranks

Global: G3G4T2T
State: 3Q
S2

Other Lists

CDFG Status: SC

Habitat Associations

General: INHABITS PERMANENT OR NEARLY PERMANENT BODIES OF WATER IN MANY HABITAT TYPES; BELOW 6000 FT ELEV.

Micro: REQUIRE BASKING SITES SUCH AS PARTIALLY SUBMERGED LOGS, VEGETATION MATS, OR OPEN MUD BANKS. NEED SUITABLE NESTING SITES.

* SENSITIVE *

Occurrence No. 209 **Map Index:** 32703 **EO Index:** 1266

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: LAABS, D. & M. ALLABACK 1989 (OBS)

Dates Last Seen

Element: 1989-05-03
Site: 1989-05-03

Record Last Updated: 1996-02-14

Quad Summary: ORCUTT (3412074/195C), CASMALIA (3412075/196D)

County Summary: SANTA BARBARA

* SENSITIVE *

Lat/Long:
UTM:
Mapping Precision:
Symbol Type:
Radius:

Township:
Range:
Section: **Qtr:**
Meridian:
Elevation:

Location: *SENSITIVE* Location information suppressed.

Location Detail: Please contact the Calfornia Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.

Ecological: WILLOW RIPARIAN BORDERED BY GRASSLAND TO THE SOUTH, CHAPARRAL TO THE NORTH; RIPARIAN IS NARROW, BUT DENSE WITH PERENNIAL FLOW.

Threat:

General:

Owner/Manager:

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Eucyclogobius newberryi

tidewater goby

Element Code: AFCQN04010

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	**Global:** G3	**CDFG Status:** SC
State: None	**State:** S2S3	

Habitat Associations

General: BRACKISH WATER HABITATS ALONG THE CALIF COAST FROM AGUA HEDIONDA LAGOON, SAN DIEGO CO. TO THE MOUTH OF THE SMITH RIVER.

Micro: FOUND IN SHALLOW LAGOONS AND LOWER STREAM REACHES, THEY NEED FAIRLY STILL BUT NOT STAGNANT WATER & HIGH OXYGEN LEVELS.

Occurrence No. 56 **Map Index:** 13076 **EO Index:** 28525

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SWIFT, C. ET AL 1986 (LIT)

Dates Last Seen
Element: 1996-XX-XX
Site: 1996-XX-XX

Record Last Updated: 1997-11-06

Quad Summary: CASMALIA (3412075/196D)

County Summary: SANTA BARBARA

Lat/Long: 34.84295º / -120.59114º
UTM: Zone-10 N3858273 E720254
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Area: 75.8 ac

Township: 09N
Range: 35W
Section: 20 **Qtr:** XX
Meridian: S
Elevation: 80 ft

Location: SHUMAN CANYON, FROM MOUTH TO 1.0 MILES UPSTREAM, 5 MILES SE OF POINT SAL. VANDENBERG AFB.

Location Detail: SITE OCCUPIES 1.5-2.5 ACRES.

Ecological:

Threat:

General: LACM 36197-1, COLL 11/3/76. POP PRESUMED EXTANT IN 1990 BY SWIFT. LAST COLLECTED IN 1996.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Eucyclogobius newberryi

tidewater goby

Element Code: AFCQN04010

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	**Global:** G3	**CDFG Status:** SC
State: None	**State:** S2S3	

Habitat Associations

General: BRACKISH WATER HABITATS ALONG THE CALIF COAST FROM AGUA HEDIONDA LAGOON, SAN DIEGO CO. TO THE MOUTH OF THE SMITH RIVER.

Micro: FOUND IN SHALLOW LAGOONS AND LOWER STREAM REACHES, THEY NEED FAIRLY STILL BUT NOT STAGNANT WATER & HIGH OXYGEN LEVELS.

Occurrence No. 57 **Map Index:** 12970 **EO Index:** 28523

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SWIFT, C. ET AL 1986 (LIT)

Dates Last Seen
Element: 2001-08-15
Site: 2001-08-15

Record Last Updated: 2002-02-27

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.79008º / -120.61060º
UTM: Zone-10 N3852366 E718614
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Area: 139.3 ac

Township: 08N
Range: 35W
Section: 07 **Qtr:** XX
Meridian: S
Elevation: 10 ft

Location: SAN ANTONIO CREEK, FROM MOUTH TO ALMOST 2 MILES UPSTREAM, SSE POINT SAL, VANDENBERG AFB.

Location Detail: SITE OCCUPIES 5-7.5 ACRES.

Ecological:

Threat:

General: LACM 36200-1, COLL 7/18/75. NO GOBIES FOUND 4/27/84 AT LOMPOC-CASMALIA BRIDGE WHILE NETTING FOR STICKLEBACKS. SWIFT PRESUMED POP EXTANT IN 1990. UNKNOWN NUMBER COLLECTED IN 1995. 8-10 SEEN NEAR ESTUARY IN 2001 DURING RED-LEGGED FROG SURVEY.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Phrynosoma coronatum (frontale)

Coast (California) horned lizard **Element Code:** ARACF12022

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G4T3T4	**CDFG Status:** SC
State: None	**State:** S3S4	

Habitat Associations

General: FREQUENTS A WIDE VARIETY OF HABITATS, MOST COMMON IN LOWLANDS ALONG SANDY WASHES WITH SCATTERED LOW BUSHES.

Micro: OPEN AREAS FOR SUNNING, BUSHES FOR COVER, PATCHES OF LOOSE SOIL FOR BURIAL, & ABUNDANT SUPPLY OF ANTS & OTHER INSECTS.

Occurrence No. 1 **Map Index:** 17293 **EO Index:** 11970

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HUMAN, V. 1990 (LIT)

Dates Last Seen
Element: 1990-XX-XX
Site: 1990-XX-XX

Record Last Updated: 1992-06-16

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.79888º / -120.57038º
UTM: Zone-10 N3853430 E722271
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1 mile

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 240 ft

Location: SAN ANTONIO TERRACE ON VANDENBERG AIR FORCE BASE.

Location Detail: RARE, A LARGE INDIVIDUAL WAS SEEN NEAR THE SOUTH MARGIN OF GOLDFINCH SWALE ON THE DUNE, AND A TINY INDIVIDUAL WAS SEEN ON THE MOST NORTHERLY OF THE DUNE WINDROWS JUST SOUTH OF THE DUCK POND. NONE WERE SEEN DURING BRUSH REMOVAL ACTIVITIES.

Ecological: SAN ANTONIO TERRACE CONSISTS OF ABOUT 6,000 ACRES OF SAND DUNES CONTAINING A WIDE VARIETY OF HABITATS.

Threat:

General: THIS SURVEY WAS CONDUCTED BETWEEN JAN 1988 AND AUG 1990.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Rana aurora draytonii

California red-legged frog **Element Code:** AAABH01022

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	**Global:** G4T2T3	**CDFG Status:** SC
State: None	**State:** S2S3	

Habitat Associations

General: LOWLANDS & FOOTHILLS IN OR NEAR PERMANENT SOURCES OF DEEP WATER WITH DENSE, SHRUBBY OR EMERGENT RIPARIAN VEGETATION.

Micro: REQUIRES 11-20 WEEKS OF PERMANENT WATER FOR LARVAL DEVELOPMENT. MUST HAVE ACCESS TO ESTIVATION HABITAT.

Occurrence No. 36 **Map Index:** 17291 **EO Index:** 12161

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HUMAN, V. 1990 (LIT)

Dates Last Seen
Element: 1997-XX-XX
Site: 1997-XX-XX

Record Last Updated: 2000-07-06

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.80828º / -120.58459º
UTM: Zone-10 N3854442 E720946
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1/5 mile

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 160 ft

Location: ABANDONED MISSLE LAUNCHER AT THE END OF PIKE ROAD, SAN ANTONIO TERRACE ON VANDENBERG AIR FORCE BASE.

Location Detail: 1997: IRP (INSTALLATION RESTORATION PROGRAM) SITE 31. INHABITS THE ABANDONED MISSILE SUMP, POND AND SURROUNDING WETLANDS.

Ecological: SITE IS WITHIN A COMPLEX OF DUNES AND DUNE SWALE PONDS. THE WATER LEVEL OF THE SUMP FELL ABOUT 6 FT BETWEEN 1988 AND 1990.

Threat:

General: 1990: AS MANY AS 4 FROGS SEEN AT ONCE. ONLY A VERY SMALL POP AT THIS SITE. 1997: DAY & NIGHT SURVEYS CONDUCTED, ALMOST ALL OBSERVED AT NIGHT. 74 OBSERVED IN 2 DAYS. FROGS SEEN IN ALL OF THE AREAS IN IRP SITE 31.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Rana aurora draytonii

California red-legged frog **Element Code:** AAABH01022

Status		NDDB Element Ranks		Other Lists	
Federal:	Threatened	**Global:**	G4T2T3	**CDFG Status:**	SC
State:	None	**State:**	S2S3		

Habitat Associations

General: LOWLANDS & FOOTHILLS IN OR NEAR PERMANENT SOURCES OF DEEP WATER WITH DENSE, SHRUBBY OR EMERGENT RIPARIAN VEGETATION.

Micro: REQUIRES 11-20 WEEKS OF PERMANENT WATER FOR LARVAL DEVELOPMENT. MUST HAVE ACCESS TO ESTIVATION HABITAT.

Occurrence No. 392 **Map Index:** 43189 **EO Index:** 43189

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: CHRISTOPHER, S. 1997 (LIT)

Dates Last Seen
Element: 1997-XX-XX
Site: 1997-XX-XX

Record Last Updated: 2000-07-10

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.82271º / -120.55815º
UTM: Zone-10 N3856100 E723326
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 2/5 mile

Township: 09N
Range: 35W
Section: 27 **Qtr:** XX
Meridian: S
Elevation: 440 ft

Location: IRP (INSTALLATION RESTORATION PROGRAM) SITES 32/35 ACCESSED BY EL RANCHO OESTE RD, SAN ANTONIO TERRACE, S OF SHUMAN CR.

Location Detail: RED-LEGGED FROGS FOUND THROUGHOUT SAN ANTONIO TERRACE IN DUNE SWALE PONDS (CHIRSTOPHER 1997), BUT ONLY 3 PLACES MENTIONED IN REPORT FOR SITES 32/35, A SPRING-FED MARSH, A CATTLE TANK, & A CATTLE POND.

Ecological: GRASSLANDS ON SAN ANTIONIO TERRACE WITH MARSH VEGETATION.

Threat:

General: 1997: 13 ADULTS WITH 2 OR MORE SUBADULTS, MANY FROGS HEARD JUMPING BUT NOT ABLE TO IDENTIFY; 1 METAMORPH AND MANY TADPOLES.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Rana aurora draytonii

California red-legged frog **Element Code:** AAABH01022

Status		NDDB Element Ranks		Other Lists	
Federal:	Threatened	**Global:**	G4T2T3	**CDFG Status:**	SC
State:	None	**State:**	S2S3		

Habitat Associations

General: LOWLANDS & FOOTHILLS IN OR NEAR PERMANENT SOURCES OF DEEP WATER WITH DENSE, SHRUBBY OR EMERGENT RIPARIAN VEGETATION.

Micro: REQUIRES 11-20 WEEKS OF PERMANENT WATER FOR LARVAL DEVELOPMENT. MUST HAVE ACCESS TO ESTIVATION HABITAT.

Occurrence No. 491 **Map Index:** 47262 **EO Index:** 47262

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: PAGE, C. 2001 (OBS)

Dates Last Seen
Element: 2001-08-15
Site: 2001-08-15

Record Last Updated: 2002-02-19

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.79340º / -120.61615º
UTM: Zone-10 N3852722 E718097
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Area: 61.4 ac

Township: 08N
Range: 35W
Section: 06 **Qtr:** XX
Meridian: S
Elevation: 40 ft

Location: VANDENBURG AIR FORCE BASE; SAN ANTONIO CREEK FROM SOUTHERN PACIFIC RAILROAD TRACKS TO (NEAR) THE OCEAN.

Location Detail:

Ecological: HABITAT CONSISTS OF RIPARIAN ZONE (DOMINATED BY WILLOW AND POISON OAK) AND AQUATIC ZONE DOMINATED BY DUCKWEED. TIDEWATER GOBIES (8-10) OBSERVED IN VICINITY.

Threat:

General: 15 AUG 2001: 2 ADULTS AND 1 JUVENILE OBSERVED.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Rana aurora draytonii

California red-legged frog **Element Code:** AAABH01022

Status		NDDB Element Ranks		Other Lists	
Federal:	Threatened	**Global:**	G4T2T3	**CDFG Status:**	SC
State:	None	**State:**	S2S3		

Habitat Associations

General: LOWLANDS & FOOTHILLS IN OR NEAR PERMANENT SOURCES OF DEEP WATER WITH DENSE, SHRUBBY OR EMERGENT RIPARIAN VEGETATION.

Micro: REQUIRES 11-20 WEEKS OF PERMANENT WATER FOR LARVAL DEVELOPMENT. MUST HAVE ACCESS TO ESTIVATION HABITAT.

Occurrence No. 551 **Map Index:** 48711 **EO Index:** 48711

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SIEMENS, M. 2002 (OBS)

Dates Last Seen
Element: 2002-05-23
Site: 2002-05-23

Record Last Updated: 2002-09-03

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.84255º / -120.52029º
UTM: Zone-10 N3858386 E726735
Mapping Precision: SPECIFIC
Symbol Type: POINT
Radius: 80 meters

Township: 09N
Range: 35W
Section: 24 **Qtr:** XX
Meridian: S
Elevation: 313 ft

Location: SHUMAN CREEK

Location Detail: FROGS OBSERVED IN POOLS & ON THE BANK.

Ecological: HABITAT CONSISTS OF WILLOW RIPARIAN, DOMINATED BY YOUNG WILLOWS, ALONG AN INTERMITTENT, BLUE-LINE DRAINAGE, WITH COASTAL SCRUB, DOMINATED BY COYOTE BUSH, ENCROACHING FROM THE UPLANDS

Threat: THREATENED BY OIL SUMP REMEDIATION SCHEDULED FOR THE NEAR FUTURE.

General: 2 ADULT FROGS OBSERVED ON 11 APR 2002. 11 FROGS OBSERVED 23 MAY 2002.

Owner/Manager: PVT-UNOCAL

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Rana aurora draytonii

California red-legged frog **Element Code:** AAABH01022

Status		NDDB Element Ranks		Other Lists	
Federal:	Threatened	**Global:**	G4T2T3	**CDFG Status:**	SC
State:	None	**State:**	S2S3		

Habitat Associations

General: LOWLANDS & FOOTHILLS IN OR NEAR PERMANENT SOURCES OF DEEP WATER WITH DENSE, SHRUBBY OR EMERGENT RIPARIAN VEGETATION.

Micro: REQUIRES 11-20 WEEKS OF PERMANENT WATER FOR LARVAL DEVELOPMENT. MUST HAVE ACCESS TO ESTIVATION HABITAT.

Occurrence No. 576 **Map Index:** 48912 **EO Index:** 48912

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: DART, J. 2002 (OBS)

Dates Last Seen
Element: 2002-07-18
Site: 2002-07-18

Record Last Updated: 2002-10-02

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.85444º / -120.52125º
UTM: Zone-10 N3859703 E726614
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1/10 mile

Township: 09N
Range: 35W
Section: 24 **Qtr:** XX
Meridian: S
Elevation: 384 ft

Location: JUST EAST OF BLACK ROAD, IN THE CASMALIA OIL FIELDS, SW OF SANTA MARIA

Location Detail: SITE CONSISTS OF A SCOUR POOL AND A CULVERT AT MILEAGE POST 282.33, LOCATED ON THE UNION PACIFIC RIGHT-OF-WAY, WITHIN THE CASMALIA OIL FIELD PROPERTY.

Ecological: HABITAT CONSISTS OF A SMALL SCOUR POOL AND A CULVERT (ABOUT 5 M UPSTREAM); POOL IS SHADED BY ARROYO WILLOWS (SALIX LASEOLEPIS)

Threat: POSSIBLE THREAT FROM OIL SPILL CONTAMINATION.

General: 4 ADULTS AND 8 JUVENILES OBSERVED ON 18 JUL 2002.

Owner/Manager: PVT-UNION PACIFIC RR

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Rana aurora draytonii

California red-legged frog **Element Code:** AAABH01022

Status		NDDB Element Ranks		Other Lists	
Federal:	Threatened	**Global:**	G4T2T3	**CDFG Status:**	SC
State:	None	**State:**	S2S3		

Habitat Associations

General: LOWLANDS & FOOTHILLS IN OR NEAR PERMANENT SOURCES OF DEEP WATER WITH DENSE, SHRUBBY OR EMERGENT RIPARIAN VEGETATION.

Micro: REQUIRES 11-20 WEEKS OF PERMANENT WATER FOR LARVAL DEVELOPMENT. MUST HAVE ACCESS TO ESTIVATION HABITAT.

Occurrence No. 729 **Map Index:** 54228 **EO Index:** 54228

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: CHRISTOPHER, S. V. 2003 (OBS)

Dates Last Seen
Element: 2003-02-17
Site: 2003-02-17

Record Last Updated: 2004-02-02

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.81726º / -120.59692º
UTM: Zone-10 N3855411 E719793
Mapping Precision: SPECIFIC
Symbol Type: POINT
Radius: 80 meters

Township: 09N
Range: 35W
Section: 32 **Qtr:** XX
Meridian: S
Elevation: 121 ft

Location: SAN ANTONIO TERRACE, ON THE WEST SIDE OF THE RAILROAD TRACKS, VANDENBERG AIR FORCE BASE

Location Detail: S.V. CHRISTOPHER SITE #279

Ecological: HABITAT CONSISTS OF CATTAIL MARSH IN A DUNE SWALE.

Threat: POSSIBLE THREAT FROM PROXIMITY OF RAILROAD.

General: 4 ADULTS HEARD CALLING ON 17 FEB 2003.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Taxidea taxus

American badger **Element Code:** AMAJF04010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G5	**CDFG Status:** SC
State: None	**State:** S4	

Habitat Associations

General: MOST ABUNDANT IN DRIER OPEN STAGES OF MOST SHRUB, FOREST, AND HERBACEOUS HABITATS, WITH FRIABLE SOILS.

Micro: NEED SUFFICIENT FOOD, FRIABLE SOILS & OPEN, UNCULTIVATED GROUND. PREY ON BURROWING RODENTS. DIG BURROWS.

Occurrence No. 1 **Map Index:** 17294 **EO Index:** 11969

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HUMAN, V. 1990 (LIT)

Element: 1990-XX-XX
Site: 1990-XX-XX

Record Last Updated: 1992-06-16

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.80352º / -120.56588º
UTM: Zone-10 N3853955 E722670
Mapping Precision: SPECIFIC
Symbol Type: POINT
Radius: 80 meters

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 240 ft

Location: SAN ANTONIO TERRACE ON VANDENBERG AIR FORCE BASE.

Location Detail: DEN FOUND NEAR SOUTH EDGE OF WILD BOAR WETLAND.

Ecological: MICE, VOLES AND KANGAROO RATS ARE PRINCIPAL PREY ITEMS. SAN ANTONIO TERRACE CONSISTS OF ABOUT 6,000 ACRES OF SAND DUNES CONTAINING A VARIETY OF HABITATS AND A DIVERSITY OF SPECIES.

Threat:

General: THIS SURVEY WAS DONE BETWEEN JAN 1988 AND AUG 1990.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Taxidea taxus

American badger **Element Code:** AMAJF04010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G5	**CDFG Status:** SC
State: None	**State:** S4	

Habitat Associations

General: MOST ABUNDANT IN DRIER OPEN STAGES OF MOST SHRUB, FOREST, AND HERBACEOUS HABITATS, WITH FRIABLE SOILS.

Micro: NEED SUFFICIENT FOOD, FRIABLE SOILS & OPEN, UNCULTIVATED GROUND. PREY ON BURROWING RODENTS. DIG BURROWS.

Occurrence No. 2 **Map Index:** 17295 **EO Index:** 11968

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HUMAN, V. 1990 (LIT)

Element: 1990-XX-XX
Site: 1990-XX-XX

Record Last Updated: 1992-06-16

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.81472º / -120.57609º
UTM: Zone-10 N3855175 E721706
Mapping Precision: SPECIFIC
Symbol Type: POINT
Radius: 80 meters

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 240 ft

Location: SAN ANTONIO TERRACE ON VANDENBERG AIR FORCE BASE.

Location Detail: A DEN SITE AND MUCH DIGGING AROUND LOTUS WETLAND.

Ecological: MICE, VOLES AND KANGAROO RATS ARE PRINCIPAL PREY.

Threat:

General: THIS SURVEY WAS DONE BETWEEN JAN 1988 AND AUG 1990.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Taxidea taxus

American badger **Element Code:** AMAJF04010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G5	**CDFG Status:** SC
State: None	**State:** S4	

Habitat Associations

General: MOST ABUNDANT IN DRIER OPEN STAGES OF MOST SHRUB, FOREST, AND HERBACEOUS HABITATS, WITH FRIABLE SOILS.

Micro: NEED SUFFICIENT FOOD, FRIABLE SOILS & OPEN, UNCULTIVATED GROUND. PREY ON BURROWING RODENTS. DIG BURROWS.

Occurrence No. 3 **Map Index:** 17298 **EO Index:** 11965

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HUMAN, V. 1990 (LIT)

Element: 1990-XX-XX
Site: 1990-XX-XX

Record Last Updated: 1994-05-26

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.80358° / -120.59781°
UTM: Zone-10 N3853891 E719749
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1/5 mile

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 160 ft

Location: SAN ANTONIO TERRACE ON VANDENBERG AIR FORCE BASE.

Location Detail: A DEN AND DIGGINGS WERE FOUND BY ABANDONED ANTENNA PAD NEAR THE WEST END OF PERIGEE ROAD.

Ecological: VOLES, MICE AND KANGAROO RATS ARE PRINCIPAL PREY ITEMS. SAN ANTONIO TERRACE CONSISTS OF ABOUT 6,000 ACRES OF SAND DUNES CONTAINING A VARIETY OF HABITATS AND A DIVERSITY OF SPECIES.

Threat:

General: THIS SURVEY WAS DONE BETWEEN JAN 1988 AND AUG 1990.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Taxidea taxus

American badger **Element Code:** AMAJF04010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G5	**CDFG Status:** SC
State: None	**State:** S4	

Habitat Associations

General: MOST ABUNDANT IN DRIER OPEN STAGES OF MOST SHRUB, FOREST, AND HERBACEOUS HABITATS, WITH FRIABLE SOILS.

Micro: NEED SUFFICIENT FOOD, FRIABLE SOILS & OPEN, UNCULTIVATED GROUND. PREY ON BURROWING RODENTS. DIG BURROWS.

Occurrence No. 4 **Map Index:** 17299 **EO Index:** 11964

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HUMAN, V. 1990 (LIT)

Element: 1990-XX-XX
Site: 1990-XX-XX

Record Last Updated: 1992-06-16

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.80403° / -120.57901°
UTM: Zone-10 N3853982 E721467
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1/5 mile

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 200 ft

Location: SAN ANTONIO TERRACE ON VANDENBERG AIR FORCE BASE.

Location Detail: ONE INDIVIDUAL WAS SEEN IN A DEN JUST SOUTH OF ENCELADUS ROAD NEAR GOLDEN EYES SWALE.

Ecological: MICE, VOLES AND KANGAROO RATS ARE MAJOR PREY ITEMS. SAN ANTONIO TERRACE CONSISTS OF ABOUT 6,000 ACRES OF SAND DUNES CONTAINING A VARIETY OF HABITATS AND A DIVERSITY OF SPECIES.

Threat:

General: THIS SURVEY WAS DONE BETWEEN JAN 1988 AND AUG 1990.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Taxidea taxus

American badger **Element Code:** AMAJF04010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G5	**CDFG Status:** SC
State: None	**State:** S4	

Habitat Associations

General: MOST ABUNDANT IN DRIER OPEN STAGES OF MOST SHRUB, FOREST, AND HERBACEOUS HABITATS, WITH FRIABLE SOILS.

Micro: NEED SUFFICIENT FOOD, FRIABLE SOILS & OPEN, UNCULTIVATED GROUND. PREY ON BURROWING RODENTS. DIG BURROWS.

Occurrence No. 109 **Map Index:** 56685 **EO Index:** 56701

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: RAWLINSON, D. 1989 (OBS)

Dates Last Seen
Element: 1989-08-29
Site: 1989-08-29

Record Last Updated: 2004-09-09

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.87553º / -120.51439º
UTM: Zone-10 N3862059 E727183
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 2/5 mile

Township: 09N
Range: 35W
Section: 12 **Qtr:** XX
Meridian: S
Elevation: 400 ft

Location: BLACK ROAD, 3 MILES NORTH OF CASMALIA.

Location Detail: LOCATION GIVEN AS BLACK RD, 3 MI E CASMALIA. MAPPED ALONG BLACK RD 3 MILES NORTH FROM CASMALIA.

Ecological: RANCH LANDS - ROLLING HILLS.

Threat:

General: ROAD KILL OBSERVED ON 29 AUG 1989.

Owner/Manager: UNKNOWN

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Taxidea taxus

American badger **Element Code:** AMAJF04010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G5	**CDFG Status:** SC
State: None	**State:** S4	

Habitat Associations

General: MOST ABUNDANT IN DRIER OPEN STAGES OF MOST SHRUB, FOREST, AND HERBACEOUS HABITATS, WITH FRIABLE SOILS.

Micro: NEED SUFFICIENT FOOD, FRIABLE SOILS & OPEN, UNCULTIVATED GROUND. PREY ON BURROWING RODENTS. DIG BURROWS.

Occurrence No. 113 **Map Index:** 56728 **EO Index:** 56744

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: RAWLINSON, D. 1987 (OBS)

Dates Last Seen
Element: 1987-07-19
Site: 1987-07-19

Record Last Updated: 2004-09-13

Quad Summary: ORCUTT (3412074/195C), CASMALIA (3412075/196D)

County Summary: SANTA BARBARA

Lat/Long: 34.77501º / -120.49111º
UTM: Zone-10 N3850961 E729590
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 3/5 mile

Township: 08N
Range: 34W
Section: 17 **Qtr:** XX
Meridian: S
Elevation: 240 ft

Location: HIGHWAY 1 AT JUNCTION WITH SAN ANTONIO ROAD, BETWEEN SANTA MARIA AND VANDENBERG AFB.

Location Detail: MAPPED TO INCLUDE AREA WHERE SAN ANTONIO ROAD INTERSECTS HWY 1 (VANDENBERG ROAD).

Ecological: SURROUNDING AREA IS OAK WOODLAND.

Threat:

General: ROAD KILL OBSERVED ON 19 JUL 1987.

Owner/Manager: UNKNOWN

Appendix 5

Federal Status, State Status, CDFG Status (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Thamnophis hammondii

two-striped garter snake

Element Code: ARADB36160

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G3	**CDFG Status:** SC
State: None	**State:** S2	

Habitat Associations

General: COASTAL CALIFORNIA FROM VICINITY OF SALINAS TO NORTHWEST BAJA CALIFORNIA. FROM SEA TO ABOUT 7,000 FT ELEVATION.

Micro: HIGHLY AQUATIC, FOUND IN OR NEAR PERMANENT FRESH WATER. OFTEN ALONG STREAMS WITH ROCKY BEDS AND RIPARIAN GROWTH.

Occurrence No. 26 **Map Index:** 33137 **EO Index:** 12773

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SWEET, S. 1988 (PERS)

Dates Last Seen
Element: 1988-04-16
Site: 1988-04-16

Record Last Updated: 1995-11-14

Quad Summary: CASMALIA (3412075/196D)

County Summary: SANTA BARBARA

Lat/Long: 34.78482º / -120.59322º
UTM: Zone-10 N3851820 E720218
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 2/5 mile

Township: 08N
Range: 35W
Section: XX **Qtr:** XX
Meridian: S
Elevation: 45 ft

Location: NORTH EDGE OF SAN ANTONIO CREEK, SOUTHWEST OF MOD III POND, VANDENBERG AFB.
Location Detail:
Ecological:
Threat:
General: UCSB SPECIMEN #30246, COLLECTED ON 16 APRIL 1988.
Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Aphanisma blitoides

aphanisma

Element Code: PDCHE02010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S1.1	**R-E-D Code:** 2-2-2

Habitat Associations

General: COASTAL BLUFF SCRUB, COASTAL DUNES, COASTAL SCRUB.

Micro: ON BLUFFS AND SLOPES NEAR THE OCEAN IN SANDY OR CLAY SOILS. IN STEEP DECLINE ON THE ISLANDS AND THE MAINLAND. 1-305M.

Occurrence No. 7 **Map Index:** 17567 **EO Index:** 10035

Dates Last Seen

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: PARIKH, A. & N. GALE 1998 (OBS)

Element: 1998-05-10
Site: 1998-05-10
Record Last Updated: 1998-07-06

Quad Summary: CASMALIA (3412075/196D)

County Summary: SANTA BARBARA

Lat/Long: 34.86812º / -120.61850º
UTM: Zone-10 N3861005 E717685
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Area: 0.9 ac

Township: 09N
Range: 35W
Section: 18 **Qtr:** XX
Meridian: S
Elevation: 100 ft

Location: HEADLANDS NEAR LION'S HEAD, S OF POINT SAL.

Location Detail: SOUTH OF PT. SAL ROAD.

Ecological: IN COASTAL BLUFF SCRUB ON STEEP ROCKY CLIFF FACE ABOVE THE OCEAN. MANY NONNATIVE PLANTS HERE: MESEMBRYANTHEMUM CRYSTALLINUM, CARPOBROTUS EDULIS, SONCHUS ASPER, AND BROMUS DIANDRUS.

Threat: SEVERE DEGRADATION OF HABITAT BY NONNATIVE PLANTS, ESPECIALLY MESEMBRYANTHEMUM CRYSTALLINUM.

General: 20 PLANTS IN 1998.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Arctostaphylos purissima

La Purisima manzanita

Element Code: PDERI041A0

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2?	**CNPS List:** 1B
State: None	**State:** S2?	**R-E-D Code:** 2-3-3

Habitat Associations

General: CHAPARRAL.

Micro: SANDSTONE OUTCROPS, SANDY SOIL. 120-300M.

Occurrence No. 9 **Map Index:** 13330 **EO Index:** 29719

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: NICHOLS, R. 1989 (OBS)

Dates Last Seen
Element: 1996-10-02
Site: 1996-10-02

Record Last Updated: 1999-01-07

Quad Summary: LOMPOC (3412064/170B), SURF (3412065/171A), CASMALIA (3412075/196D)

County Summary: SANTA BARBARA

Lat/Long: 34.71411° / -120.50541°
UTM: Zone-10 N3844173 E728450
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Area: 11,061.5 ac

Township: 07N
Range: 34W
Section: XX **Qtr:** XX
Meridian: S
Elevation: 500 ft

Location: 3.0-5.5 MILES N OF LOMPOC, FROM THE VICINITY OF MISSION LA PURISIMA, W TO VANDENBERG AFB (NEAR SPRR), N TO BURTON MESA.

Location Detail: MAPPED TOGETHER WITH ARCTOSTAPHYLOS RUDIS AS SEVERAL NON-SPECIFIC POLYGONS ON THE LOMPOC, SURF, AND CASMALIA QUADS. THIS EO COVERS A HUGE AREA; THE ONLY WAY TO DESCRIBE ITS LOCATION IS TO GET THE MAP OVERLAY.

Ecological: BURTON MESA MARITIME CHAPARRAL, ON ORCUTT SAND. WITH ARCTOSTAPHYLOS RUDIS, ERICAMERIA ERICOIDES, ARTEMISIA CALIFORNICA, ADENOSTOMA FASCICULATUM, Q. AGRIFOLIA, SALVIA MELLIFERA, CORETHROGYNE FILAGINIFOLIA, HORKELIA CUNEATA, LOTUS SCOPARIUS.

Threat: TRAILS, AND FIREBREAKS HAVE FRAGMENTED MUCH OF THE HABITAT IN THIS AREA. NONNATIVE PLANTS AND DEVELOPMENT ALSO THREATEN.

General: MAPPED BASED ON ASSOCIATION OF THIS SPECIES W/PREVIOUSLY IDENTIFIED STANDS OF ARCTOSTAPHYLOS RUDIS &CENTRAL MARITIME CHAPARRAL. ACTUAL EXTENT OF A. PURISSIMA IN THIS AREA IS UNKNOWN. 10 PLANTS N OF MISSION STATE HISTORICAL MONUMENT IN 1996.

Owner/Manager: DOD-VAFB, PVT, DPR

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Arctostaphylos purissima

La Purisima manzanita

Element Code: PDERI041A0

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2?	**CNPS List:** 1B
State: None	**State:** S2?	**R-E-D Code:** 2-3-3

Habitat Associations

General: CHAPARRAL.

Micro: SANDSTONE OUTCROPS, SANDY SOIL. 120-300M.

Occurrence No. 10 **Map Index:** 13140 **EO Index:** 8669

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: NICHOLS, R. 1989 (OBS)

Dates Last Seen
Element: 1989-04-04
Site: 1989-04-04
Record Last Updated: 1996-11-19

Quad Summary: CASMALIA (3412075/196D)

County Summary: SANTA BARBARA

Lat/Long: 34.81525º / -120.53479º
UTM: Zone-10 N3855325 E725483
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Area: 950.2 ac

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 500 ft

Location: VANDENBERG AFB, ABOUT 2 MI SW TO 3 MI S OF CASMALIA. BOTH SIDES OF LOMPOC-CASMALIA HIGHWAY.

Location Detail: MAPPED FROM ANTONIO SIDING ALONG SPRR EAST TO LOMPOC-CASMALIA ROAD AND SOUTH ABOUT 2 MILES.

Ecological: 200-800 FEET ELEVATION. ASSOCIATED WITH ARCTOSTAPHYLOS PURISIMA, SALVIA MELLIFERA, ADENOSTOMA FASCICULATUM, ERICAMERIA ERICOIDES, ARTEMISIA CALIFORNICA, BACCHARIS PILULARIS CONSANGUINEA, RHAMNUS CALIFORNICA, AND QUERCUS AGRIFOLIA.

Threat: MILITARY ACTIVITIES AND FIRE CONTROL ACTIVITIES COULD THREATEN.

General: EXACT EXTENT OF THIS POPULATION UNKNOWN. OCCURRENCE BASED ON REPORTED ASSOCIATION OF THIS SPECIES WITH KNOWN STAND OF ARCTOSTAPHYLOS RUDIS.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Arctostaphylos rudis

sand mesa manzanita

Element Code: PDERI041E0

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: CHAPARRAL, COASTAL SCRUB.

Micro: ON SANDY SOILS IN LOMPOC/NIPOMO AREA. 25-230M.

Occurrence No. 1 **Map Index:** 13330 **EO Index:** 29720

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: NICHOLS, R. 1989 (OBS)

Dates Last Seen
Element: 1996-10-02
Site: 1996-10-02
Record Last Updated: 1996-11-07

Quad Summary: LOMPOC (3412064/170B), SURF (3412065/171A), CASMALIA (3412075/196D)

County Summary: SANTA BARBARA

Lat/Long: 34.71411° / -120.50541°
UTM: Zone-10 N3844173 E728450
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Area: 11,061.5 ac

Township: 07N
Range: 34W
Section: XX **Qtr:** XX
Meridian: S
Elevation: 500 ft

Location: 3.0-5.5 MILES N OF LOMPOC, FROM THE VICINITY OF MISSION LA PURISIMA, W TO VANDENBERG AFB (NEAR SPRR), N TO BURTON MESA.

Location Detail: MAPPED AS SEVERAL NON-SPECIFIC POLYGONS ON THE LOMPOC, SURF, AND CASMALIA QUADS. THIS EO COVERS A HUGE AREA; THE ONLY WAY TO DESCRIBE ITS LOCATION IS TO GET THE MAP OVERLAY.

Ecological: BURTON MESA MARITIME CHAPARRAL, ON ORCUTT SAND. W/ARCTOSTAPHYLOS PURISSIMA, ERICAMERIA ERICOIDES, ARTEMISIA CALIFORNICA, ADENOSTOMA FASCICULATUM, Q. AGRIFOLIA, SALVIA MELLIFERA, CORETHROGYNE FILAGINIFOLIA, HORKELIA CUNEATA, LOTUS SCOPARIUS.

Threat: DEVELOPMENT & NONNATIVE PLANTS THREATEN. ROADS, TRAILS, AND FIREBREAKS HAVE FRAGMENTED MUCH OF THE HABITAT IN THIS AREA.

General: AT LEAST 58000 PLANTS ESTIMATED BETWEEN 1988 AND 1989. INCLUDES FORMER OCCURRENCES 2, 3, 12, 13, 14, 21, & 23.

Owner/Manager: DOD-VAFB, PVT, DPR

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Arctostaphylos rudis

sand mesa manzanita

Element Code: PDERI041E0

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: CHAPARRAL, COASTAL SCRUB.

Micro: ON SANDY SOILS IN LOMPOC/NIPOMO AREA. 25-230M.

Occurrence No. 7 **Map Index:** 13140 **EO Index:** 29775

Dates Last Seen

Occ Rank: Good
Element: 1989-04-04
Origin: Natural/Native occurrence
Site: 1989-04-04
Presence: Presumed Extant
Trend: Unknown
Record Last Updated: 1996-11-13
Main Source: NICHOLS, R. 1989 (OBS)

Quad Summary: CASMALIA (3412075/196D)

County Summary: SANTA BARBARA

Lat/Long: 34.81525º / -120.53479º
UTM: Zone-10 N3855325 E725483
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Area: 950.2 ac

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 500 ft

Location: VANDENBERG AFB, ABOUT 2 MILES SOUTHWEST TO 3 MILES SOUTH OF CASMALIA; BOTH SIDES OF LOMPOC-CASMALIA HIGHWAY.

Location Detail:

Ecological: 200-800 FEET ELEVATION. ASSOCIATED WITH ARCTOSTAPHYLOS PURISIMA, SALVIA MELLIFERA, ADENOSTOMA FASCICULATUM, ERICAMERIA ERICOIDES, ARTEMISIA CALIFORNICA, BACCHARIS PILULARIS CONSANGUINEA, RHAMNUS CALIFORNICA, AND QUERCUS AGRIFOLIA.

Threat: MILITARY ACTIVITIES AND FIRE CONTROL ACTIVITIES COULD THREATEN.

General: 7500 PLANTS ESTIMATED IN 1989. OCCURRENCE PROBABLY INCLUDES A 1940 COLLECTION FROM "NEAR MARSHALIA" (EASTWOOD SN CAS).

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Arctostaphylos rudis

sand mesa manzanita

Element Code: PDERI041E0

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: CHAPARRAL, COASTAL SCRUB.

Micro: ON SANDY SOILS IN LOMPOC/NIPOMO AREA. 25-230M.

Occurrence No. 11 **Map Index:** 12984 **EO Index:** 20121

Occ Rank: None
Origin: Natural/Native occurrence
Presence: Extirpated
Trend: Unknown
Main Source: EDWARDS, J. 1981 (PERS)

Dates Last Seen
Element: XXXX-XX-XX
Site: XXXX-XX-XX

Record Last Updated: 1989-08-11

Quad Summary: SURF (3412065/171A), CASMALIA (3412075/196D)

County Summary: SANTA BARBARA

Lat/Long: 34.75080º / -120.60295º
UTM: Zone-10 N3848025 E719418
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1/5 mile

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 240 ft

Location: VANDENBERG AFB., AT END OF LANDING FACILITY V-17 FOR VANDENBERG SPACE SHUTTLE PROGRAM.
Location Detail:
Ecological:
Threat:
General: SCHEDULED FOR REMOVAL PRIOR TO CONSTRUCTION OF SPACE SHUTTLE LANDING STRIP IN 1981.
Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Chorizanthe rectispina

straight-awned spineflower

Element Code: PDPGN040N0

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G1	**CNPS List:** 1B
State: None	**State:** S1.2	**R-E-D Code:** 3-1-3

Habitat Associations

General: CHAPARRAL, CISMONTANE WOODLAND, COASTAL SCRUB.

Micro: OFTEN ON GRANITE IN CHAPARRAL. 355-1035M.

Occurrence No. 12 **Map Index:** 39831 **EO Index:** 34833

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HENDRICKSON, B. 1991 (OBS)

Dates Last Seen
Element: 1991-05-13
Site: 1991-05-13
Record Last Updated: 1998-09-28

Quad Summary: CASMALIA (3412075/196D)

County Summary: SANTA BARBARA

Lat/Long: 34.83277° / -120.52721°
UTM: Zone-10 N3857286 E726129
Mapping Precision: SPECIFIC
Symbol Type: POINT
Radius: 80 meters

Township: 09N
Range: 35W
Section: 25 **Qtr:** XX
Meridian: S
Elevation: 520 ft

Location: EAST OF LOMPOC-CASMALIA ROAD 0.4 MILES SOUTHEAST OF CASMALIA, VANDENBERG AFB.

Location Detail: ALONG RIDGE EAST OF ROAD, ABOUT 0.3 MILE SOUTH OF RR CROSSING.

Ecological: BARE ROCKY SOIL ALONG THE EDGE OF THE RIDGETOP IN COASTAL SCRUB VEGETATION.

Threat:

General: 25 PLANTS OBSERVED IN 1991. NO GRAZING OR THREATS NOTED AT THIS SITE IN 1991.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Cirsium rhothophilum

Surf thistle

Element Code: PDAST2E2J0

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: Threatened	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: COASTAL DUNES, COASTAL BLUFF SCRUB.

Micro: OPEN AREAS IN CENTRAL DUNE SCRUB; USUALLY IN COASTAL DUNES. 3-60M.

Occurrence No. 8 **Map Index:** 12955 **EO Index:** 4187

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: ZEDLER, P. 1979 (LIT)

Dates Last Seen
Element: 1989-04-15
Site: 1989-04-15
Record Last Updated: 1994-12-16

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.80027° / -120.61954°
UTM: Zone-10 N3853476 E717769
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Area: 723.7 ac

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 20 ft

Location: ALONG BEACH SW OF CASMALIA, FROM SCHUMANN CREEK SOUTH TO PURISIMA POINT, VANDENBERG AIR FORCE BASE.

Location Detail:

Ecological: ON SMALL TRANSVERSE SAND RIDGES IN FOREDUNES. WITH HAZARDIA SQUARROSA, ERIOGONUM PARVIFOLIUM, ERICAMERIA ERICOIDES, CALYSTEGIA SOLDANELLA, ERIASTRUM STAECHADIFOLIUM, MALACOTHRIX INCANA, ABRONIA LATIFOLIA, A. MARITIMA, DITHYREA MARITIMA.

Threat: SOME DISTURBANCE BY FOOT OR VEHICULAR TRAFFIC TO PLANTS IN SOUTHERN HALF OF POLYGON IN 1986.

General: 3500 PLANTS ESTIMATED IN 1986; THIS IS THE LARGEST OCCURRENCE ON THE MOST PRISTINE DUNES.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Cordylanthus rigidus ssp. littoralis

seaside bird's-beak

Element Code: PDSCR0J0P2

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G5T1	**CNPS List:** 1B
State: Endangered	**State:** S1.1	**R-E-D Code:** 2-3-3

Habitat Associations

General: CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL, CISMONTANE WOODLAND, COASTAL SCRUB, COASTAL DUNES.

Micro: SANDY, OFTEN DISTURBED SITES, USUALLY WITHIN CHAPARRAL OR COASTAL SCRUB. 0-215M.

Occurrence No. 25 **Map Index:** 24865 **EO Index:** 6786

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HENDRICKSON, B. 1989 (OBS)

Dates Last Seen
Element: 1989-06-23
Site: 1989-06-23
Record Last Updated: 1993-12-14

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.76130º / -120.51748º
UTM: Zone-10 N3849380 E727215
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1/5 mile

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 500 ft

Location: 0.8 MI N OF VANDENBERG AFB MAIN GATE; ABOUT 1000 FT W OF HWY 1.

Location Detail:

Ecological: RECENT BURN SITE (WITHIN 5 YEARS). OPEN BURTON MESA CHAPARRAL/OAK WOODLAND DOMINATED BY ADENOSTOMA AND RHAMNUS CALIFORNICA. IN SANDY SOIL ALONG OLD FIREBREAK.

Threat: WAS SURVEYED IN 1989 BECAUSE SITE WAS ON AN ALTERNATE ROUTE OF PROPOSED COASTAL AQUEDUCT.

General: OVER 100 PLANTS IN 1989.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Deinandra increscens ssp. villosa

Gaviota tarplant

Element Code: PDAST4R0U3

Status		NDDB Element Ranks		Other Lists	
Federal:	Endangered	**Global:**	G4G5T1	**CNPS List:**	1B
State:	Endangered	**State:**	S1.1	**R-E-D Code:**	3-3-3

Habitat Associations

General: COASTAL SCRUB, VALLEY AND FOOTHILL GRASSLAND, COASTAL BLUFF SCRUB.

Micro: KNOWN FROM COASTAL TERRACE NEAR GAVIOTA; SANDY BLOWOUTS AMID SANDY LOAM SOIL; GRASSLAND/COSCR ECOTONE. 35-430M.

Occurrence No. 5 **Map Index:** 39081 **EO Index:** 34088

Dates Last Seen

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: PARIKH, A. & N. GALE 1998 (OBS)

Element: 1998-05-08
Site: 1998-05-08
Record Last Updated: 1998-07-06

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.87506° / -120.62741°
UTM: Zone-10 N3861756 E716852
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Area: 4.9 ac

Township: 09N
Range: 36W
Section: 12 **Qtr:** SW
Meridian: S
Elevation: 100 ft

Location: VANDENBERG AFB; ABOUT 0.65-0.8 MI NW OF LIONS HEAD, ALONG BOTH SIDES OF PT. SAL ROAD.

Location Detail: TWO COLONIES MAPPED.

Ecological: ON COASTAL BLUFF GROWING ON A ROCKY STEEP FACE WITH NASSELLA PULCHRA, AVENA FATUA, ENCELIA CALIFORNICA. ON SERPENTINE OUTCROPS AND SOILS. ANOTHER RARE PLANT ALSO HERE: DUDLEYA BLOCHMANIAE BLOCHMANIAE.

Threat: ROAD REPAIR ACTIVITIES, ROCK SLIDES, AND EROSION ARE POTENTIAL THREATS.

General: 580 PLANTS ESTIMATED IN 1998.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Delphinium parryi ssp. blochmaniae

dune larkspur

Element Code: PDRAN0B1B1

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G4T2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 3-2-3

Habitat Associations

General: CHAPARRAL, COASTAL DUNES (MARITIME).

Micro: ON ROCKY AREAS AND DUNES. 30-375M.

Occurrence No. 6 **Map Index:** 28614 **EO Index:** 15179

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HENDRICKSON, B. 1991 (OBS)

Dates Last Seen
Element: 1991-05-17
Site: 1991-05-17
Record Last Updated: 1996-12-17

Quad Summary: CASMALIA (3412075/196D)

County Summary: SANTA BARBARA

Lat/Long: 34.81524° / -120.51592°
UTM: Zone-10 N3855367 E727209
Mapping Precision: SPECIFIC
Symbol Type: POINT
Radius: 80 meters

Township: 09N
Range: 34W
Section: XX **Qtr:** XX
Meridian: S
Elevation: 550 ft

Location: VANDENBERG AIR FORCE BASE, ABOUT 0.5 MILE EAST OF LOMPOC-CASMALIA ROAD AND 2 MILES SSE OF CASMALIA.

Location Detail:

Ecological: COASTAL SCRUB ON GENTLE SOUTH-FACING SLOPE WITH SANDY SOIL. ASSOCIATED WITH ARTEMISIA CALIFORNICA, BROMUS DIANDRUS, AND B. RUBENS. SITE IS WEEDY.

Threat: INVASION BY EHRHARTA CALYCINA THREATENS HABITAT. COASTAL AQUADUCT ROUTE EXTENSION RUNS THROUGH THIS AREA.

General: 1 PLANT OBSERVED IN 1991. HISTORIC COLLECTION BY J. TUCKER #313 UC FROM "MESA BETWEEN CASMALIA AND SAN ANTONIO CANYON" FROM THIS VICINITY.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Dithyrea maritima

beach spectaclepod

Element Code: PDBRA10020

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: Threatened	**State:** S2.1	**R-E-D Code:** 3-3-2

Habitat Associations

General: COASTAL DUNES, COASTAL SCRUB. FORMERLY MORE WIDESPREAD IN COASTAL HABITATS IN SO. CALIF.

Micro: SEA SHORES, ON SAND DUNES, AND SANDY PLACES NEAR THE SHORE. 3-50M.

Occurrence No. 9 **Map Index:** 40193 **EO Index:** 35195

Dates Last Seen

Occ Rank: Unknown
Element: 1906-07-03
Origin: Natural/Native occurrence
Site: 1906-07-03
Presence: Presumed Extant
Trend: Unknown
Record Last Updated: 1998-11-17
Main Source: EASTWOOD, A. #705 CAS (HERB)

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.83606° / -120.59757°
UTM: Zone-10 N3857494 E719684
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1 mile

Township: 09N
Range: 35W
Section: 20 **Qtr:** XX
Meridian: S
Elevation: 40 ft

Location: CASMALIA SANDS.

Location Detail: EXACT LOCATION NOT KNOWN; MAPPED NEAR THE BEACHES WEST OF CASMALIA.

Ecological:

Threat:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1906 COLLECTION BY EASTWOOD.

Owner/Manager: UNKNOWN

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Dithyrea maritima

beach spectaclepod

Element Code: PDBRA10020

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: Threatened	**State:** S2.1	**R-E-D Code:** 3-3-2

Habitat Associations

General: COASTAL DUNES, COASTAL SCRUB. FORMERLY MORE WIDESPREAD IN COASTAL HABITATS IN SO. CALIF.

Micro: SEA SHORES, ON SAND DUNES, AND SANDY PLACES NEAR THE SHORE. 3-50M.

Occurrence No. 16 **Map Index:** 17009 **EO Index:** 3627

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: BITTMAN, R. 1989 (OBS)

Dates Last Seen
Element: 1998-07-24
Site: 1998-07-24

Record Last Updated: 2002-05-14

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.80009º / -120.61985º
UTM: Zone-10 N3853456 E717741
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Area: 37.8 ac

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 80 ft

Location: NORTH SIDE OF MOUTH OF SAN ANTONIO CREEK.

Location Detail:

Ecological: SHIFTING & STABILIZED COASTAL DUNES WITH CIRSIUM RHOTHOPHILUM, MALACOTHRIX INCANA, ATRIPLEX CALIFORNICA, CALYSTEGIA SOLDANELLA, ERICAMERIA ERICOIDES, LUPINUS, CAKIILE MARITIMA, ABRONIA, CARPOBROTUS, SENECIO BLOCHMANIAE, & CAMISSONIA.

Threat: SIGNS OF INSECT PREDATION IN 1989, SUBSTANTIAL HERBIVORY BY WEEVILS.

General: UNKNOWN HOW MANY PLANTS SEEN IN 1989, LESS THAN 500 RAMETS IN 1998.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Dithyrea maritima

beach spectaclepod

Element Code: PDBRA10020

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: Threatened	**State:** S2.1	**R-E-D Code:** 3-3-2

Habitat Associations

General: COASTAL DUNES, COASTAL SCRUB. FORMERLY MORE WIDESPREAD IN COASTAL HABITATS IN SO. CALIF.

Micro: SEA SHORES, ON SAND DUNES, AND SANDY PLACES NEAR THE SHORE. 3-50M.

Occurrence No. 18 **Map Index:** 12862 **EO Index:** 20542

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: ROYE, C. 1985 (OBS)

Element: 1985-03-18
Site: 1985-03-18
Record Last Updated: 1989-08-11

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.75637º / -120.63462º
UTM: Zone-10 N3848574 E716504
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1/5 mile

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 20 ft

Location: DUNES NEAR PURISIMA POINT, VANDENBERG AIR FORCE BASE.

Location Detail:

Ecological: IN FOREDUNE AREA ASSOCIATED EITH CIRSIUM RHOTHOPHILUM, ABRONIA SPP., CONVOLVULUS SOLDANELLA, AND CARPOBROTUS.

Threat:

General: DUNES FENCED.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Dudleya blochmaniae ssp. blochmaniae

Blochman's dudleya

Element Code: PDCRA04051

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2T2	**CNPS List:** 1B
State: None	**State:** S2.1	**R-E-D Code:** 2-3-2

Habitat Associations

General: COASTAL SCRUB, COASTAL BLUFF SCRUB, VALLEY AND FOOTHILL GRASSLAND.

Micro: OPEN, ROCKY SLOPES; OFTEN IN SHALLOW CLAYS OVER SERPENTINE OR IN ROCKY AREAS W/LITTLE SOIL. 5-450M.

Occurrence No. 27 **Map Index:** 39081 **EO Index:** 34089

Dates Last Seen

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: PARIKH, A. & N. GALE 1998 (OBS)

Element: 1998-05-08
Site: 1998-05-08
Record Last Updated: 1998-07-06

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.87506° / -120.62741°
UTM: Zone-10 N3861756 E716852
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Area: 4.9 ac

Township: 09N
Range: 36W
Section: 12 **Qtr:** SW
Meridian: S
Elevation: 100 ft

Location: VANDENBERG AFB; FROM ABOUT 0.65-0.8 MI NW OF LIONS HEAD, ALONG BOTH SIDES OF PT. SAL ROAD.

Location Detail: TWO COLONIES MAPPED.

Ecological: ON OPEN GROUND, COASTAL BLUFF TERRACE, WITH CLAYEY SOILS, GENTLE SLOPES. SERPENTINE-DERIVED SOILS IN THE AREA. WITH CALOCHORTUS ARGILLOSUS, SISYRHINCHIUM BELLUM, & SIDALCEA MALVIFLORA. ANOTHER RARE PLANT HERE: HEMIZONIA INCRESCENS VILLOSA.

Threat: ROAD REPAIR ACTIVITIES AND DRAINAGE IMPROVEMENTS COULD THREATEN.

General: 200 PLANTS ESTIMATED IN 1998.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Erigeron blochmaniae

Blochman's leafy daisy

Element Code: PDAST3M5J0

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: COASTAL DUNES.

Micro: SAND DUNES AND HILLS. 3-185M.

Occurrence No. 2 **Map Index:** 28628 **EO Index:** 29934

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HOWALD, A. 1981 (PERS)

Dates Last Seen
Element: 1979-XX-XX
Site: 1979-XX-XX

Record Last Updated: 1996-12-16

Quad Summary: CASMALIA (3412075/196D)

County Summary: SANTA BARBARA

Lat/Long: 34.82130º / -120.58265º
UTM: Zone-10 N3855890 E721088
Mapping Precision: SPECIFIC
Symbol Type: POINT
Radius: 80 meters

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 250 ft

Location: VANDENBERG AFB ON SAN ANTONIO TERRACE, SAND DUNES ABOUT 3 AIR MILES WSW OF CASMALIA.

Location Detail: WEST SIDE OF PEGA ROAD AND 1.2 MILES SOUTHWEST OF ANTONIO SIDING.

Ecological: 1 CLUMP AT BOTTOM OF OPEN SAND SLOPE.

Threat:

General: 1-15 PLANTS OBSERVED IN FALL OF 1979.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Erigeron blochmaniae

Blochman's leafy daisy

Element Code: PDAST3M5J0

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: COASTAL DUNES.

Micro: SAND DUNES AND HILLS. 3-185M.

Occurrence No. 3 **Map Index:** 28630 **EO Index:** 29936

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HUMAN, V. 1990 (LIT)

Dates Last Seen
Element: 1990-XX-XX
Site: 1990-XX-XX

Record Last Updated: 1996-12-20

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.80909º / -120.56605º
UTM: Zone-10 N3854572 E722640
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1/5 mile

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 280 ft

Location: VANDENBERG AFB ON SAN ANTONIO TERRACE, WEST OF RANCHO ROAD ABOUT 2.7 MILES SOUTHWEST OF CASMALIA.

Location Detail: AT THE 'WILD ROSE SWALE' SITE DESCRIBED BY V. HUMAN.

Ecological:

Threat:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1990 STUDY 'BIOLOGICAL RESOURCES OF SAN ANTONIO TERRACE, VANDENBERG AFB, CALIFORNIA' BY HUMAN.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Erigeron blochmaniae

Blochman's leafy daisy

Element Code: PDAST3M5J0

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: COASTAL DUNES.

Micro: SAND DUNES AND HILLS. 3-185M.

Occurrence No. 4 **Map Index:** 28629 **EO Index:** 29935

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HUMAN, V. 1990 (LIT)

Element: 1990-XX-XX
Site: 1990-XX-XX

Record Last Updated: 1996-12-20

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.81633º / -120.56459º
UTM: Zone-10 N3855379 E722754
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1/5 mile

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 300 ft

Location: VANDENBERG AFB ON SAN ANTONIO TERRACE, WEST OF RANCHO ROAD ABOUT 2.3 MILES SOUTHWEST OF CASMALIA.

Location Detail: SOUTH OF 'PASTURE' SITE DESCRIBED BY V. HUMAN. MAPPED NEAR 'PASTURE WETLAND' AND 'PASTURE SPRING STREAM' SITES.

Ecological:

Threat:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1990 STUDY 'BIOLLOGICAL RESOURCES OF SAN ANTONIO TERRACE, VANDENBERG AFB, CALIFORNIA' BY HUMAN.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Horkelia cuneata ssp. puberula

mesa horkelia

Element Code: PDROS0W045

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G4T2	**CNPS List:** 1B
State: None	**State:** S2.1	**R-E-D Code:** 2-3-3

Habitat Associations

General: CHAPARRAL, CISMONTANE WOODLAND, COASTAL SCRUB.

Micro: SANDY OR GRAVELLY SITES. 70-810M.

Occurrence No. 51 **Map Index:** 55029 **EO Index:** 55029

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: PRITCHETT, D. #CSM-19 UCSB (HERB)

Dates Last Seen
Element: 1987-07-10
Site: 1987-07-10
Record Last Updated: 2004-04-09

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.79482º / -120.53752º
UTM: Zone-10 N3853054 E725289
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Area: 93.0 ac

Township: 08N
Range: 35W
Section: 02 **Qtr:** XX
Meridian: S
Elevation: 350 ft

Location: W SIDE OF LOMPOC-CASMALIA RD., 3.0 MILES S OF CASMALIA.

Location Detail: EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB.

Ecological: IN SANDY LOAM IN SHADE OF OAK WOODLAND-FOREST.

Threat:

General: 1941 COLLECTION BY TUCKER "BETWEEN CASMALIA AND SAN ANTONIO CANYON" ATTRIBUTED TO THIS SITE. PER B. ERTTER, THE TUCKER COLLECTION VARIES TOWARD SSP. CUNEATA. UNKNOWN NUMBER OF PLANTS SEEN IN 1941 AND 1987. NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Horkelia cuneata ssp. sericea

Kellogg's horkelia

Element Code: PDROS0W043

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G4T1	**CNPS List:** 1B
State: None	**State:** S1.1	**R-E-D Code:** 3-3-3

Habitat Associations

General: CLOSED-CONE CONIFEROUS FOREST, COASTAL SCRUB, CHAPARRAL.

Micro: OLD DUNES, COASTAL SANDHILLS; OPENINGS. 10-200M.

Occurrence No. 2 **Map Index:** 28803 **EO Index:** 30305

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: BRANDEGEE, K. SN UC #185282 (HERB)

Element: 1909-05-01
Site: 1909-05-01
Record Last Updated: 1997-02-04

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.83561º / -120.57107º
UTM: Zone-10 N3857503 E722109
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1 mile

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 320 ft

Location: ANTONIO SIDING, NEAR SURF.

Location Detail:

Ecological:

Threat:

General: MAIN SOURCE OF INFORMATION FOR THIS SITE IS 1909 COLLECTION BY BRANDEGEE. SITE INCLUDES 1940 COLLECTION BY RIPLEY (#3152) FROM GENERAL AREA OF "BARTON (BURTON) MESA, NEAR

Owner/Manager: UNKNOWN

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Monardella crispa

crisp monardella

Element Code: PDLAM18070

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: COASTAL DUNES, COASTAL SCRUB.

Micro: OFTEN ON THE BORDERS OF OPEN, SAND AREAS, USUALLY ADJACENT TO TYPICAL BACKDUNE SCRUB VEGETATION. 5-120M.

Occurrence No. 11 **Map Index:** 12921 **EO Index:** 17920

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SMITH, D. 1982 (PERS)

Element: 1982-XX-XX
Site: 1982-XX-XX

Record Last Updated: 1999-12-16

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.78818º / -120.62053º
UTM: Zone-10 N3852133 E717710
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 2/5 mile

Township: 08N
Range: 35W
Section: 07 **Qtr:** XX
Meridian: S
Elevation: 60 ft

Location: MAJOR DUNES JUST SOUTH OF SAN ANTONIO CREEK, VANDENBERG AIR FORCE BASE.

Location Detail: EXACT LOCATION NOT KNOWN; MAPPED IN DUNES WEST OF RR TRACKS AND SOUTH OF SAN ANTONIO CREEK. NEEDS FIELDWORK.

Ecological: IN BLOW OUT IN BACK DUNE AREA.

Threat:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1981/1982 COLLECTION BY D. SMITH #132.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Monardella crispa

crisp monardella

Element Code: PDLAM18070

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: COASTAL DUNES, COASTAL SCRUB.

Micro: OFTEN ON THE BORDERS OF OPEN, SAND AREAS, USUALLY ADJACENT TO TYPICAL BACKDUNE SCRUB VEGETATION. 5-120M.

Occurrence No. 12 **Map Index:** 12950 **EO Index:** 17918

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SMITH, D. 1982 (PERS)

Dates Last Seen
Element: 1982-XX-XX
Site: 1982-XX-XX

Record Last Updated: 1999-12-16

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.78738º / -120.61019º
UTM: Zone-10 N3852067 E718658
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1/5 mile

Township: 08N
Range: 35W
Section: 07 **Qtr:** XX
Meridian: S
Elevation: 80 ft

Location: SANDY AREA ADJACENT TO SOUTHERN PACIFIC RR BRIDGE OVER SAN ANTONIO CREEK, VANDENBERG AIR FORCE BASE.

Location Detail:

Ecological: IN DISTURBED SANDY AREA ADJACENT TO CREEK.

Threat:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1981/1982 COLLECTION BY D. SMITH #683. FORMER GENERAL OCCURRENCE #20 FROM "BURTON MESA" LUMPED WITH THIS OCCURRENCE.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Monardella crispa

crisp monardella

Element Code: PDLAM18070

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: COASTAL DUNES, COASTAL SCRUB.

Micro: OFTEN ON THE BORDERS OF OPEN, SAND AREAS, USUALLY ADJACENT TO TYPICAL BACKDUNE SCRUB VEGETATION. 5-120M.

Occurrence No. 13 **Map Index:** 12886 **EO Index:** 17921

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SMITH, D. 1982 (PERS)

Element: 1982-XX-XX
Site: 1982-XX-XX

Record Last Updated: 2000-02-23

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.76104° / -120.62511°
UTM: Zone-10 N3849113 E717363
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 3/5 mile

Township: 08N
Range: 36W
Section: 24 **Qtr:** XX
Meridian: S
Elevation: 80 ft

Location: SANDY AREA ADJACENT TO PARKING AREA AT PURISIMA POINT, VANDENBERG AIR FORCE BASE.

Location Detail: MAPPED BETWEEN BEACH AND SPRR TRACKS IN THE VICINITY OF PURISIMA POINT.

Ecological: IN SANDY AREA.

Threat:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1981/1982 COLLECTION BY D. SMITH #673.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Monardella crispa

crisp monardella

Element Code: PDLAM18070

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: COASTAL DUNES, COASTAL SCRUB.

Micro: OFTEN ON THE BORDERS OF OPEN, SAND AREAS, USUALLY ADJACENT TO TYPICAL BACKDUNE SCRUB VEGETATION. 5-120M.

Occurrence No. 17 **Map Index:** 40535 **EO Index:** 35542

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SMITH, D. 1982 (PERS)

Element: 1982-XX-XX
Site: 1982-XX-XX

Record Last Updated: 2000-02-23

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.82035º / -120.58370º
UTM: Zone-10 N3855782 E720995
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1 mile

Township: 09N
Range: 35W
Section: 32 **Qtr:** XX
Meridian: S
Elevation: 280 ft

Location: NORTH END OF PEGA ROAD, VANDENBERG AIR FORCE BASE.

Location Detail: MAPPED IN SANDY AREA ABOUT 1-2 MILES SOUTHWEST OF ANTONIO SIDING ALONG THE SPRR.

Ecological: OPEN AREA IN DUNES. PLANTS ARE ABUNDANT IN THIS AREA AND EXTEND AS INTERMITTENT STANDS THROUGHOUT THE SAN ANTONIO TERRACE.

Threat:

General: THIS LOCATION IS BASED UPON TWO COLLECTIONS BY D. SMITH; #90 AND 100.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Monardella frutescens

San Luis Obispo monardella

Element Code: PDLAM180X0

Status		NDDB Element Ranks		Other Lists	
Federal:	None	**Global:**	G2	**CNPS List:**	1B
State:	None	**State:**	S2.2	**R-E-D Code:**	2-2-3

Habitat Associations

General: COASTAL DUNES, COASTAL SCRUB.

Micro: STABILIZED SAND OF THE IMMEDIATE COAST. 10-100M.

Occurrence No. 9 **Map Index:** 22762 **EO Index:** 14084

Dates Last Seen

Occ Rank: Unknown
Element: 1981-XX-XX
Origin: Natural/Native occurrence
Site: 1981-XX-XX
Presence: Presumed Extant
Trend: Unknown
Record Last Updated: 1993-02-10
Main Source: SMITH, D. 1982 (LIT)

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.81311º / -120.61083º
UTM: Zone-10 N3854920 E718532
Mapping Precision: SPECIFIC
Symbol Type: POINT
Radius: 80 meters

Township: 09N
Range: 35W
Section: XX **Qtr:** XX
Meridian: S
Elevation: 80 ft

Location: CASMALIA BEACH, ABOUT 0.6 MILE NNW OF NARLON, VANDENBERG AIR FORCE BASE.

Location Detail: MAPPED ABOUT 250 METERS ESE OF POND 2 SURVEY MARKER ON TOPO MAP.

Ecological: GROWING IN RELATIVELY OPEN VEGETATION ON STABILIZED BACKDUNE SLOPES AND RIDGES. OFTEN OCCURRING ALONG RIDGE TOPS.

Threat:

General: SMITH OBSERVED POPULATIONS FROM CASMALIA BEACH TO SOUTH OF POINT ARGUELLO. SITE MAPPED BASED UPON 1981 MAP BY A. HOWALD.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Monardella frutescens

San Luis Obispo monardella

Element Code: PDLAM180X0

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: COASTAL DUNES, COASTAL SCRUB.

Micro: STABILIZED SAND OF THE IMMEDIATE COAST. 10-100M.

Occurrence No. 16 **Map Index:** 13064 **EO Index:** 18082

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HDR 1980 (LIT)

Dates Last Seen
Element: 1981-XX-XX
Site: 1981-XX-XX

Record Last Updated: 1999-01-14

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.81555º / -120.58295º
UTM: Zone-10 N3855252 E721076
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Area: 171.9 ac

Township: 09N
Range: 35W
Section: 32 **Qtr:** XX
Meridian: S
Elevation: 200 ft

Location: SAN ANTONIO TERRACE, VICINITY OF PEGA ROAD; NORTH OF UMBRO ROAD BETWEEN RR TRACKS AND RANCHO ROAD, VANDENBERG AFB.

Location Detail: NUMEROUS COLONIES MAPPED IN THIS AREA. NEED GRAPHICS LAYER TO APPRECIATE IT.

Ecological: WIDELY SCATTERED COLONIES IN OPEN VEGETATION ON STABILIZED BACKDUNE SLOPES AND RIDGES.

Threat: BASE CONSTRUCTION ACTIVITIES.

General: ABOUT 950,000 PLANTS ESTIMATED FOR THE SAN ANTONIO TERRACE; MOST OF WHICH ARE WITHIN THIS OCCURRENCE. MAIN SOURCE OF INFORMATION FOR THIS SITE IS 1980 REPORT BY HENNINGSON, DURHAM, AND RICHARDSON.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Monardella frutescens

San Luis Obispo monardella

Element Code: PDLAM180X0

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: COASTAL DUNES, COASTAL SCRUB.

Micro: STABILIZED SAND OF THE IMMEDIATE COAST. 10-100M.

Occurrence No. 26 **Map Index:** 31052 **EO Index:** 35602

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: BITTMAN, R. 1989 (OBS)

Dates Last Seen
Element: 1989-04-15
Site: 1989-04-15
Record Last Updated: 1999-01-14

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.80009º / -120.61985º
UTM: Zone-10 N3853456 E717741
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Area: 17.7 ac

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 20 ft

Location: NORTH SIDE OF THE MOUTH OF SAN ANTONIO CREEK, VANDENBERG AIR FORCE BASE.

Location Detail: ALONG DIRT ROAD TOWARDS DUNES.

Ecological: IN SAND ALONG ROAD.

Threat:

General: UNKNOWN NUMBER OF PLANTS OBSERVED IN 1989.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Monardella frutescens

San Luis Obispo monardella

Element Code: PDLAM180X0

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: COASTAL DUNES, COASTAL SCRUB.

Micro: STABILIZED SAND OF THE IMMEDIATE COAST. 10-100M.

Occurrence No. 27 **Map Index:** 40591 **EO Index:** 35598

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HDR 1980 (LIT)

Element: 1980-XX-XX
Site: 1980-XX-XX

Record Last Updated: 1999-01-14

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.80442º / -120.56818º
UTM: Zone-10 N3854050 E722458
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Area: 24.7 ac

Township: 08N
Range: 35W
Section: 04 **Qtr:** XX
Meridian: S
Elevation: 300 ft

Location: SAN ANTONIO TERRACE, ALONG RANCHO ROAD ABOUT 2.3 MILES NORTH OF SAN ANTONIO CREEK, VANDENBERG AFB.

Location Detail: SEVERAL COLONIES MAPPED ALONG EITHER SIDE OF ROAD; UP TO 0.3 MILE WEST OF ROAD, 0.2 MILE EAST OF ROAD, AND ABOUT 0.5-1 MILE NORTH OF ALAMO BENCHMARK.

Ecological: WIDELY SCATTERED COLONIES IN OPEN VEGETATION ON STABILIZED BACKDUNE SLOPES AND RIDGES.

Threat: BASE CONSTRUCTION ACTIVITIES.

General: UNKNOWN NUMBER OF PLANTS SEEN AT IN 1979/1980 THIS OCCURRENCE. ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1980 REPORT BY HENNINGSON, DURHAM, AND RICHARDSON.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Monardella frutescens

San Luis Obispo monardella

Element Code: PDLAM180X0

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: COASTAL DUNES, COASTAL SCRUB.

Micro: STABILIZED SAND OF THE IMMEDIATE COAST. 10-100M.

Occurrence No. 28 **Map Index:** 40592 **EO Index:** 35599

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HDR 1980 (LIT)

Element: 1980-XX-XX
Site: 1980-XX-XX

Record Last Updated: 1999-01-14

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.79695º / -120.60643º
UTM: Zone-10 N3853137 E718977
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Area: 3.5 ac

Township: 08N
Range: 35W
Section: 06 **Qtr:** XX
Meridian: S
Elevation: 100 ft

Location: SAN ANTONIO TERRACE, ALONG EAST SIDE OF SPRR TRACKS ABOUT 0.5 MILE NORTH OF SAN ANTONIO CREEK CROSSING, VANDENBERG AFB.

Location Detail: TWO COLONIES MAPPED AS A SINGLE POLYGON ALONG EAST SIDE OF TRACKS.

Ecological: IN OPEN VEGETATION ON STABILIZED BACKDUNE SLOPES AND RIDGES.

Threat: BASE CONSTRUCTION ACTIVITIES.

General: UNKNOWN NUMBER OF PLANTS SEEN AT IN 1979/1980 THIS OCCURRENCE. ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1980 REPORT BY HENNINGSON, DURHAM, AND RICHARDSON.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Monardella frutescens

San Luis Obispo monardella

Element Code: PDLAM180X0

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: COASTAL DUNES, COASTAL SCRUB.

Micro: STABILIZED SAND OF THE IMMEDIATE COAST. 10-100M.

Occurrence No. 29 **Map Index:** 40593 **EO Index:** 35600

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HDR 1980 (LIT)

Element: 1980-XX-XX
Site: 1980-XX-XX

Record Last Updated: 1999-01-14

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.79577° / -120.59333°
UTM: Zone-10 N3853034 E720179
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Area: 10.4 ac

Township: 08N
Range: 35W
Section: 05 **Qtr:** XX
Meridian: S
Elevation: 120 ft

Location: SAN ANTONIO TERRACE, ALONG BOTH SIDES OF UMBRA ROAD ABOUT 0.25 MILE WNW OF JUNCTION WITH BRIO ROAD, VANDENBERG AFB.

Location Detail: FOUR COLONIES.

Ecological: IN OPEN VEGETATION ON STABILIZED BACKDUNE SLOPES AND RIDGES.

Threat: BASE CONSTRUCTION ACTIVITIES.

General: ABOUT 400 PLANTS ATTRIBUTED TO THIS SITE IN 1979/1980. ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1980 REPORT BY HENNINGSON, DURHAM, AND RICHARDSON.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Monardella frutescens

San Luis Obispo monardella

Element Code: PDLAM180X0

Status		NDDB Element Ranks		Other Lists	
Federal:	None	**Global:**	G2	**CNPS List:**	1B
State:	None	**State:**	S2.2	**R-E-D Code:**	2-2-3

Habitat Associations

General: COASTAL DUNES, COASTAL SCRUB.

Micro: STABILIZED SAND OF THE IMMEDIATE COAST. 10-100M.

Occurrence No. 30 **Map Index:** 40594 **EO Index:** 35601

Dates Last Seen

Occ Rank: Unknown
Element: 1980-XX-XX
Origin: Natural/Native occurrence
Site: 1980-XX-XX
Presence: Presumed Extant
Trend: Unknown
Record Last Updated: 1999-01-14
Main Source: HDR 1980 (LIT)

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long:	34.79022º / -120.59942º	**Township:**	08N
UTM:	Zone-10 N3852405 E719637	**Range:**	35W
Mapping Precision:	SPECIFIC	**Section:**	08 **Qtr:** XX
Symbol Type:	POLYGON	**Meridian:**	S
Area:	4.3 ac	**Elevation:**	120 ft

Location: SAN ANTONIO TERRACE, SOUTH OF UMBRA ROAD AND WEST OF BRIO ROAD, VANDENBERG AFB.

Location Detail: TWO COLONIES MAPPED IN SINGLE POLYGON ABOUT 0.15 MILE WEST OF THE END OF BRIO ROAD.

Ecological: IN OPEN VEGETATION ON STABILIZED BACKDUNE SLOPES AND RIDGES.

Threat: BASE CONSTRUCTION ACTIVITIES.

General: UNKNOWN NUMBER OF PLANTS OBSERVED AT THIS SITE IN 1979/1980. ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1980 REPORT BY HENNINGSON, DURHAM, AND RICHARDSON.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Rorippa gambelii

Gambel's water cress

Element Code: PDBRA270V0

Status		NDDB Element Ranks		Other Lists	
Federal:	Endangered	**Global:**	G1	**CNPS List:**	1B
State:	Threatened	**State:**	S1.1	**R-E-D Code:**	3-3-2

Habitat Associations

General: MARSHES AND SWAMPS.

Micro: FRESHWATER AND BRACKISH MARSHES AT THE MARGINS OF LAKES AND ALONG STREAMS, IN OR JUST ABOVE THE WATER LEVEL. 5-1305M.

Occurrence No. 12 **Map Index:** 36413 **EO Index:** 31410

Dates Last Seen

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: KEIL, D. 1996 (OBS)

Element: 1996-07-25
Site: 1996-07-25
Record Last Updated: 1997-08-12

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.75735º / -120.51562º
UTM: Zone-10 N3848946 E727396
Mapping Precision: SPECIFIC
Symbol Type: POINT
Radius: 80 meters

Township: 08N
Range: 35W
Section: 24 **Qtr:** XX
Meridian: S
Elevation: 480 ft

Location: VANDENBERG AFB; 0.5 MI NNE OF MAIN GATE, JUST W OF HWY 1 (VANDENBERG RD) AT "LOMPOC LEFT LANE" SIGN.

Location Detail: PLANTS PRIMARILY FOUND AT W END OF PEAT RICH MARSH AT ECOTONE WITH RIPARIAN (WILLOW) WOODLAND.

Ecological: FRESHWATER MARSH WITH FLOATING MAT SURROUNDED BY WILLOW WOODLAND. BORDERED BY COASTAL DUNE SCRUB AND COASTAL LIVE OAK WOODLAND. ASSOCIATES INCLUDE: TYPHA LATIFOLIA, SCIRPUS MICROCARPUS, S. ACUTUS, SPARGANIUM, SALIX LASIOLEPIS, & MYRICA CA.

Threat: DRAINAGE IS SPRING-FED AND WOULD BE ADVERSELY AFFECTED BY WELL DRILLING, SHOULD ANY OCCUR.

General: FEWER THAN 100 PLANTS IN 1996.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Scrophularia atrata

black-flowered figwort

Element Code: PDSCR1S010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL, COASTAL DUNES, COASTAL SCRUB, RIPARIAN SCRUB.

Micro: SAND, DIATOMACEOUS SHALES, AND SOILS DERIVED FROM OTHER PARENT MATERIAL; AROUND SWALES AND IN SAND DUNES. 10-250M.

Occurrence No. 19 **Map Index:** 29078 **EO Index:** 30990

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HENDRICKSON, B. 1991 (OBS)

Dates Last Seen
Element: 1991-05-13
Site: 1991-05-13
Record Last Updated: 1997-04-15

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.80879º / -120.51910º
UTM: Zone-10 N3854644 E726936
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Area: 9.0 ac

Township: 09N
Range: 35W
Section: XX **Qtr:** XX
Meridian: S
Elevation: 450 ft

Location: ABOUT 2.2 AIR MILES SSE OF CASMALIA AND 0.4 MILE EAST OF LOMPOC-CASMALIA ROAD, NORTH END OF VANDENBERG AFB.

Location Detail: VALLEY SOUTH OF BISHOP ROAD (NEXT DRAINAGE TO THE EAST FROM LOMPOC-CASMALIA ROAD).

Ecological: BACCHARIS PILULARIS-RIPARIAN SCRUB AND COASTAL SAGE SCRUB. ASSOCIATED WITH ARTEMISIA CALIFORNICA, BACCHARIS, AND TOXICODENDRON.

Threat: COASTAL AQUEDUCT EXTENSION CONSTRUCTION.

General: 50-100 PLANTS OBSERVED IN 1991.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Scrophularia atrata

black-flowered figwort

Element Code: PDSCR1S010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL, COASTAL DUNES, COASTAL SCRUB, RIPARIAN SCRUB.

Micro: SAND, DIATOMACEOUS SHALES, AND SOILS DERIVED FROM OTHER PARENT MATERIAL; AROUND SWALES AND IN SAND DUNES. 10-250M.

Occurrence No. 20 **Map Index:** 29076 **EO Index:** 30985

Dates Last Seen

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HENDRICKSON, B. 1991 (OBS)

Element: 1991-05-29
Site: 1991-05-29
Record Last Updated: 1997-03-28

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.83549º / -120.52985º
UTM: Zone-10 N3857582 E725880
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Area: 7.7 ac

Township: 09N
Range: 35W
Section: XX **Qtr:** XX
Meridian: S
Elevation: 350 ft

Location: JUST SOUTH OF CASMALIA, SOUTH OF SOUTHERN PACIFIC TRACKS AND WEST OF LOMPOC-CASMALIA ROAD, NORTH END OF VANDENBERG AFB.

Location Detail:

Ecological: RIPARIAN SCRUB AND COYOTE BUSH SCRUB IN WETTER AREAS OF VALLEY FLOOR. USUALLY ASSOCIATED WITH BASES OF SHRUBS AND WILLOWS.

Threat: ON ROUTE OF PROPOSED COASTAL AQUEDUCT. MANY AREAS DISTURBED BY DUMPING.

General: 1000+ PLANTS OBSERVED IN 1991.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Scrophularia atrata

black-flowered figwort

Element Code: PDSCR1S010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL, COASTAL DUNES, COASTAL SCRUB, RIPARIAN SCRUB.

Micro: SAND, DIATOMACEOUS SHALES, AND SOILS DERIVED FROM OTHER PARENT MATERIAL; AROUND SWALES AND IN SAND DUNES. 10-250M.

Occurrence No. 21 **Map Index:** 29077 **EO Index:** 30986

Dates Last Seen

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HENDRICKSON, B. 1991 (OBS)

Element: 1991-04-11
Site: 1991-04-11
Record Last Updated: 1997-03-28

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.82976º / -120.52503º
UTM: Zone-10 N3856957 E726336
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Area: 13.1 ac

Township: 09N
Range: 35W
Section: XX **Qtr:** XX
Meridian: S
Elevation: 480 ft

Location: ABOUT 0.6 AIR MILE SOUTHEAST OF CASMALIA ALONG EAST SIDE OF LOMPOC-CASMALIA ROAD, NORTH END OF VANDENBERG AFB.

Location Detail:

Ecological: RIPARIAN SCRUB DOMINATED BY BACCHARIS PILULARIS CONSANGUINEA. OLD, TALL SHRUBS WITH LITTLE UNDERSTORY. COMMON AT BASES OF SHRUBS AND ON THE BANKS OF INTERMITTANT STEAM, UNDER SALIX LASIOLEPIS. HIGHEST DENSITY IS IN THE STREAMBED.

Threat:

General: ABOUT 1000 PLANTS OBSERVED IN 1991.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Scrophularia atrata

black-flowered figwort

Element Code: PDSCR1S010

Status		NDDB Element Ranks		Other Lists	
Federal:	None	**Global:**	G2	**CNPS List:**	1B
State:	None	**State:**	S2.2	**R-E-D Code:**	2-2-3

Habitat Associations

General: CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL, COASTAL DUNES, COASTAL SCRUB, RIPARIAN SCRUB.

Micro: SAND, DIATOMACEOUS SHALES, AND SOILS DERIVED FROM OTHER PARENT MATERIAL; AROUND SWALES AND IN SAND DUNES. 10-250M.

Occurrence No. 22 **Map Index:** 29072 **EO Index:** 30988

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HOWALD, A. 1981 (PERS)

Element: 1981-XX-XX
Site: 1981-XX-XX

Record Last Updated: 1997-03-28

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.81299° / -120.57121°
UTM: Zone-10 N3854993 E722157
Mapping Precision: SPECIFIC
Symbol Type: POINT
Radius: 80 meters

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 240 ft

Location: SAN ANTONIO TERRACE, ABOUT 0.4 MILE WEST OF RANCHO ROAD AND 1.5 MILE SOUTH OF ANTONIO, VANDENBERG AFB.

Location Detail:

Ecological:

Threat:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS MAP DETAIL PROVIDED BY A. HOWALD.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Scrophularia atrata

black-flowered figwort

Element Code: PDSCR1S010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL, COASTAL DUNES, COASTAL SCRUB, RIPARIAN SCRUB.

Micro: SAND, DIATOMACEOUS SHALES, AND SOILS DERIVED FROM OTHER PARENT MATERIAL; AROUND SWALES AND IN SAND DUNES. 10-250M.

Occurrence No. 23 **Map Index:** 29071 **EO Index:** 30987

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HOWALD, A. 1981 (PERS)

Element: 1981-XX-XX
Site: 1981-XX-XX

Record Last Updated: 1997-03-28

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.80658º / -120.58897º
UTM: Zone-10 N3854243 E720550
Mapping Precision: SPECIFIC
Symbol Type: POINT
Radius: 80 meters

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 180 ft

Location: SAN ANTONIO TERRACE, ABOUT 0.3 MILE WEST OF PEGA ROAD AND 0.25 MILE NORTH OF PERIGEE ROAD, VANDENBERG AFB.

Location Detail:

Ecological:

Threat:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS MAP DETAIL PROVIDED BY HOWALD.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Scrophularia atrata

black-flowered figwort

Element Code: PDSCR1S010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL, COASTAL DUNES, COASTAL SCRUB, RIPARIAN SCRUB.

Micro: SAND, DIATOMACEOUS SHALES, AND SOILS DERIVED FROM OTHER PARENT MATERIAL; AROUND SWALES AND IN SAND DUNES. 10-250M.

Occurrence No. 24 **Map Index:** 29073 **EO Index:** 30989

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HOWALD, A. 1981 (PERS)

Element: 1981-XX-XX
Site: 1981-XX-XX

Record Last Updated: 1997-03-28

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.80238º / -120.57428º
UTM: Zone-10 N3853810 E721905
Mapping Precision: SPECIFIC
Symbol Type: POINT
Radius: 80 meters

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 220 ft

Location: SAN ANTONIO TERRACE, ABOUT 0.4 MILE WEST OF RANCHO ROAD AND 1.2 MILES NORTH OF UMBRA ROAD, VANDENBERG AFB.

Location Detail:

Ecological:

Threat:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS MAP DETAIL PROVIDED BY A. HOWALD.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Scrophularia atrata

black-flowered figwort

Element Code: PDSCR1S010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL, COASTAL DUNES, COASTAL SCRUB, RIPARIAN SCRUB.

Micro: SAND, DIATOMACEOUS SHALES, AND SOILS DERIVED FROM OTHER PARENT MATERIAL; AROUND SWALES AND IN SAND DUNES. 10-250M.

Occurrence No. 25 **Map Index:** 29074 **EO Index:** 30991

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HOWALD, A. 1981 (PERS)

Element: 1981-XX-XX
Site: 1981-XX-XX

Record Last Updated: 1997-03-28

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.78917º / -120.57763º
UTM: Zone-10 N3852337 E721634
Mapping Precision: SPECIFIC
Symbol Type: POINT
Radius: 80 meters

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 160 ft

Location: SAN ANTONIO TERRACE, NORTHWEST OF JUNCTION OF PEGA ROAD AND UMBRA ROAD, VANDENBERG AFB.

Location Detail:

Ecological:

Threat:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS MAP DETAIL PROVIDED BY A. HOWALD.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Scrophularia atrata

black-flowered figwort

Element Code: PDSCR1S010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL, COASTAL DUNES, COASTAL SCRUB, RIPARIAN SCRUB.

Micro: SAND, DIATOMACEOUS SHALES, AND SOILS DERIVED FROM OTHER PARENT MATERIAL; AROUND SWALES AND IN SAND DUNES. 10-250M.

Occurrence No. 26 **Map Index:** 29075 **EO Index:** 30996

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SMITH, D. 1982 (LIT)

Element: 198X-XX-XX
Site: 198X-XX-XX

Record Last Updated: 1997-04-15

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.77330º / -120.57284º
UTM: Zone-10 N3850587 E722115
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 3/5 mile

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 300 ft

Location: NEAR SAN ANTONIO CREEK AT EL RANCHO ROAD CROSSING, VANDENBERG AFB.

Location Detail: SITE ALSO REFERRED TO IN OLD COLLECTIONS AS "4 MILES SOUTH OF CASMALIA."

Ecological: AT BASE OF SHALE SLOPE.

Threat:

General: TWO COLLECTIONS ATTRIBUTED TO THIS SITE: MUNZ (#19455 CAS) IN 1954 AND SMITH AND KOEHLER (#56 UNKNOWN HERB) CIRCA 1980.

Owner/Manager: DOD-VANDENBERG AFB

Appendix 5

Federal Status, State Status, CNPS List, CNPS R-E-D Code (Quads: Lompoc, Lompoc Hills, Santa Rosa Hills, Surf, Tranquillon Mtn, Orcutt, Casmalia)

Scrophularia atrata

black-flowered figwort

Element Code: PDSCR1S010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G2	**CNPS List:** 1B
State: None	**State:** S2.2	**R-E-D Code:** 2-2-3

Habitat Associations

General: CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL, COASTAL DUNES, COASTAL SCRUB, RIPARIAN SCRUB.

Micro: SAND, DIATOMACEOUS SHALES, AND SOILS DERIVED FROM OTHER PARENT MATERIAL; AROUND SWALES AND IN SAND DUNES. 10-250M.

Occurrence No. 27 **Map Index:** 29070 **EO Index:** 30995

Dates Last Seen

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SMITH, D. 1982 (LIT)

Element: 198X-XX-XX
Site: 198X-XX-XX

Record Last Updated: 1997-03-28

Quad Summary:

County Summary: SANTA BARBARA

Lat/Long: 34.82840º / -120.57818º
UTM: Zone-10 N3856687 E721478
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 3/5 mile

Township: 99X
Range: 99X
Section: XX **Qtr:** XX
Meridian: S
Elevation: 280 ft

Location: DUNES AT THE NORTH END OF PEGA ROAD, VANDENBERG AFB.

Location Detail:

Ecological: MARGIN OF POND IN SWALE.

Threat:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS UNDATED COLLECTION BY SMITH ET AL (#131 UNKNOWN HERB) CIRCA 1980.

Owner/Manager: DOD-VANDENBERG AFB

RAPID ASSESSMENT PLOT DATA

APPENDIX 6

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

A. Appendix 6 – Rapid Assessment Plot Data

1. *Central Maritime Chaparral Sites*

Chaparral Site Rapid Assessment Information (Site 1)

Holland Type **Central Maritime Chaparral**
CNPS Series **Ceanothus Chaparral Series**
CNPS Association **Santa Barbara Ceanothus-Lompoc Ceanothus/Rush-rose Chaparral**

Species	Present	Mean Cover
Ceanothus impressus var. impressus	x	25.00%
Helianthemum scoparium	x	25.00%
Ceanothus cuneatus var. fascicularis	x	16.00%
Arctostaphylos purissima	x	4.00%
Arctostaphylos rudis	x	2.00%
Artemisia californica	x	<1
Baccharis pilularis	x	<1
Crassula connata	x	<1
Cryptantha clevlandii	x	<1
Daucus pusillus	x	<1
Ericameria ericoides	x	<1
Eriophyllum confertiflorum	x	<1
Hypochoeris glabra	x	<1
Mimulus aurantiacus ssp. lompocense	x	<1
Vulpia octoflora	x	<1
bare		
rock		
litter		
logs/branches		
Total	***15***	***72%***

AZALEA FIRE AREA W FISH AND GAME
(FEB 12, 2004)

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	178
Date Surveyed	12-Feb-04
Elevation	390
Topography	Flat
Slope	0%
Aspect	Flat
No. Native species	14

No. Non-native species	1
Depth of litter	0
Tree Height (ft)	15
Shrub Height (ft)	4
Herb Height (ft)	1
Disturbance	ORV activity
Other Notes	Burnt in 1997; Oaks resprouting; Ice plant present
Comparison Site	None

Chaparral Site Rapid Assessment Information (Site 2)

Holland Type **Central Maritime Chaparral**

CNPS Series **Coast Live Oak Chaparral Series**

CNPS Association **Coast Live Oak/Chamise-Purisima Manzanita-Shagbark Manzanita Chaparral**

Species	Present	Mean Cover
Quercus agrifolia	x	28.33%
Adenostoma fasciculatum	x	25.00%
Arctostaphylos purissima	x	12.67%
Arctostaphylos rudis	x	8.67%
Salvia mellifera	x	3.67%
Mimulus aurantiacus ssp. lompocense	x	2.67%
Daucus pusillus	x	<1
Ehrharta calycina	x	<1
Ericameria ericoides	x	<1
Eriophyllum confertiflorum	x	<1
Galium andrewsii	x	<1
Galium nuttallii	x	<1
Gnaphalium californicum	x	<1
Horkelia cuneata	x	<1
Leptodactylon californicum	x	<1
Pteridium aquilinum	x	<1
Rhamnus californica	x	<1
bare		20.00%
rock		
litter		
logs/branches		
Total	***17***	***101%***

Photo 2: Example of vegetation surveyed at Site 2.

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	182
Date Surveyed	12-Feb-04
Elevation	381
Topography	Undulating

Slope	5-25%
Aspect	SE
No. Native species	16
No. Non-native species	1
Depth of litter	0
Tree Height (ft)	12
Shrub Height (ft)	6-10
Herb Height (ft)	
Disturbance	
Other Notes	Old undisturbed stand of oaks, manzanitas, chamise on south east slope; high cover of oaks; Woodrat nest (x2)
Comparison Site	None

Chaparral Site Rapid Assessment Information (Site 3)

Holland Type **Central Maritime Chaparral**
CNPS Series **Coast Live Oak Chaparral Series**
CNPS Association **Coast Live Oak/Chamise-Lompoc Ceanothus Chaparral**

Species	Present	Mean Cover
Adenostoma fasciculatum	x	53.33%
Quercus agrifolia	x	18.33%
Ceanothus cuneatus var. fascicularis	x	15.67%
Horkelia cuneata	x	3.67%
Salvia mellifera	x	3.67%
Mimulus aurantiacus ssp. lompocense	x	1.50%
Anagallis arvensis	x	<1
Arctostaphylos rudis	x	<1
Artemisia californica	x	<1
Ceanothus impressus var. impressus	x	<1
bare		
rock		
litter		
logs/branches		
Total	***10***	***96%***


Photo 3: Example of vegetation surveyed at Site 3.

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	39
Date Surveyed	6-Apr-04
Elevation	336
Topography	Flat; lower
Slope	0%
Aspect	Flat
No. Native species	9

No. Non-native species	1
Depth of litter	0
Tree Height (ft)	8-10
Shrub Height (ft)	2-4
Herb Height (ft)	1
Disturbance	
Other Notes	Possibly recent disturbance; close to road
Comparison Site	None

Chaparral Site Rapid Assessment Information (Site 4)

Holland Type **Central Maritime Chaparral**
CNPS Series **Chamise Chaparral Series**
CNPS Association **Chamise-Black Sage-Lompoc Ceanothus Chaparral**

Species	Present	Mean Cover
Adenostoma fasciculatum	x	80.00%
Salvia mellifera	x	36.00%
Ceanothus cuneatus var. fascicularis	x	20.00%
Mimulus aurantiacus ssp. lompocense	x	6.00%
Anagallis arvensis	x	2.00%
Arctostaphylos purissima	x	2.00%
Arctostaphylos rudis	x	<1
Baccharis pilularis	x	<1
Croton californicus	x	<1
Daucus pusillus	x	<1
Ericameria ericoides	x	<1
Gnaphalium californicum	x	<1
Horkelia cuneata	x	<1
Toxicodendron diversilobum	x	<1
bare		5.00%
rock		
litter		
logs/branches		3%
Total	***14***	***151%***


Photo 4: Example of vegetation surveyed at Site 4.

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	41
Date Surveyed	8-Oct-03
Elevation	327
Topography	Flat
Slope	2%
Aspect	S

No. Native species	13
No. Non-native species	1
Depth of litter (in)	1
Tree Height (ft)	0
Shrub Height (ft)	6-8
Herb Height (ft)	<0.5
Disturbance	Vehicle and bike tracks
Other Notes	Burnt in 1997; Oaks resprouting; Ice plant present
Comparison Site	None

Chaparral Site Rapid Assessment Information (Site 5)

Holland Type **Central Maritime Chaparral**
CNPS Series **Manzanita Chaparral Series**
CNPS Association **Purisima Manzanita-Shagbark Manzanita-Chamise Chaparral**

Species	Present	Mean Cover
Arctostaphylos purissima	x	40.00%
Arctostaphylos rudis	x	39.00%
Adenostoma fasciculatum	x	14.00%
Mimulus aurantiacus ssp. lompocense	x	1.00%
Ceanothus cuneatus var. fascicularis	x	<1
Ericameria ericoides	x	<1
Eriophyllum confertiflorum	x	<1
Helianthemum scoparium	x	<1
Horkelia cuneata	x	<1
Navarretia atractyloides	x	<1
Quercus agrifolia	x	<1
bare		10.00%
rock		3.00%
litter		
logs/branches		2%
Total	***7***	***13%***

Photo not available

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	43
Date Surveyed	8-Oct-03
Elevation	355
Topography	Undulating
Slope	5%
Aspect	N
No. Native species	11
No. Non-native species	0

Depth of litter (in)	0.5
Tree Height (ft)	0
Shrub Height (ft)	3-10
Herb Height (ft)	<0.5
Disturbance	
Other Notes	Moss under manzanitas
Comparison Site	None

Chaparral Site Rapid Assessment Information (Site 6)

Holland Type **Central Maritime Chaparral**
CNPS Series **Manzanita Chaparral Series**
CNPS Association **Shagbark Manzanita Chaparral**

Species	Present	Mean Cover
Arctostaphylos rudis	x	60.00%
Ceanothus cuneatus var. fascicularis	x	9.00%
Salvia mellifera	x	6.00%
Quercus agrifolia	x	5.00%
Arctostaphylos purissima	x	2.00%
Artemisia californica	x	<1
Daucus pusillus	x	<1
Eriastrum densiflorum	x	<1
Ericameria ericoides	x	<1
Eriogonum parvifolium	x	<1
Eriophyllum confertiflorum	x	<1
Erodium botrys	x	<1
Erodium cicutarium	x	<1
Helianthemum scoparium	x	<1
Horkelia cuneata	x	<1
Mucronea californica	x	<1
bare		20.00%
rock		
litter		
logs/branches		
Total	***16***	***102%***

Photo not available

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	50
Date Surveyed	8-Oct-03
Elevation	386
Topography	Flat
Slope	0%
Aspect	S

No. Native species	14
No. Non-native species	2
Depth of litter	0
Tree Height (ft)	
Shrub Height (ft)	5-6
Herb Height (ft)	<1
Disturbance	
Other Notes	Close to western boundary
Comparison Site	None

Chaparral Site Rapid Assessment Information (Site 7)

Holland Type **Central Maritime Chaparral**
CNPS Series **Chamise Chaparral Series**
CNPS Association **Chamise-Black Sage Chaparral**

Species	Present	Mean Cover
Adenostoma fasciculatum	x	75.00%
Salvia mellifera	x	20.00%
Artemisia californica	x	3.00%
Baccharis pilularis	x	1.00%
Anagallis arvensis	x	<1
Arctostaphylos purissima	x	<1
Daucus pusillus	x	<1
Lotus scoparius	x	<1
Lupinus chamissonis	x	<1
Mimulus aurantiacus ssp. lompocense	x	<1
Navarretia atractyloides	x	<1
Paeonia californica	x	<1
bare		5.00%
rock		
litter		
logs/branches		
Total	***12***	***104%***

Photo not available

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	56
Date Surveyed	8-Oct-03
Elevation	373
Topography	Flat; lower
Slope	0%
Aspect	Flat
No. Native species	11
No. Non-native species	1

Depth of litter	0
Tree Height (ft)	0
Shrub Height (ft)	2-6
Herb Height (ft)	<1
Disturbance	Near hiking trail
Other Notes	
Comparison Site	None

Chaparral Site Rapid Assessment Information (Site 8)

Holland Type **Central Maritime Chaparral**
CNPS Series **Manzanita Series**
CNPS Association **Purisima Manzanita Chaparral**

Species	Present	Mean Cover
Arctostaphylos purissima	x	99.00%
Adenostoma fasciculatum	x	<1
Carex globosa	x	<1
Croton californicus	x	<1
Dendromecon rigida	x	<1
Ericameria ericoides	x	<1
Mimulus aurantiacus ssp. lompocense	x	<1
Quercus agrifolia	x	<1
Salvia mellifera	x	<1
bare		1.00%
rock		
litter		
logs/branches		
Total	***9***	***101%***

Photo not available

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	64
Date Surveyed	26-Apr-04
Elevation	626
Topography	Undulating
Slope	2%
Aspect	SE
No. Native species	9
No. Non-native species	0
Depth of litter (in)	
Tree Height (ft)	15-20
Shrub Height (ft)	6-10
Herb Height (ft)	1
Disturbance	Road through stand

Other Notes	Low diversity, very few understory/herbaceous species; very few Bishop pines on ridge immediately above Chaparral
Comparison Site	None

Chaparral Site Rapid Assessment Information (Site 9)

Holland Type **Central Maritime Chaparral**

CNPS Series **Chamise Chaparral Series**

CNPS Association **Chamise-Coyote Bush-Black Sage/Lompoc Monkeyflower Chaparral**

Species	Present	Mean Cover
Adenostoma fasciculatum	x	17.00%
Mimulus aurantiacus ssp. lompocense	x	7.00%
Baccharis pilularis	x	5.00%
Heliotropium curassavicum	x	5.00%
Salvia mellifera	x	5.00%
Erodium botrys	x	1.00%
Erodium cicutarium	x	1.00%
Quercus agrifolia	x	1.00%
Achillea borealis	x	<1
Anagallis arvensis	x	<1
Arctostaphylos purissima	x	<1
Arctostaphylos rudis	x	<1
Artemisia californica	x	<1
Ceanothus cuneatus var. fascicularis	x	<1
Daucus pusillus	x	<1
Distichlis spicata	x	<1
Eriophyllum confertiflorum	x	<1
Horkelia cuneata	x	<1
Juncus textilis	x	<1
Nassella lepida	x	<1
Navarretia atractyloides	x	<1
bare		75.00%
rock		
litter		
logs/branches		
Total	***21***	***117%***

Photo 9: Example of vegetation surveyed at Site 9.

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	184
Date Surveyed	12-Feb-04
Elevation	362
Topography	Flat
Slope	0%

Aspect	Flat
No. Native species	18
No. Non-native species	3
Depth of litter	0
Tree Height (ft)	
Shrub Height (ft)	1-6
Herb Height (ft)	
Disturbance	Burnt in 1997 and 1983; lowland recovering area
Other Notes	Soap plant present
Comparison Site	None

Chaparral Site Rapid Assessment Information (Site 10)

Holland Type **Central Maritime Chaparral**
CNPS Series **Manzanita Series**
CNPS Association **Purisima Manzanita Chaparral**

Species	Present	Mean Cover
Arctostaphylos purissima	x	90.00%
Quercus agrifolia	x	4.67%
Adenostoma fasciculatum	x	4.00%
Arctostaphylos rudis	x	3.33%
Ceanothus cuneatus var. fascicularis	x	<1
bare		<1
rock		
litter		
logs/branches		
Total	***5***	***102%***


Photo 10: Example of vegetation surveyed at Site 10.

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	75
Date Surveyed	13-May-04
Elevation	387
Topography	Flat
Slope	0%
Aspect	Flat
No. Native species	5
No. Non-native species	0
Depth of litter (in)	2
Tree Height (ft)	10-12
Shrub Height (ft)	4-12
Herb Height (ft)	0
Disturbance	None; Ceanothus being overtopped
Other Notes	Woodrat nest (x1)
Comparison Site	None

Chaparral Site Rapid Assessment Information (Site 11)

Holland Type **Central Maritime Chaparral**
CNPS Series **Ceanothus Series**
CNPS Association **Lompoc Ceanothus-Coffeeberry-California Sagebrush Chaparral**

Species	Present	Mean Cover
Ceanothus cuneatus var. fascicularis	x	63.33%
Rhamnus californicus	x	13.67%
Artemisia californica	x	10.00%
Adenostoma fasciculatum	x	5.67%
Toxicodendron diversilobum	x	2.67%
Chorizanthe diffusa	x	<1
Gnaphalium ramossisima	x	<1
Quercus agrifolia	x	<1
Salvia mellifera	x	<1
bare		4.67%
Total	***8***	***96%***

Photo not available

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	78
Date Surveyed	7-Jun-04
Elevation	184
Topography	Concave; upper
Slope	3%
Aspect	SW
No. Native species	8
No. Non-native species	0
Depth of litter (in)	0
Tree Height (ft)	15-25
Shrub Height (ft)	2-8
Herb Height (ft)	<1
Disturbance	Adjacent to fire break; possibly cleared
Other Notes	Iceplant (scattered); standing dead Ceanothus cuneatus
Soil Probe (in)	12

2. *Coastal Scrub Sites*

Coastal Scrub Site Rapid Assessment Information (Site 12)

Holland Type **Central Coastal Scrub**
CNPS Series **Giant Ryegrass Series**
CNPS Association **Giant Ryegrass-Poison Oak Scrub**

Species	Present	Mean Cover
Leymus condensatus	x	95.00%
Toxicodendron diversilobum	x	18.33%
Baccharis pilularis	x	1.67%
Lotus scoparius	x	<1
Artemisia californica	x	<1
Gnaphalium californicum	x	<1
Mimulus aurantiacus ssp. lompocense	x	<1
Ribes malvaceum	x	<1
Sambucus mexicana	x	<1
Stachys bullata	x	<1
bare		
rock		
litter		
logs/branches		
Total	***10***	***115%***

Photo not available

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	13
Date Surveyed	24-May-04
Elevation	715
Topography	Concave; mid
Slope	3%
Aspect	S
No. Native species	10
No. Non-native species	0
Depth of litter (in)	
Tree Height (ft)	0
Shrub Height (ft)	0
Herb Height (ft)	2-6
Disturbance	Possible previous agricultural disturbance
Other Notes	
Comparison Site	None

Coastal Scrub Site Rapid Assessment Information (Site 13)

Holland Type **Central Coastal Scrub**
CNPS Series **Coyote Brush Series**
CNPS Association **Coyote Brush-California Sagebrush-Mock Heather Scrub**

Species	Present	Mean Cover
Baccharis pilularis	x	18.33%
Artemisia californica	x	11.67%
Ericameria ericoides	x	6.67%
Croton californicus	x	3.33%
Cryptantha clevelandii	x	1.67%
Salvia mellifera	x	<1
Chorizanthe diffusa	x	<1
Horkelia cuneata	x	<1
Lotus scoparius	x	<1
Melica imperfecta	x	<1
Mimulus aurantiacus ssp. lompocense	x	<1
Pterostegia drymarioides	x	2.67%
bare		57.67%
rock		
litter		
logs/branches		
Total	***12***	***103%***


Photo 13: Example of vegetation surveyed at Site 13.

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	28
Date Surveyed	6-Apr-04
Elevation	572
Topography	Concave; mid
Slope	25%
Aspect	SW
No. Native species	12
No. Non-native species	0
Depth of litter (in)	
Tree Height (ft)	0
Shrub Height (ft)	3-6
Herb Height (ft)	<2
Disturbance	Next to Access Road; Burnt in 1997; weeds
Other Notes	Sand Almond in adjacent area; Corizanthe sp; Native Thistle
Comparison Site	None

Coastal Scrub Site Rapid Assessment Information (Site 14)

Holland Type **Central Coastal Scrub**
CNPS Series **California Sagebrush Series**
CNPS Association **California Sagebrush-Coyote Bush/Deerweed Scrub**

Species	Present	Mean Cover
Artemisia californica	x	70.00%
Baccharis pilularis	x	11.67%
Lotus scoparius	x	10.33%
Ericameria ericoides	x	2.67%
Vulpia myuros	x	1.33%
Toxicodendron diversilobum	x	1.00%
Mimulus aurantiacus ssp. lompocense	x	<1
Arctostaphylos purissima	x	<1
Daucus pusillus	x	
Hypochoeris glabra	x	<1
Lupinus chamissonis	x	<1
Pinus muricata	x	<1
Quercus agrifolia	x	<1
Salvia mellifera	x	<1
bare		12.00%
rock		
litter		
logs/branches		
Total	***14***	***110%***

Photo 14: Example of vegetation surveyed at Site 14.

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	34
Date Surveyed	6-Apr-04
Elevation	506
Topography	Concave; lower
Slope	5%
Aspect	SW
No. Native species	12
No. Non-native species	2
Depth of litter (in)	
Tree Height (ft)	0
Shrub Height (ft)	4-8
Herb Height (ft)	1
Disturbance	Burnt in 1997; some erosion from arroyo; weeds
Other Notes	Bishop pines; Orabanche sp.
Comparison Site	None

Coastal Scrub Site Rapid Assessment Information (Site 15)

Holland Type **Central Coastal Scrub**
CNPS Series **Black Sage Series**
CNPS Association **Black Sage/Indian Rush Scrub**

Species	Present	Mean Cover
Juncus textilis	x	46.67%
Salvia mellifera	x	26.67%
Arctostaphylos purissima	x	3.33%
Baccharis pilularis	x	2.00%
Galium nuttallii	x	1.33%
Ericameria ericoides	x	1.00%
Quercus agrifolia	x	1.00%
Lupinus chamissonis	x	<1
Helianthemum scoparium	x	<1
Toxicodendron diversilobum	x	<1
Mimulus aurantiacus ssp. lompocense	x	<1
Ceanothus cuneatus var. fascicularis	x	<1
Juncus phaeocephalus	x	<1
Horkelia cuneata	x	<1
bare		21.67%
rock		<1
Total	***14***	***22%***

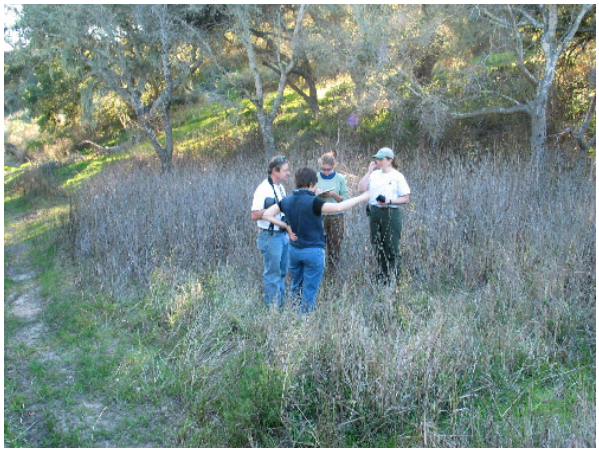


Photo 15: Example of vegetation surveyed at Site 15.

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	80
Date Surveyed	7-Jun-04
Elevation	225
Topography	Undulating
Slope	2%
Aspect	SE
No. Native species	14
No. Non-native species	0
Depth of litter (in)	2
Tree Height (ft)	0
Shrub Height (ft)	2-6
Herb Height (ft)	0.5-4
Disturbance	On edge of 1994 fire
Other Notes	
Comparison Site	None

Coastal Scrub Site Rapid Assessment Information (Site 16)

Holland Type **Central Coastal Scrub**
CNPS Series **Giant Ryegrass Series**
CNPS Association **Giant Ryegrass-Poison Oak Scrub**

Species	Present	Mean Cover
Leymus condensatus	x	80.00%
Toxicodendron diversilobum	x	13.33%
Lotus scoparius	x	5.00%
Baccharis pilularis	x	1.67%
Bromus madritensis	x	<1
Gnaphalium californicum	x	<1
Salvia mellifera	x	<1
bare		<1
rock		
litter		
logs/branches		
Total	***7***	***100%***

Photo 16: Example of vegetation surveyed at Site 16.

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	12
Date Surveyed	24-May-04
Elevation	713
Topography	Concave; upper
Slope	10%
Aspect	S
No. Native species	6
No. Non-native species	1
Depth of litter (in)	
Tree Height (ft)	0
Shrub Height (ft)	0
Herb Height (ft)	2-6
Disturbance	Historically agriculture?
Other Notes	
Comparison Site	None

3. *Coast Live Oak Woodland and Forest Sites*

Coast Live Oak Woodland and Forest Site Rapid Assessment Information (Site 17)

Holland Type **Coast Live Oak Forest**
CNPS Series **Evergreen Woodland: Coast Live Oak Series**

CNPS Association **Coast Live Oak/Poison Oak Forest**

Species	Present	Mean Cover
Quercus agrifolia	x	100.00%
Toxicodendron diversilobum	x	50.00%
Rhamnus californica	x	2.67%
Heteromeles arbutifolia	x	1.67%
Cerastium glomeratum	x	<1
Claytonia perfoliata	x	<1
Galium aparine	x	<1
Rosa californica	x	<1
Artemisia douglasiana	x	<1
Avena barbata	x	<1
Baccharis pilularis	x	<1
Bromus diandrus	x	<1
Carex barbarae	x	<1
Carpobrotus edulis	x	<1
Juncus textilis	x	<1
Leymus triticoides	x	<1
Lonicera involucrata	x	<1
Oxalis pes-caprae	x	<1
Pteridium aquilinum	x	<1
Rhamnus crocea	x	<1
Sonchus oleraceus	x	<1
Stachys bullata	x	<1
Vulpia microstachys	x	<1
bare		10.00%
rock		
litter		
logs/branches		
Total	***23***	***166%***

Photo 17: Example of Coast Live Oak Forest surveyed at Site 17.

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	96
Date Surveyed	13-May-04
Elevation	184
Topography	Concave; lower
Slope	3%
Aspect	W
No. Native species	18
No. Non-native species	5
Depth of litter (in)	
Tree Height (ft)	25-30
Shrub Height (ft)	6-8
Herb Height (ft)	1
Disturbance	Trail disturbance

Other Notes	Old oaks
Comparison Site	None

Coast Live Oak Woodland and Forest Site
Rapid Assessment Information (Site 18)

Holland Type **Coast Live Oak Forest**
CNPS Series **Evergreen Woodland: Coast Live Oak Series**
CNPS Association **Coast Live Oak/Coffee Berry/Poison Oak-Bracken Fern Forest**

Species	Present	Mean Cover
Quercus agrifolia	x	98.33%
Toxicodendron diversilobum	x	33.33%
Pteridium aquilinum	x	31.67%
Rhamnus californica	x	12.33%
Baccharis pilularis	x	<1
Cercocarpus betuloides	x	<1
Chenopodium californicum	x	<1
Galium andrewsii	x	<1
Marah fabaceus	x	<1
Salvia spathacea	x	<1
Sanicula crassicaulis	x	<1
Scrophularia californica	x	<1
Solanum douglasii	x	<1
Stachys bullata	x	<1
bare		<1
rock		
litter		
water		<1
Total	***14***	***176%***

Photo 18: Example of Coast Live Oak Forest surveyed at Site 18.

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	34
Date Surveyed	24-May-04
Elevation	358
Topography	Convex; mid
Slope	7%
Aspect	WNW
No. Native species	14
No. Non-native species	0
Depth of litter (in)	2
Tree Height (ft)	20-30
Shrub Height (ft)	2-6
Herb Height (ft)	<1

Disturbance	
Other Notes	Oaks woodland surrounding marsh
Comparison Site	None

Coast Live Oak Woodland and Forest Site
Rapid Assessment Information (Site 19)

Holland Type **Coast Live Oak Forest**
CNPS Series **Coast Live Oak Series**
CNPS Association **Coast Live Oak/Poison Oak Forest**

Species	Present	Mean Cover
Quercus agrifolia	x	100.00%
Toxicodendron diversilobum	x	53.33%
Baccharis pilularis	x	3.67%
Mimulus aurantiacus ssp. lompocense	x	1.00%
Juncus phaeocephalus	x	<1
Leymus condensatus	x	4.00%
Carex globosa	x	<1
Salvia mellifera	x	3.33%
Leymus triticoides	x	<1
Adenostoma fasciculatum	x	<1
Sanicula crassicaulis	x	<1
Artermisia californica	x	<1
bare		35.00%
water		
Total	***12***	***202%***

Photo not available

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	81
Date Surveyed	7-Jun-04
Elevation	280
Topography	mid
Slope	3%
Aspect	SE
No. Native species	12
No. Non-native species	0
Depth of litter (in)	0
Tree Height (ft)	30
Shrub Height (ft)	2-6
Herb Height (ft)	<1
Disturbance	
Other Notes	

Comparison Site	None

4. *Bishop Pine Forest Sites*

Bishop Pine Woodland and Forest Site
Rapid Assessment Information (Site 20)

Holland Type **Southern Bishop Pine Woodland**
CNPS Series **Bishop Pine Series**
CNPS Association **Bishop Pine/Purisima Manzanita Woodland**

Species	Present	Mean Cover
Pinus muricata	x	38.00%
Arctostaphylos purissima	x	36.67%
Adenostoma fasciculatum	x	5.00%
Quercus agrifolia	x	5.00%
Arctostaphylos rudis	x	1.67%
Ceanothus cuneatus var. fascicularis	x	1.67%
Quercus parvula	x	<1
Ericameria ericoides	x	<1
Mimulus aurantiacus ssp. lompocense	x	<1
Artemisia californica	x	<1
Baccharis pilularis	x	<1
Pteridium aquilinum	x	<1
bare		11.00%
rock		
litter		
logs/branches		
Total	***12***	***100%***

Photo 20: Example of Southern Bishop Pine Woodland surveyed at Site 20.

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	35
Date Surveyed	6-Apr-04
Elevation	443
Topography	Flat; lower
Slope	0%
Aspect	Flat
No. Native species	12
No. Non-native species	0
Depth of litter (in)	
Tree Height (ft)	15-20
Shrub Height (ft)	3-4
Herb Height (ft)	1

Disturbance	Trash
Other Notes	Quercus parvula; Ceanothus cuneatus var. fascicularis
Comparison Site	None

Bishop Pine Woodland and Forest Site
Rapid Assessment Information (Site 21)

Holland Type **Southern Bishop Pine Woodland**
CNPS Series **Bishop Pine Series**
CNPS Association **Bishop Pine/Chamise Woodland**

Species	Present	Mean Cover
Adenostoma fasciculatum	x	3.67%
Pinus muricata	x	3.67%
Arctostaphylos purissima	x	<1
Arctostaphylos tomentosa spp. eastwoodiana	x	<1
Baccharis pilularis	x	<1
Bromus madritensis	x	<1
Carduus pycnocephalus	x	<1
Conyza canadensis	x	<1
Ehrharta calycina	x	<1
Erechtites glomerata	x	<1
Ericameria ericoides	x	<1
Hazardia squarrosa	x	<1
Helianthemum scoparium	x	<1
Heteromeles arbutifolia	x	<1
Hypochoeris radicata	x	<1
Lotus junceus	x	<1
Nassella pulchra	x	<1
Quercus agrifolia	x	<1
Salvia mellifera	x	<1
Solanum umbelliferum	x	<1
Stephanomeria virgata	x	<1
Vulpia myuros	x	<1
bare		90.33%
rock		
litter		
logs/branches		
Total	***22***	***98%***

Photo 21: Example of Southern Bishop Pine Woodland surveyed at Site 21. Site was recently burned in 2000.

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	5
Date Surveyed	24-May-04
Elevation	762

Topography	Undulating; top
Slope	0%
Aspect	Various
No. Native species	16
No. Non-native species	6
Depth of litter (in)	
Tree Height (ft)	2-4
Shrub Height (ft)	2-4
Herb Height (ft)	<1
Disturbance	Recent fire (2000); soil erosion
Other Notes	*Arctostaphjylos tomentosa ssp. eastwoodiana* present
Comparison Site	None

5. *Native and Non-Native Grassland Sites*

Native Grassland Site
Rapid Assessment Information (Site 22)

Holland Type **Native Grassland**
CNPS Series **Coyote Brush Series**
CNPS Association **Coyote Bush/Alkali Ryegrass-Slender Needlegrass Grassland**

Species	Present	Mean Cover
Leymus triticoides	x	15.00%
Baccharis pilularis	x	10.00%
Nassella lepida	x	10.00%
Arctostaphylos purissima	x	1.00%
Arctostaphylos rudis	x	1.00%
Bromus hordeaceus	x	<1
Clarkia sp	x	<1
Crassula connata	x	<1
Erodium botrys	x	<1
Hazardia squarrosa	x	<1
Horkelia cuneata	x	<1
Isocoma menziesii	x	<1
Juncus phaeocephalus	x	<1
Plantago lanceolata	x	<1
Silene gallica	x	<1
Castilleja densiflora	x	<1
Vulpia myuros	x	<1
bare		40.00%
rock		
litter		
logs/branches		

Photo not available

Total	***17***	***77%***

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	92
Date Surveyed	13-May-04
Elevation	296
Topography	Concave; upper
Slope	2%
Aspect	SE
No. Native species	19
No. Non-native species	4
Depth of litter (in)	
Tree Height (ft)	0
Shrub Height (ft)	0
Herb Height (ft)	1
Disturbance	trash dumped
Other Notes	Old area; surrounded by oak woodland; small drainage heading south; wetland species present
Comparison Site	None

Native and Non-Native Grassland Site Rapid Assessment Information (Site 23)

Holland Type **Non-Native Grassland**

CNPS Series **California Annual Grassland Series**

CNPS Association **Broad-leaved Filaree-Soft Chess Non-Native Grassland**

Species	Present	Mean Cover
Erodium botrys	x	30.00%
Bromus hordeaceus	x	26.00%
Avena barbata	x	7.00%
Croton californicus	x	5.00%
Bromus diandrus	x	4.00%
Bromus madritensis	x	2.50%
Lupinus bicolor	x	1.50%
Cryptantha sp	x	<1
Ericameria ericoides	x	<1
Hypochoeris glabra	x	<1
Lupinus albifrons	x	<1
Lupinus truncatus	x	<1
Toxicodendron diversilobum	x	<1
Salvia mellifera	x	<1
bare		8.33%
rock		
litter		

Photo 23: Example of Non-Native Grassland in foreground surveyed at Site 23.

logs/branches		
Total	***14***	***84%***

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	67
Date Surveyed	27-Apr-04
Elevation	642
Topography	Undulating
Slope	2%
Aspect	SE
No. Native species	8
No. Non-native species	6
Depth of litter (in)	
Tree Height (ft)	0
Shrub Height (ft)	0
Herb Height (ft)	<1
Disturbance	Grazing history (tree line), gopher activity
Other Notes	Oak seedlings present
Comparison Site	None

Native Grassland Site
Rapid Assessment Information (Site 24)

Holland Type **Native Grassland**
CNPS Series **Deer Grass Series**
CNPS Association **Deer Grass Grassland**

Photo not available

Species	Present	Mean Cover
Muhlenbergia rigens	x	81.67%
Baccharis pilularis	x	10.33%
Juncus phaeocephalus	x	7.67%
Juncus patens	x	1.67%
Anagallis arvensis	x	<1
Arctostaphylos purissima	x	<1
Arctostaphylos rudis	x	<1
Ceanothus cuneatus var. fascicularis	x	<1
Erodium botrys	x	<1
Gnaphalium californicum	x	<1
Juncus textilis	x	<1
Leymus triticoides	x	<1
Mimulus aurantiacus ssp. lompocense	x	<1
Quercus agrifolia	x	<1

Rumex acetosella	x	<1
bare		2.33%
rock		
litter		
logs/branches		
Total	***15***	***104%***

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	91
Date Surveyed	13-May-04
Elevation	379
Topography	Concave; upper
Slope	2%
Aspect	SE
No. Native species	12
No. Non-native species	3
Depth of litter (in)	
Tree Height (ft)	0
Shrub Height (ft)	0
Herb Height (ft)	1-3
Disturbance	
Other Notes	*Muhlenbergia* species (dominant); surrounded by oak woodland
Comparison Site	None

6. *Riparian Sites*

Riparian Site Rapid Assessment Information (Site 25)

Holland Type **Central Coast Arroyo Willow Riparian Forest**
CNPS Series **Deciduous Forests and Woodlands: Arroyo Willow Series**
CNPS Association **Arroyo Willow/Elderberry Riparian Forest**

Species	Present	Mean Cover
Salix lasiolepis	x	100.00%
Sambucus mexicanus	x	16.67%
Baccharis douglasii	x	2.67%
Baccharis pilularis	x	2.67%
Rubus ursinus	x	1.67%
Bromus hordeaceus	x	<1
Carduus pycnocephalus	x	<1
Carex barbarae	x	<1
Conium maculatum	x	<1
Juncus patens	x	<1
Juncus textilis	x	<1

Photo not available

Piptatherum miliaceum	x	<1
bare		78.33%
Total	***12***	***202%***

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	82
Date Surveyed	7-Jun-04
Elevation	254
Topography	Flat
Slope	0%
Aspect	Flat
No. Native species	8
No. Non-native species	4
Depth of litter (in)	0
Tree Height (ft)	25-30
Shrub Height (ft)	4-10
Herb Height (ft)	<1
Disturbance	ORV evidence
Other Notes	Stream bed dry
Comparison Site	None

Riparian Site Rapid Assessment Information (Site 26)

Holland Type **Southern Cottonwood Riparian Forest**
CNPS Series **Deciduous Forests and Woodlands: Black Cottonwood Series**
CNPS Association **Black Cottonwood/Poison Oak-California Blackberry Forest**

Species	Present	Mean Cover
Populus balsamifera ssp. trichocarpa	x	96.67%
Toxicodendron diversilobum	x	66.67%
Rubus ursinus	x	15.67%
Baccharis douglasii	x	1.67%
Rhamnus californica	x	1.00%
Salix lasiolepis	x	<1
Conium maculatum	x	<1
bare		<1
rock		
litter		
water		<1

Photo 26: Example of Riparian Forest surveyed at Site 26.

Total	***7***	***182%***

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	22
Date Surveyed	24-May-04
Elevation	356
Topography	Flat; bottom
Slope	0%
Aspect	Flat
No. Native species	6
No. Non-native species	1
Depth of litter (in)	
Tree Height (ft)	20-30
Shrub Height (ft)	0
Herb Height (ft)	2-6
Disturbance	Poison hemlock (scattered)
Other Notes	
Comparison Site	None

Riparian Site Rapid Assessment Information (Site 27)

Holland Type	**Central Coast Arroyo Willow Riparian Forest**
CNPS Series	**Deciduous Forests and Woodlands: Arroyo Willow Series**
CNPS Association	**Arroyo Willow/Poison Oak-California Blackberry Forest**

Species	Present	Mean Cover
Salix lasiolepis	x	91.33%
Rubus ursinus	x	43.33%
Toxicodendron diversilobum	x	25.00%
Leymus triticoides	x	8.33%
Juncus textilis	x	<1
Baccharis pilularis	x	<1
Conium maculatum	x	<1
Cynara cardunculus	x	<1
Scrophularia californica	x	<1
Urtica holosericea	x	<1
bare		
rock		
litter		
water		<1
Total	***10***	***168%***

Photo 27: Example of Riparian Forest surveyed at Site 27.

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	23
Date Surveyed	24-May-04
Elevation	356
Topography	Flat; bottom
Slope	0%
Aspect	Flat
No. Native species	8
No. Non-native species	2
Depth of litter (in)	
Tree Height (ft)	20-30
Shrub Height (ft)	0
Herb Height (ft)	2-6
Disturbance	Poison hemlock (scattered)
Other Notes	
Comparison Site	None

7. *Wetland Habitat Sites*

Unique Stand: Vernal Pool Rapid Assessment Information (Site 28)

Holland Type **Vernal Pool**
CNPS Series **Unique Stand: Burton Mesa Vernal Pool**
CNPS Association **Brown-headed Rush Vernal Pool**

Species	Present	Mean Cover
Juncus phaeocephalus	x	97.00%
Bromus hordeaceus	x	1.33%
Avena barbata	x	<1
Bromus diandrus	x	<1
Gnaphalium californicum	x	<1
Rumex acetosella	x	<1
Anagallis arvensis	x	<1
Baccharis pilularis	x	<1
Erodium botrys	x	<1
Erodium cicutarium	x	<1
Filago gallica	x	<1
Geranium dissectum	x	<1
Gnapalium canescens	x	<1
Hordeum murinum	x	<1
Hypochoeris radicata	x	<1
Lolium multiflorum	x	<1
Phalaris aquatica	x	<1
Polygonum arenastrum	x	<1
Polypogon monspeliensis	x	<1
Quercus agrifolia	x	<1
Sonchus asper	x	<1
bare		<1
rock		
litter		
logs/branches		
Total	***21***	***100%***

Photo not available

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	87
Date Surveyed	13-May-04
Elevation	372
Topography	Flat; convex
Slope	1-5%
Aspect	SSE
No. Native species	5
No. Non-native species	16
Depth of litter (in)	
Tree Height (ft)	0
Shrub Height (ft)	0

Herb Height (ft)	<1
Disturbance	Erosion; non-native grassland surrounding
Other Notes	Non-native grasses
Comparison Site	None

Unique Stand: Vernal Pool Rapid Assessment Information (Site 29)

Holland Type **Vernal Pool**
CNPS Series **Unique Stand: Burton Mesa Vernal Pool**
CNPS Association **Sticky Baccharis/Brown-headed Rush Vernal Pool**

Species	Present	Mean Cover
Juncus phaeocephalus	x	32.50%
Baccharis douglasii	x	28.50%
Leymus triticoides	x	7.50%
Rumex acetosella	x	6.00%
Bromus hordeaceus	x	5.00%
Vulpia myuros	x	3.50%
Madia sativa	x	1.00%
Baccharis pilularis	x	<1
Bromus diandrus	x	<1
Erechtites glomerata	x	<1
Erodium botrys	x	<1
Hypochoeris radicata	x	<1
Lythrum hyssopifolium	x	<1
bare		<1
rock		
litter		
water		0%
Total	***13***	***85%***

Photo not available

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	75
Date Surveyed	7-Jun-04
Elevation	365
Topography	Undulating; upper
Slope	0%
Aspect	Flat
No. Native species	5
No. Non-native species	8
Depth of litter (in)	0
Tree Height (ft)	0
Shrub Height (ft)	1-3
Herb Height (ft)	<1
Disturbance	Burnt in 1994, ORV evident

Other Notes	Outside ring of vernal wetland
Comparison Site	None

Unique Stand: Vernal Pool Rapid Assessment Information (Site 30)

Holland Type **Vernal Pool**
CNPS Series **Unique Stand: Burton Mesa Vernal Pool**
CNPS Association **Alkali Mallow/Mexican Rush-Common Spikerush Vernal Pool**

Species	Present	Mean Cover
Juncus mexicanus	x	57.50%
Malvella leprosa	x	15.00%
Eleocharis macrostachya	x	12.50%
Polypogon monspeliensis	x	5.00%
Distichilis spicata	x	<1
Baccharis douglasii	x	<1
Bloomeria crocea	x	<1
Bromus hordeaceus	x	<1
Cotula coronopifolia	x	<1
Grindelia sp	x	<1
Rumex crispus	x	<1
Sonchus oleraceus	x	<1
bare		8.33%
rock		
litter		
water		<1
Total	***12***	***99%***

Photo not available

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	75
Date Surveyed	7-Jun-04
Elevation	365
Topography	Undulating; upper
Slope	0%
Aspect	Flat
No. Native species	7
No. Non-native species	5
Depth of litter (in)	0
Tree Height (ft)	0
Shrub Height (ft)	1-3
Herb Height (ft)	<1
Disturbance	Burnt in 1994, ORV evident
Other Notes	Inside ring of vernal wetland
Comparison Site	None

Unique Stand: Vernal Pool Rapid Assessment Information (Site 31)

Holland Type **Vernal Pool**
CNPS Series **Unique Stand: Burton Mesa Vernal Pool**
CNPS Association **Brown-headed Rush Vernal Pool**

Species	Present	Mean Cover
Juncus phaeocephalus	x	92.50%
Vulpia myuros	x	2.50%
Malvella leprosa	x	<1
Stephanomeria virgata	x	<1
Sonchus oleraceus	x	<1
Rumex crispus	x	<1
Hypochoeris radicata	x	<1
Gnaphalium palustre	x	<1
Erechtites glomerata	x	<1
Cotula coronopifolia	x	<1
Bromus madritensis ssp rubens	x	<1
Bromus hordeaceus	x	<1
bare		4.00%
rock		
litter		
water		<1
Total	***12***	***100%***

Photo not available

ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	75
Date Surveyed	7-Jun-04
Elevation	365
Topography	Undulating; upper
Slope	0%
Aspect	Flat
No. Native species	5
No. Non-native species	7
Depth of litter (in)	0
Tree Height (ft)	0
Shrub Height (ft)	1-3
Herb Height (ft)	<1
Disturbance	Burnt in 1994, ORV evident
Other Notes	Inside ring of vernal wetland
Comparison Site	None

Emergent Wetland Rapid Assessment Information (Site 32)

Holland Type **Emergent Wetland**
CNPS Series **Common Monkey Flower Series**
CNPS Association **Common Monkey Flower-Common Willow Herb Wetland**

Species	Present	Mean Cover
Mimulus guttatus	x	54.67%
Epilobium ciliatum?	x	7.67%
Juncus effusus	x	1.67%
Baccharis pilularis	x	1.00%
Lythrum hyssopifolium	x	1.00%
Anagallis arvensis	x	<1
Juncus bufonius	x	<1
Polypogon monspeliensis	x	<1
Rumex conglomeratus	x	<1
Scirpus microcarpus	x	<1
bare		<1
rock		
litter		
water		33.33%
Total	***10***	***99%***

Photo 32: Example of Riparian Forest surveyed at Site 32.

ENVIRONMENTAL DATA (see GIS database for more information)

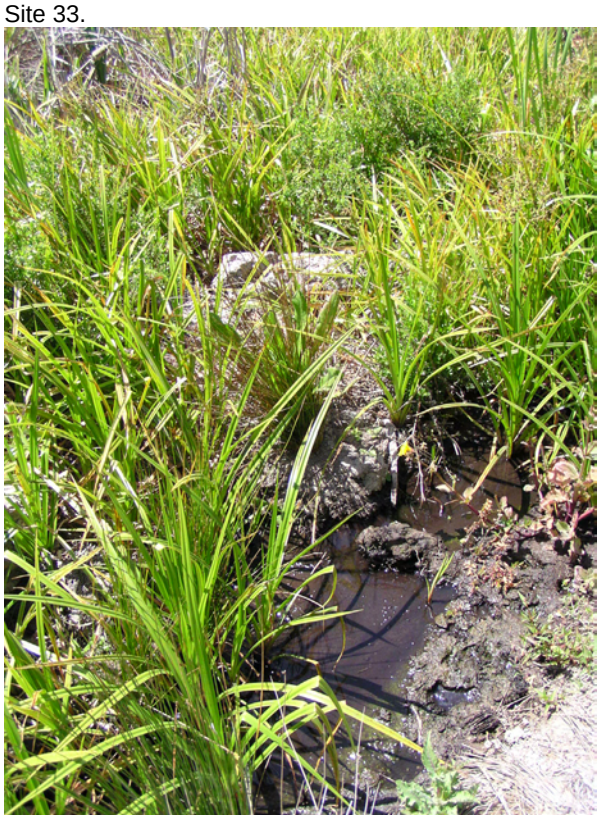
WP No.	20
Date Surveyed	24-May-04
Elevation	321
Topography	Flat; bottom
Slope	0%
Aspect	Flat
No. Native species	6
No. Non-native species	4
Depth of litter (in)	
Tree Height (ft)	0
Shrub Height (ft)	0
Herb Height (ft)	2-6
Disturbance	Agricultural field adjacent
Other Notes	
Comparison Site	None

Emergent Wetland Rapid Assessment Information (Site 33)

Holland Type **Emergent Wetland**
CNPS Series **Bulrush Series**
CNPS Association **Small-fruited Bulrush Wetland**

Species	Present	Mean Cover
Scirpus microcarpus	x	91.67%
Juncus effusus	x	1.33%
Epilobium ciliatum?	x	<1
Typha latifolia	x	<1
Anagallis arvensis	x	<1
Juncus balticus	x	<1
Mimulus guttatus	x	<1
Urtico holosericea	x	<1
bare		<1
rock		
litter		
water		<1
Total	***8***	***94%***

Photo 33: Example of Riparian Forest surveyed at Site 33.



ENVIRONMENTAL DATA (see GIS database for more information)

WP No.	21
Date Surveyed	24-May-04
Elevation	341
Topography	Flat; bottom
Slope	0%
Aspect	Flat
No. Native species	7
No. Non-native species	1
Depth of litter (in)	
Tree Height (ft)	0
Shrub Height (ft)	0
Herb Height (ft)	2-6
Disturbance	Agricultural field adjacent
Other Notes	
Comparison Site	None

BIRD SURVEY POINT COUNT FORM

APPENDIX 7A

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

Appendix 7a

Bird Point Count Form

Burton Mesa Land Management Plan Surveys Point Counts Page of

Point ID #: Visit #: start time: leave time: Date: **2003**

Weather: ° F % mph Flag Locations/ color:

Location/Notes: Habitat: % (habitat) w/in 50m:

Noise Distractions? (Type, Loudness, Duration):

Observer: Mark Holmgren

Spec Code	<50m	>50m	<50 fly	>50 fly	Notes

Key: C=Call; V=Visual; S=Singing; J=Juvenile Visual; fl = fledgling; Subscript m = Male; Sub f= Female; **CIRCLE** if NOT in Riparian; **BOX** if only 95-98% sure of identification; **DIAMOND** if same individual as last point; Observations in **PARENTHESIS** are likely associated with a territory of an already observed individual. Species Below ~~~ noted after 5 Minutes; Species Below ≈≈≈≈≈≈≈≈≈≈ noted in between points

VEGETATION RAPID ASSESSMENT FORM

APPENDIX 7B

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

Appendix 7b

CALIFORNIA NATIVE PLANT SOCIETY - VEGETATION RAPID ASSESSMENT FIELD FORM

(Revised February 5, 2003)

For Office Use:	Final database #:	Final vegetation type name:	Alliance_____ Association_____

LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo #:	Date:	Name(s) of surveyors:
_____	_____	_____	_____

GPS waypoint #: _____ **GPS name:** _____ **GPS datum: (NAD 27)** _____ **Is GPS within stand?** Yes / No

If No cite distance (note ft/m), bearing and view from point to stand center: _____ **Error: ±**_____ **ft/m**

UTM field reading: UTME __ __ __ __ __ __ **UTMN** __ __ __ __ __ __ __ **UTM zone:** _____

Elevation: _____ **ft/m Photograph #'s**: _____

Topography: flat____ **concave**____ **convex**____ **undulating**____ | **bottom**____ **lower**____ **mid**____ **upper**____ **top**____

Geology: _____ **Soil Texture:** _____ **% Large Rock**_____ **% Small Rock**_____ **% Bare/Fines**_____

Slope exposure (circle one and/or enter actual °): **NE**_____ **SE**_____ **SW**_____ **NW**_____ **Flat**__ **Variable**__

Slope steepness (circle one and enter actual °): **0°**__ **1-5°** _____ **5-25°**_____ **> 25°**_____ **Upland** or **Wetland/Riparian** (circle one)

Site history, stand age, and comments: _____

_____

_____

Type / level of disturbance (use codes): _____

VEGETATION DESCRIPTION

Field-assessed vegetation alliance name: _____

Field-assessed association name (optional): _____

Size of stand: <1 acre___ **1-5 acres**___ **>5 acres**___ **Adjacent alliances:** _____ _____

_____ _____ _____ _____

Tree: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
If Tree, list 1-3 dominant overstory spp.: _____

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) **Desert Palm/Joshua Tree:** 1 (<1.5" base diameter), 2 (1.5-6" diam.), 3 (>6" diam.)

Desert Riparian Tree/Shrub: 1 (<2ft. stem ht.), 2 (2-10ft. ht.), 3 (10-20ft. ht.), 4 (>20ft. ht.)

% Overstory Conifer/Hardwood Tree cover: _____/_____ Shrub cover: _____ Herbaceous cover: _____ Total Veg cover:_____
Modal Conifer/Hardwood height: _____/_____ **Tall Shrub/Low Shrub height:** _____/_____ **Herbaceous height:** _____

Species (List up to 12 major species), Stratum, and Approximate % cover: (Jepson Manual nomenclature please)

Strata categories: T=tall, M=medium, L=low; **% cover** intervals for reference: **<1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%**

Strata	Species	% cover		Strata	Species	% cover

Major non-native species (with % cover): _____

Unusual species: _____

PROBLEMS WITH INTERPRETATION

Confidence in identification: (L, M, H) _____ **Explain** _____

Other identification problems (describe): _____

Polygon is more than one type: (Yes, No) _____ (Note: type with greatest coverage in polygon should be entered in above section)

Other types: _____ _____ _____

Has the vegetation changed since air photo taken? (Yes, No) _____ **If Yes, how? What has changed** (write N/A if so)**?** _____

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FINAL ENVIRONMENTAL IMPACT REPORT

APPENDIX 8

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

State of California
The Resources Agency
DEPARTMENT OF FISH AND GAME

FINAL
ENVIRONMENTAL IMPACT REPORT

State Clearing House Number 2005041134

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

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CONDOR ENVIRONMENTAL
PLANNING SERVICES, INC.
3944 State Street Suite #310, Santa Barbara, CA 93105
Tel: (805) 898-2000 • info@condorenvironmental.com

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1.0 INTRODUCTION

PURPOSE

The environmental review process for a proposed Burton Mesa Land Management Plan is being conducted by the California Department of Fish and Game in accordance with the California Environmental Quality Act. The information presented here is intended to provide public agency decision-makers and the general public with an analysis of environmental impacts of the project.

PURPOSE AND LEGAL AUTHORITY

This Environmental Impact Report (EIR) evaluates the environmental effects of a proposed Land Management Plan for Burton Mesa Ecological Reserve in Santa Barbara County. Burton Mesa Ecological Reserve is owned by the State Lands Commission and managed under lease agreement by the California Department of Fish and Game. This Final EIR has been prepared in conformance with the California Environmental Quality Act (CEQA) Guidelines. The EIR is intended to provide agencies, decision-makers and the general public with a clear and concise evaluation of potential impacts of the proposed Land Management Plan. The standards for adequacy of an EIR, defined in Section 15151 of the CEQA Guidelines are as follows:

"An EIR should be prepared with a significant degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good faith effort at full disclosure."

ENVIRONMENTAL REVIEW PROCESS

The Department of Fish and Game distributed a Notice of Preparation and Initial Study, on April 25th, 2005, which required a 30 day review period that closed on May 25th, 2005.

The initial study determined that the following resources could be significantly impacted and require review and evaluation in this EIR:

- Biological Resources
- Cultural Resources
- Fire Protection
- Geologic Hazards
- Hazards

- Noise and Vibration
- Recreation

Other environmental issues of concern were considered in the Initial Study (Appendix 1) and eliminated from detailed review in the EIR document, because they would not be affected or there would be a less than significant impact.

Section 6.0, Effects Found Not to be Significant provides a list of these issues, and Appendices 1 and 2 contain the NOP and Initial Study respectively.

EIR REVIEW PROCESS

As required by CEQA, the Draft EIR was circulated for a 45-day period of public review. During this period, written comments regarding the sufficiency of the document were submitted by all interested public agencies and private parties. During the public comment period, the Department of Fish and Game conducted a public hearing to present the Land Management Plan and EIR, and receive public comments. After the 45-day public review period ended, the Department of Fish and Game prepared written responses to all comments received. These responses are incorporated into this Final EIR, which was available for public review for 10 days prior to certification. The Final EIR was reviewed, considered, and certified by the Department of Fish and Game prior to any actions on the proposed Land Management Plan.

FORMAT AND CONTENT OF EIR

A description of the sections included in this EIR is provided below to assist the reader in using this document.

Section 2.0, Executive Summary, includes a project description, project alternatives, and a summary of the impacts and mitigation measures identified in the EIR.

Section 3.0, Project Description, presents a detailed description of the proposed project as required by CEQA Guidelines, which includes the project location, characteristics, and objectives.

Section 4.0, Environmental Impact Analysis, lists the environmental topics that were determined to be potentially significant.

Each resource area contains the following sub-sections:

- Existing Conditions
- Impacts
- Mitigation
- Residual Impact Significance

Section 5.0, Significant Environmental Effects that Cannot be Avoided, addresses impacts that cannot be mitigated to a less than significant level.

Section 6.0, Environmental Effects Found not to be Significant, draws attention to issues that were determined to have no impact or less than significant impacts, therefore, eliminated from detailed review.

Section 7.0, Project Alternatives, are required by CEQA guidelines to provide a comparative analysis of practical alternatives to the proposed project.

Section 8.0, References and Consultants, used in the preparation of this EIR.

Section 9.0, List of Persons who prepared this EIR

Appendices

Appendix 1: NOP, NOC, and Initial Study

Appendix 2: Botanical and Wildlife Surveys in Fuel Management Segments

Appendix 3: Cultural Surveys of Fuel Management Segments

Appendix 4: Public Comments

2.0 EXECUTIVE SUMMARY

PURPOSE

This section provides a summary of the proposed Burton Mesa Ecological Reserve Management Plan, Objectives, Overview of Topics of Known Concern, Alternatives, and a Summary of Impacts and Mitigation Measures associated with the project.

PROJECT LOCATION

Burton Mesa Ecological Reserve is located in northern Santa Barbara County, north of the City of Lompoc (Figure 1). It is approximately 20 miles due north of Point Conception and ranges from 7 to 13 miles inland (east) of the Pacific Ocean. The Reserve consists of approximately 5,735 acres with an irregular boundary, essentially surrounding the community of Vandenberg Village, and adjacent to the communities of Mission Hills and Mesa Oaks.

PROJECT CHARACTERISTICS

The project is a Land Management Plan for the 5,735 Burton Mesa Ecological Reserve. The Plan was developed to guide the Department of Fish and Game in management of the land consistent with ecological reserve regulations adopted by the California Fish and Game Commission and to achieve the Department's mission to protect and enhance wildlife values.

The Land Management Plan guides the management of habitats, species, and programs. It serves as a guide for appropriate public uses of the property, and provides a descriptive inventory of fish, wildlife, plants and habitats the property supports. It serves as a budget planning aid for annual regional budget preparation.

The Plan includes a fuel management plan (FMP) for areas of the Reserve adjacent to the communities of Vandenberg Village, Mesa Oaks and Mission Hills. It also addresses wildfire response; retention of approximately 28 miles of trails; boundary fencing; interpretive signs; enforcement of regulations that prohibit bee keeping, unauthorized vehicles and equestrian use; phasing out farming and livestock grazing; habitat restoration; and protection of biological and cultural resources.

TOPICS OF KNOWN CONCERN

The proposed plan could have potentially significant impacts on the following resources which are evaluated in this EIR:

Biological Resources

Cultural Resources

Noise and Vibration

Fire Protection

Geologic Hazards

Hazards

Recreation

ALTERNATIVES

Four alternatives are considered and two are discussed briefly but eliminated from further review. The Environmentally Superior Alternative is the proposed Land Management Plan project because it would result in the least amount of significant impact while achieving the project's objectives of providing opportunities for wildlife-dependent public access.

- Alternative 1: No Land Management Plan
- Alternative 2: Land Management Plan with No Fuel Management Plan
- Alternative 3: Land Management Plan with a Wider Fuel Management Zone
- Alternative 4: Environmentally Superior Alternative

Considered but eliminated from further review:

- Land Management Plan with no Fuel Management Plan component, but with a Roof Retrofit Project
- Prescribed Fire

All of the alternatives are discussed in detail in Section 7 of this EIR.

SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

See Table 2.0-1, Summary of Project Specific Impacts, for a summary of impacts, mitigation measures, and residual impacts. See Table 2.0-2 for detailed information on habitat impacts of the proposed Fuel Management Plan and associated mitigation measures.

Three types of residual impacts can exist after implementation of mitigation:

Significant and Unavoidable Impacts are impacts that cannot be avoided or lessened by implementing mitigation measures or alternatives.

Significant Impacts are impacts that can feasibly be mitigated to a less than significant level.

Less than significant Impacts are impacts that have been found not to significantly impact the site without the implementation of mitigation measures.

Table 2.0-1
Summary of Project Impacts

Environmental Impact	Mitigation Measures	Residual Impact
BIOLOGICAL RESOURCES		
Bird Species		
Fuel reduction activities may disturb nesting bird species; causing nest abandonment or destruction. This is a potentially significant impact.	No fuel reduction activities shall occur between mid-February and August, during the bird breeding season.	Less than significant
Removal of vegetation in treatment areas in the FMZ will reduce overall habitat quality. Reductions in vegetative cover are expected to reduce the habitat's carrying capacity to support bird nesting, roosting and foraging. This is a potentially significant impact.	Removal of vegetation will be done according to the Fuel Management Plan utilizing the identified menu of treatments as appropriate for each segment. The treatment methods identified are designed to minimize impacts while achieving fuel reduction goals. Reductions in habitat quality will be mitigated through restoration of disturbed areas within the Reserve. This will increase the habitat quality on the interior of the Reserve thereby increasing the overall carrying capacity for bird species.	
Amphibian and Reptile Species		
Fuel reduction activities from March to late August, during the active period of the California horned lizard, could significantly impact the population status of this species; resulting in possible disruption of animal activities.	No fuel reduction activities shall occur between March and August to avoid impact to the California horned lizard.	Less than significant
Silvery legless lizards are likely to be found in fuel management zone segments. They do not survive where there is a lot of human activity or disturbance (Hovey, 2004).	Biological surveys will be conducted prior to all work and a salvage and relocation effort will be implemented if sensitive amphibians (such as the silvery legless lizard) are found.	Less than significant
Fuel reduction activities are expected to create open areas which may become susceptible to Argentine ant invasion, and domestic pets, with potentially significant impacts to native reptile, amphibians, small mammals, and birds. This is a potentially significant impact.	Weed removal and removal of Argentine ant habitat shall occur to lessen the impacts on amphibians, reptiles, small mammals and birds that have declined due to the expansion of invasive species into native habitats. The FMZ areas will be routinely monitored and non-native species invasions will be treated to reduce the likelihood of further expansion into the Reserve.	Significant
Maintenance of fuel management zones could lead to invasion by veldt grass, iceplant, and other weeds that can displace native habitats causing a significant impact.		

Environmental Impact	Mitigation Measures	Residual Impact
BIOLOGICAL RESOURCES (continued)		
Mammal Species		
Fuel reduction activities at the Reserve during the badger breeding season (March-May) would significantly impact this species population by causing disturbance, stress, and den displacement of mothers and their cubs. However, If the fuel removal is done outside of the breeding season, it may actually enhance badger foraging opportunities by creating habitat more favorable to this species. A potentially beneficial impact.	Fuel reduction activities shall not occur during Badger breeding season (March-May) and if any denning burrows are found they shall be avoided.	Less than significant
Western gray squirrel populations reside predominantly in oak woodland communities. If oak trees are removed in the process of fuel reduction activities, their habitat could be impacted. Fuel materials expected to be removed are primarily shrubs; removal of oak trees is not proposed, but pruning would occur Therefore, western gray squirrel is not expected to be significantly impacted.	Pruning of Coast live oaks shall be minimized in order to reduce impacts to western gray squirrels.	Less than significant
Fuel reduction in the fuel break may remove some nesting habitat for the Large-eared woodrat, formally known as the "dusky footed woodrat." Woodrat nests are usually located at the base of oak trees and are a ready source of combustible fuel. Fuel reductions may also reduce foraging opportunities for the species in the fuel break areas which consist of chaparral and sage scrub communities. Due to the abundance of oak woodland and chaparral habitats on the Burton Mesa Reserve the impact would not be significant. The San Diego desert woodrat is unlikely to inhabit the fuel break zones and the fuel modifications are not expected to have significant impact on the species. However, if their presence is confirmed, the impacts would be significant.	No mitigation for large-eared woodrat is required. A biological monitor shall be on site to identify any evidence of the San Diego woodrat in the fuel break segments and if found, nests will be left intact and avoided.	
Mule deer are relatively common within the FMZ segments. The Department of Fish and Game found a higher level of deer activity on Segment 9. It is possible that Segment 9 serves as an important area during fawning season lasting from early April to June. Fuel reduction activities during this time of year could significantly impact this species by causing disturbance, stress, and/or displacement.Mule deer are relatively common within the fuel break segments.	Significant vegetation clearing shall be avoided in Segment 9 during mule deer fawning season which generally occurs from early April to June.	
The installation of perimeter fencing to assist in the enforcement of public access regulations could impact movement of large animals (mountain lion, deer, bobcat, gray fox, and coyote) to and from the Reserve.	Perimeter fencing shall follow design specifications which allow for movement of large animals. Areas currently fenced with barbed wire shall be phased out and replaced with barbless wire.	

Environmental Impact	Mitigation Measures	Residual Impact
BIOLOGICAL RESOURCES (continued)		
Plant Species and Natural Communities		
Fuel reduction activities in the fuel break are expected to reduce or remove habitat for individuals of the following rare plants: Seaside bird's beak, Hoover's bent grass, straight-awned spineflower, curly leaved monardella, California spineflower, small-seed fiddleneck, San Luis Obispo wallflower, Freemont's monkeyflower, purisima manzanita, shagbark manzanita, lompoc ceanothus, Santa Barbara ceanothus, and chaparral mallow. This is a significant impact.	A botanist approved by the Department of Fish and Game shall survey and identify all locations of sensitive plant species within the fuel break, in order to avoid these species to the maximum extent feasible. Some prescriptions may require removal of rare shrubs and subshrubs to achieve fuel reduction goals. A biological monitor shall be present during fuel modification activities to ensure avoidance is implemented. Areas will be monitored for an increase in non-native invasives and will be routinely treated to lessen the impact on native plant and animals. Fuel management treatments (other than mowing) shall be conducted from September through February to minimize trampling of rare, young, herbaceous plants.	Less than significant
The removal of subshrub biomass could result in a shift in vegetation type. There is a potential for expansion of herbaceous annuals, including rare annuals (beneficial impact). Invasive weeds and invasive animals, such as Argentine ants, are likely due to the creation of more open habitats. This is a significant impact.	A botanist approved by the Department of fish and Game shall survey and identify locations of sensitive shrubs and subshrubs in order to avoid these species to the maximum extent feasible. Some prescriptions may require removal of rare shrubs and subshrubs to achieve fuel reduction goals. A biological monitor shall be present during the fuel modification activities to ensure avoidance is implemented. Areas will be monitored for an increase in non-native invasives and will be routinely treated to lessen the impact on native plant and animals. Fuel break treatments (other than mowing) shall be conducted from September through October to minimize trampling of young herbaceous plants.	
Removal of vegetation in FMZ areas could reduce the overall carrying capacity of the habitat to sustain native insect populations, which could affect both local plant species and wildlife which rely upon insect populations. Vegetation removal will also increase the susceptibility of habitats to invasion of non-native species by creating more open and possibly disturbed habitat, and by potential introduction of propagules by staff implementing fuel reduction measures. These are significant impacts.	Removal of vegetation shall be done in accordance with the Fuel Management Plan. Consideration will be given to the timing of work so as to reduceimpacts to native insect species. All equipment and shoes shall be cleaned and free of seeds prior to use in the fuel break area to reduce the introduction of invasive plant species. Staging areas shall not be located in weedy areas in order to prevent spread of weed propagules.	
Open areas in the FMZ, presently occupied by shrubs and subshrubs, could be susceptible to future disturbance by unauthorized vehicles and create new access into areas currently considered pristine Burton Mesa Chaparral. This is a significant impact.	FMZ segments will be assessed for their potential to increase access problems. Barriers and/or signage will be placed in key areas to prevent and minimize new intrusions into the Reserve.	

Environmental Impact	Mitigation Measures	Residual Impact
BIOLOGICAL RESOURCES (continued)		
Plant Species and Natural Communities (continued)		
Removal of vegetation in the FMZ will reduce the overall habitat quality in the treatment areas. Areas of high quality Burton Mesa chaparral and/or coastal scrub will be reduced to low quality habitat following thinning and treatments. Areas of medium quality will be reduced to low quality. This is a significant impact. The total high quality habitat to be reduced to low quality is approximately 2.8 acres, and the medium quality habitat to be reduced to low quality is 15.3 acres. Low quality areas typically include areas previously impacted by past fuel reduction work and impacts to those areas are expected to be less than significant.	Removal of vegetation will be done according to the Fuel Management Plan utilizing the identified menu of treatments as appropriate for each segment. The reduction in habitat quality will be mitigated through restoration of disturbed areas within the Reserve. This will increase the overall carrying capacity of the habitat and the species it supports. The total high quality habitat to be reduced to low quality is approximately 2.8 acres, and the medium quality habitat to be reduced to low quality is 15.3 acres. Low quality areas typically include areas previously impacted by past fuel reduction work and impacts to those areas are expected to be less than significant.	Less than significant
Removal of native vegetation for construction of 0.4 miles of new trails is significant. Consequently, new trails will be located in disturbed areas where feasible. The exact total area and habitat types impacted will be more thoroughly assessed prior to trail installation. The approximate width of the trails would be 10 feet, with impacts resulting in the direct impact to less than 0.5 acres. Two new trails are conceptually being proposed in the La Purisima Management Unit (1 in the east and 1 on the west end).	Removal of vegetation for the construction of 0.4 miles of new trails will be mitigated by the closure and restoration of 24.2 miles of existing trails within the Reserve. The closure and rehabilitation of these trails will increase the overall carrying capacity of the Reserve, thereby increasing the both the habitat quality and species utilization of the Reserve.	
CULTURAL RESOURCES		
Continued unauthorized use of vehicles, both in areas where cultural resources are known to be present as well in other areas where resources are likely to exist, could significantly damage these sites, a significant impact.	Unauthorized vehicles shall be excluded from the Reserve by the installation of barriers or boundary fencing; the extension of existing fencing to block unauthorized vehicle access across Highway 1; and routine patrols of the area would reduce impacts to a level of less than significant.	Less than significant
Construction and maintenance of the fuel management zone is not expected to impact cultural resources based upon the intensive survey conducted for this project within the proposed FMZ. No cultural resources were identified in the proposed FMZ segments, and no significant impact would occur.	If archaeological artifacts are unearthed or exposed during construction of the fuel management zones, informational kiosks, visitor's center, boundary fencing, mechanical weed removal, or habitat restoration activities, all ground disturbing work in the vicinity shall stop immediately, and the artifacts and the site shall be evaluated by an experienced archeologist. An appropriate plan for the evaluation of the artifacts from the site shall be prepared and its implementation overseen by an experienced archaeologist, approved by the California Department of Fish and Game, prior to restarting ground disturbance at the project site.	

Environmental Impact	Mitigation Measures	Residual Impact
CULTURAL RESOURCES (continued)		
Public use of trails in areas of cultural sensitivity could result in the unauthorized collection of artifacts from some of the more visible and accessible sites. This could potentially be a significant impact.	A monitoring system will be designed to routinely check cultural resource sites near trails to determine if adequate protection of the sites is occurring. Measures to protect resources will be implemented at the first sign of off-trail disturbance in their vicinity. Interpretive signs shall include elements that describe cultural resources of the Reserve and educate and inform the public regarding their legal and ethical responsibilities to protect cultural resources.	(continued) Less than significant
Construction of kiosks and/or a visitor's center, installation of boundary fencing, and habitat restoration that involves ground disturbance could significantly impact cultural resources.Mechanical weed removal activities could significantly impact unknown sub-surface cultural artifacts.	Surveys shall be performed in areas where sub-surface excavation is proposed.	Less than significant
	All areas where ground disturbing activities are performed shall be monitored.	
	If archaeological artifacts are unearthed or exposed during construction of the fuel management zones, informational kiosks, visitor's center, boundary fencing, mechanical weed removal, or habitat restoration activities, all ground disturbing work in the vicinity shall stop immediately, and the artifacts and the site shall be evaluated by an experienced archeologist. An appropriate plan for the evaluation of the artifacts from the site shall be prepared and its implementation overseen by an experienced archaeologist, approved by the California Department of Fish and Game, prior to restarting ground disturbance at the project site.	
	If paleontological artifacts are unearthed or exposed during construction or habitat restoration activities, all ground disturbing work in the vicinity shall stop immediately and the Department of Fish and Game notified. The artifacts and the site shall be evaluated by an experienced paleontologist/cultural resources specialist. An appropriate plan for the evaluation of the artifacts from the site shall be prepared and its implementation overseen by an experienced paleontologist.	
	If human remains are accidentally discovered or recognized during construction or habitat restoration activities, all excavation and ground disturbing work on or adjacent to the project site (or area of discovery) shall stop immediately. The County Coroner of the County in which the remains are discovered shall be contacted, and the Native American Heritage Commission shall be notified immediately and their recommendations and requirements adhered to, prior to continuation of activities.	

Environmental Impact	Mitigation Measures	Residual Impact
FIRE PROTECTION		
The fuel management zone project is expected to improve the safety of adjacent residential communities, but will not change the response time to local residences and will not cause an increase in fire fighting personnel, equipment, or facilities. The improvement of safety of adjacent residential communities is considered a beneficial impact.	No mitigation required	Beneficial
Fire Department access is expected to improve within and adjacent to the Reserve with implementation of the Fuel Management Plan; this is a beneficial impact.		
The Wildfire Response Plan is expected to improve the effectiveness of fire suppression within and adjacent to the Reserve, and is considered a beneficial impact.		
GEOLOGIC HAZARDS		
Erosion from poorly designed trails could result in loss of vegetative cover and wildlife habitat on exposed, sandy slopes.	Trails should be located in areas with stable soils to reduce the potential for erosion, and they should be engineered or designed so as to prevent erosion leading to the loss of vegetation. Water bars or rice straw wattles shall be installed on any trail that is located on a steep slope susceptible to erosion.	Less than significant
Hiking trails could become difficult to access and create unsafe conditions where soil erosion and loss is high; possibly resulting in trail closures.	Trails shall be temporarily closed after substantial rain events to prevent foot traffic from contributing to soil loss and rutting. Signs shall be posted in these areas to encourage responsible public use of trails.	
Erosion could lead to downcutting and sedimentation in stream beds. This is a significant impact.	Silt fencing or other effective means of minimizing erosion shall be installed when necessary. The Department shall encourage the County and private homeowners in the area to minimize erosion and to install sediment traps on properties adjacent to the Reserve to prevent sediment from entering drainages.	

Environmental Impact	Mitigation Measures	Residual Impact
HAZARDS		
Visitors to the Reserve and adjacent residents could be exposed to herbicides if those activities are conducted while wind speeds are above 5 miles per hour. This is a significant impact.	Using herbicides for weed removal activities shall be limited to when wind speeds are less than 5 miles per hour. All prescriptions and directions on the manufacturer's label shall be followed. Only trained personnel will administer herbicides and follow Department protocols, reporting procedures and safety precautions. Non-toxic or less toxic herbicides shall be used to the greatest extent feasible.	Less than significant
NOISE AND VIBRATION		
Fuel break construction and wood chipping will generate substantial short-term noise. This is a significant impact.	Fuel reduction activities will be limited to the hours between 8AM and 5PM Monday through Friday.	Less than significant
	The Department of Fish and Game or its agents shall make a diligent effort to notify adjacent residents in advance of vegetation removal or chipping within the fuel management zones.	
	Equipment will not be left idling for long periods; it will be turned off and jacketed when not in an active work mode.	
RECREATION		
Although some trails would be closed, the provision of 28.5 miles of trails for public, wildlife-dependent uses is a beneficial impact.	No mitigation is required	Beneficial

Table 2.0-2

Habitat Impacts of the Proposed Fuel Management Plan and Associated Mitigation Measures.

Segment Number	Total Acreage	High	Moderate	Low
1	1.049	1.049		
2	2.463			2.463
7	1.225		1.225	
8	3.46		3.46	
9	0.682		0.682	
10	3.8		3.8	
11	0.17			0.17
12	1.377	1.377		
13	2.2		1.1	1.1
14	3.07		1.54	1.54
15	1.029	0.38	0.68	
16	2.48		1.72	0.76
17	2.72			2.72
18	2.28		1.14	1.14
total:	**28.05**	**2.806**	**15.347**	**9.893**

Proposed Mitigation Ratios:

High Quality degrade to Low Quality= Two:One 2.806X2= **5.612 acres**

Moderate Quality degrades to Low Quality= One:One 15.347X1= **15.347 acres**

Low Quality remains Low Quality= zero

Total Mitigation: 20.959

Note: Segments 3, 4 and 5 are not recommended for treatment as they currently exhibit a post treatment condition. Segment 6 is not managed by the Department and will not be treated.

PROJECT DESCRIPTION

INTRODUCTION

CEQA Guidelines Section 15124 requires that a complete project description contain the following information:

1. *A statement of objectives*
2. *A precise location and boundaries of the proposed project shown on a detailed map, including a regional map*
3. *A general description of the project's technical, economic, and environmental characteristics*
4. *A statement briefly describing the intended uses of the EIR including a list of agencies that are expected to use the EIR in their decision making, a list of permits and other approvals required to implement the project, and a list of related environmental review and consultation requirements from federal, state, or local laws, regulations, or policies.*

PROJECT OBJECTIVES

The project has the following objectives:

1. The plan guides management of habitats, species, and programs described herein to achieve the department's mission to protect and enhance wildlife values.
2. The plan serves as a guide for appropriate public uses of the property.
3. The plan serves as a descriptive inventory of fish, wildlife and native plant habitats which occur on or use this property.
4. The plan provides an overview of the property's operation and maintenance, and personnel requirements to implement management goals. It serves as a budget planning aid for annual regional budget preparation.
5. The plan provides a description of potential and actual environmental impacts and subsequent mitigation which may occur during management, and contains environmental documentation to comply with state and federal statutes and regulations.

PROJECT LOCATION AND SITE CHARACTERISTICS

The Reserve is located in northern Santa Barbara County, north of the City of Lompoc (Figure 1). It is approximately 20 miles due north of Point Conception and ranges from 7 to 13 miles inland (east) of the Pacific Ocean. The Reserve consists of approximately 5,735 acres with an irregular boundary, essentially surrounding the community of Vandenberg Village, and adjacent to the communities of Mission Hills and Mesa Oaks.

State Highway 1 transects the southwestern part of the Reserve. Two additional major public roads, Harris Grade and Rucker Roads, run north to south crossing the Reserve on its eastern portion. Santa Lucia Canyon Road is roughly parallel to the Reserve's western boundary.

This property supports one of the last significant natural stands of maritime chaparral in central California. Because of the number of rare and endemic plants, the unusual oaks, a rich herbaceous understory and a diverse animal fauna, maritime chaparral on the Burton Mesa is recognized as a valuable biological resource. Various land uses have reduced the original extent of Burton Mesa Chaparral throughout the region and it has come under significant pressure from development and adjacent land uses, resulting in habitat loss and fragmentation and invasion of exotic species.

Land surrounding the Reserve consists of property owned by various parties, including the U.S. government and private land owners. The western boundary of the Reserve is shared with Vandenberg Air Force Base (VAFB), owned by the U.S. Department of Defense, and is delineated by a 100-foot wide fuel break. Beyond the southern boundary is a federal holding, of the Department of Justice (formerly owned by the U.S. Air Force) that houses the U.S. Bureau of Prisons federal penitentiary complex at Lompoc. The jagged northern perimeter is adjacent to an active oil field, now operated by Plains Exploration and Production Company. La Purisima Mission State Historic Park, owned and managed by California State Parks, is adjacent to and south of the eastern La Purisima Unit portion of the Reserve. The close proximity of this State Park results in a contiguous conservation area of over 7,000 acres.

The urban areas surrounded by and adjacent to the Reserve are known as Vandenberg Village, Mission Hills, and Mesa Oaks, which in total consist of more than 2,400 private homes, public schools, churches, businesses, roads and a golf course.

PROJECT CHARACTERISTICS

Burton Mesa Ecological Reserve is managed by the Department of Fish and Game for protection and enhancement of the important habitats, plants and animals it supports. The Land Management Plan guides management of habitats, species, and programs to achieve the Department's mission to protect and enhance wildlife values. It serves as a guide for appropriate public uses of the property, and provides a descriptive inventory of fish, wildlife, and native plant habitats on the property. It serves as a planning aid for annual regional budget preparation. It provides a description of potential and actual environmental impacts and subsequent mitigation which may occur during management, and contains environmental documentation to comply with state and federal statutes and regulations.

The Plan includes a fuel management plan for the perimeter of the Reserve adjacent to the communities of Vandenberg Village, Mesa Oaks, and Mission Hills. It also addresses wildfire response, retention of approximately 28 miles of trails, boundary fencing, interpretive signs, habitat restoration, and protection of biological and cultural resources.

INTENDED USE OF THIS FINAL EIR

This EIR is intended to serve as source of information for the State, other agencies and the public to evaluate and consider the potential impacts that may result from implementation of the Land Management Plan.

The **Lead Agency** is the State of California, Department of Fish and Game

Trustee Agencies *are state agencies having jurisdiction over certain resources held in trust for the people of California but do not have a legal authority over approving or carrying out the project (CEQA Guidelines sec. 15386).*

- N/A

*A **Responsible Agency** is an agency other than the Lead Agency that has a legal responsibility for also carrying out or approving a project (CEQA Guidelines sec. 15096, 15381).*

- State of California , State Lands Commission

Other agencies with Jurisdiction by Law:

- The United States Fish and Wildlife Service

  Federally Threatened or Endangered Species:

  Vernal pool fairy shrimp (*Branchinecta lynchi)*
  California tiger salamander (*Ambystoma californiense)*
  California red legged frog (*Rana draytonii)*

4.0 ENVIRONMENTAL IMPACT ANALYSIS

INTRODUCTION

The purpose of this section is to inform decision-makers and the public of the type and extent of change to the existing environment that would result from the implementation of the proposed Land Management Plan. The Environmental Impact Analysis provides a detailed discussion of existing conditions, expected impacts, the significance of those impacts, mitigation recommendations, and residual impacts after mitigation.

BIOLOGICAL RESOURCES

EXISTING CONDITIONS

The Land Management Plan describes the existing biological resources in detail. In summary, the Reserve supports high plant and animal diversity (more than 300 native plant species and more than 230 native animal species) and a significant number of endemic, rare, threatened, or endangered species, many of which comprise the rare Burton Mesa Chaparral community. Biological resources could be impacted by construction and ongoing maintenance of a proposed fuel management zone (FMZ). The proposed FMZ project accounts for most of the impacts to biological resources. The FMZ segments would affect maritime chaparral, coastal scrub, oak woodland, and riparian communities. Biological impacts are described below.

Bird Species

Four species of sensitive birds were observed during field surveys in or around the FMZ segments (Appendix 2). Yellow warblers were heard in the oak woodland of segments 4 and 8. A Cooper's hawk was seen in segment 4. Bell's sage sparrow was detected in the chaparral and coastal scrub near the south end of segment 10. All of these species are considered Species of Special Concern by the California Department of Fish and Game. A single Swainson's thrush was observed in the coastal scrub of segment 8. This species is considered to be locally important and is proposed for inclusion on the Department's revised Species of Special Concern List (L. Comrack *pers comm*., 2004).

Amphibian and Reptile Species

FMZ segment 10 and similar habitat in the Reserve support populations of California horned lizard and Silvery legless lizard. Both species are considered to be Species of Special Concern by the California Department of Fish and Game (2004) and are considered Federal Sensitive Species. California harvester ants are common on the Reserve and are an important food source for the California horned lizard. However, the California harvester ant is in decline throughout much of California due, in part, to invasion of its habitat by the Argentine ant (Hovey, 2004). Silvery legless lizard are vulnerable to decline where invasive species such as veldt grass and iceplant invade and displace native habitats, or where there is a lot of human activity or disturbance (Hovey, 2004).

Mammal Species

The American badger is listed by the California Department of Fish and Game as a Species of Special Concern. FMZ segments 4, 11, 17 and 18 are in close proximity of known locations of American badgers. The Western gray squirrel is considered to be a locally important species by Santa Barbara County.It has been observed in segment 2 of the fuel break area, including oak woodland communities, as well as, a riparian area of segment 1. The San Diego desert woodrat is a California Species of Special Concern and a Federally listed Sensitive Species. This species could potentially inhabit community types within the proposed FMZ areas. However, their presence in the FMZ is unlikely (Lawhead, 2004). Segment 9 appears to be utilized heavily by mule deer and serves as fawning grounds during the breeding season (Lawhead, 2004).

Plant Species

The Department of Fish and Game surveyed the FMZ segments in spring and early summer during the flowering season of 2004 and found 14 sensitive plant species (Meyer and Hickson, 2004). They include: Seaside bird's beak, Hoover's bent grass, straight-awned spineflower, curly leaved monardella, California spineflower, small-seed fiddleneck, San Luis Obispo wallflower, Freemont's monkeyflower, Purisima manzanita, shagbark manzanita, Lompoc ceanothus, Santa Barbara ceanothus, and chaparral mallow.

Wetlands

Large wetlands and areas of riparian habitat exist in Segment 1 near Highway 1, smaller wetlands exist in Segments 3, 7, 8 and 9.

IMPACTS

Bird Species

Biology 1. Fuel reduction activities may disturb nesting bird species, including yellow warblers, Bell's sage sparrow, and Swainson's thrush; causing nest abandonment or destruction. This is a significant impact if the activities were done between mid-February and September 1.

Biology 2. Removal of vegetation in treatment areas in the FMZ will reduce overall habitat quality. Reductions in vegetative cover are expected to reduce the habitat's carrying capacity to support bird nesting, roosting and foraging. This is a potentially significant impact.

Amphibians and Reptiles

Biology 3. Fuel reduction activities from March to late August, during the active period of the California horned lizard and other reptiles, could significantly impact the population status of these species; resulting in possible disruption of their activities.

Biology 4. Silvery legless lizards are likely to be found in FMZ segments. This lizard may be active near the ground surface beneath the soil surface or at the interface between the leaf litter layer and underlying soil throughout the year. They do not survive where there is a lot of human activity or disturbance (Hovey, 2004), thus fuel reduction activities could cause significant impact to this species.

Biology 5. Fuel reduction activities are expected to create open areas which may become susceptible to Argentine ant invasion, and domestic pets, with potentially significant impacts to native reptile, amphibians, small mammals, and birds.

Biology 6. FMZ maintenance could lead to invasion by veldt grass, iceplant, and other weeds that can displace native habitats causing a significant impact.

Biology 7. Removal of vegetation in treatment areas in the FMZ will reduce overall habitat quality. Reductions in vegetative cover are expected to reduce the habitat's carrying capacity to support reptile and amphibian species. This is a potentially significant impact.

Mammals

Biology 8. Fuel reduction activities at the Reserve during the American badger breeding season (March-May) may significantly impact this species by causing disturbance, stress, and den displacement of mothers and their cubs. However, if the fuel removal is done outside of the breeding season, it may actually enhance badger foraging opportunities by creating habitat more favorable to this species.

Biology 9. Western gray squirrel populations reside predominantly in oak woodland communities. If oak trees are removed in the process of fuel reduction activities, their habitat could be impacted. However, fuel materials expected to be removed are primarily shrubs; removal of oak trees is not proposed, but pruning may occur. Therefore western gray squirrel is not expected to be significantly impacted.

Biology 10. Fuel reduction in the FMZ may remove some nesting habitat for Big-eared woodrat, formally known as the "dusky footed woodrat." Big-eared woodrat nests are typically located at the base of oak trees, around the drip line of low growing oaks, and in patches of decadent shrubs or piles of woody debris. These locations represent a ready source of combustible fuel. Fuel reductions may also reduce foraging opportunities for the species in fuel break areas which consist of chaparral and coastal scrub. The San Diego desert woodrat is unlikely to inhabit the FMZ and the fuel modifications are not expected to have a significant impact on the species. However, if their presence is confirmed, the impacts would be significant.

Biology 11. Mule deer are relatively common within the FMZ segments. The Department of Fish and Game found a higher level of deer activity on Segment 9. It is possible that Segment 9 serves as an important area during fawning season lasting from early April to June. Fuel reduction activities during this time of year could significantly impact this species by causing disturbance, stress, and/or displacement.

Biology 12. The installation of perimeter fencing to assist in the enforcement of public access regulations could impact movement of large animals (mountain lion, deer, bobcat, gray fox, and coyote) to and from the Reserve.

Biology 13. Removal of vegetation in treatment areas in the FMZ will reduce overall habitat quality. Reductions in vegetative cover are expected to reduce the habitat's carrying capacity to support mammal species. This is a potentially significant impact.

Plants and Natural Communities

Fuel reduction activities are expected to reduce or remove habitat and individuals of the following species within fuel management zones:

Seaside bird's beak, Hoover's bent grass, straight-awned spineflower, curly leaved monardella, California spineflower, small-seed fiddleneck, San Luis Obispo wallflower, Freemont's monkeyflower, Purisima manzanita, shagbark manzanita, Lompoc ceanothus, Santa Barbara ceanothus, chaparral mallow, and coast live oak.

Biology 14. Plant species which require wildfire to stimulate germination may decline and could eventually be eliminated in the FMZ area over time due to the suppression of natural fire regimes. This is a potentially significant impact.

Biology 15. The removal of shrub and subshrub biomass could result in a shift in vegetation type. There is a potential for expansion of herbaceous annuals, including rare annuals (beneficial impact). Invasive weeds and invasive animals, such as Argentine ants, are likely to expand due to the creation of more open habitats adjacent to urbanized areas. This is a significant impact.

Biology 16. Removal of vegetation in FMZ areas could reduce the overall carrying capacity of the habitat to sustain native insect populations, which could affect both local plant species and wildlife which rely upon insect populations. Vegetation removal will also increase the susceptibility of habitats to invasion of non-native species by creating more open and possibly disturbed habitat, and by potential introduction of propagules by staff implementing fuel reduction measures. These are significant impacts.

Biology 17. Open areas in the FMZ, presently occupied by shrubs and subshrubs, could be susceptible to future disturbance by unauthorized vehicles and create new access into areas currently considered pristine Burton Mesa Chaparral. This is a significant impact.

Biology 18. Removal of vegetation in the FMZ will reduce the overall habitat quality in the treatment areas. Areas of high quality Burton Mesa chaparral and/or coastal scrub will be reduced to low quality habitat following thinning and treatments. Areas of medium quality will be reduced to low quality. This is a significant impact. The total high quality habitat to be reduced to low quality is approximately 2.8 acres, and the medium quality habitat to be reduced to low quality is 15.3 acres. Low quality areas typically include areas previously impacted by past fuel reduction work and impacts to those areas are expected to be less than significant.

Biology 19. Removal of native vegetation for construction of 0.4 miles of new trails is significant. Consequently, new trails will be located in disturbed areas where feasible. The exact total area and habitat types impacted will be more thoroughly assessed prior to trail installation. The approximate width of the trails would be 10 feet, with impacts resulting in the direct impact to approximately 0.5 acres.

Two new trails are conceptually being proposed, one in the La Purisima Management Unit (on the east end) and one on the Encina Management Unit (on the east end).

MITIGATION

Birds

Biology 1. No fuel reduction activities shall occur between mid-February and September, during the bird breeding season. Biological surveys will be conducted prior to all work to ensure no breeding is occurring.

Biology 2. Removal of vegetation will be done according to the Fuel Management Plan utilizing the identified menu of treatments as appropriate for each segment. The treatment methods identified are designed to minimize impacts while achieving fuel reduction goals. Reductions in habitat quality will be mitigated through restoration of disturbed areas within the Reserve. This will increase the habitat quality on the interior of the Reserve thereby increasing the overall carrying capacity for bird species.

Amphibians and Reptiles

Biology 3. No fuel reduction activities shall occur between March and August to avoid impact to the California horned lizard and other sensitive reptile species.

Biology 4. Biological surveys will be conducted prior to all work and a salvage and relocation effort will be implemented if sensitive amphibians (such as the silvery legless lizard) are found.

Biology 5. Weed removal and removal of Argentine ant habitat shall occur to lessen the impacts on amphibians, reptiles, small mammals and birds that have declined due to the expansion of invasive species into native habitats.

Biology 6. The FMZ areas will be routinely monitored and non-native species invasions will be treated to reduce the likelihood of further expansion into the Reserve.

Biology 7. Removal of vegetation will be done according to the Fuel Management Plan utilizing the identified menu of treatments as appropriate for each segment. The reduction in habitat quality will be mitigated through restoration of disturbed areas within the Reserve. This will increase the overall carrying capacity for reptile and amphibian species.

Mammals

Biology 8. Fuel reduction activities shall not occur during American badger breeding season (March-May) and if any active denning burrows are found they shall protected from disturbance.

Biology 9. Pruning of coast live oaks shall be minimized as described in the Fuel Management Plan in order to reduce impacts to western gray squirrels.

Biology 10. Due to the abundance of oak woodland and chaparral habitats on the Burton Mesa Reserve, no mitigation for impacts to large-eared woodrat is required. A biological monitor shall be on site to identify any evidence of the San Diego desert woodrat in the fuel break segments and if found, the nests will be left intact and actions shall be taken to ensure minimal impact to this species.

Biology 11. Significant vegetation clearing shall be avoided in Segment 9 during mule deer fawning season which generally occurs from early April to June.

Biology 12. Perimeter fencing shall follow design specifications which allow for movement of large animals. Areas currently fenced with barbed wire shall be phased out and replaced with barbless wire.

Biology 13. Removal of vegetation will be done according to the Fuel Management Plan utilizing the identified menu of treatments as appropriate for each segment. The reduction in habitat quality will be mitigated through restoration of disturbed areas within the Reserve. This will increase the overall carrying capacity for mammalian species

Plants and Natural Communities

Biology 14. A botanist approved by the Department of Fish and Game shall survey and identify all locations of sensitive herbaceous, annual and perennial plant species within the fuel break, in order to avoid these species to the maximum extent feasible. Fuel management treatments (other than mowing) shall be conducted from September through February to minimize trampling of rare, young, herbaceous plants.

Biology 15. A botanist approved by the Department of fish and Game shall survey and identify locations of sensitive shrubs and subshrubs in order to avoid these species to the maximum extent feasible. Some prescriptions may require removal of rare shrubs and subshrubs to achieve fuel reduction goals. A biological monitor shall be present during the fuel modification activities to ensure avoidance is implemented. Areas will be monitored for an increase in non-native invasives and will be routinely treated to lessen the impact on native plant and animals.

Biology 16. Removal of vegetation shall be done in accordance with the Fuel Management Plan. Consideration will be given to the timing of work so as to reduce impacts to native insect species. All equipment and shoes shall be cleaned with soap and water, Lysol®, or a 10% bleach solution and free of seeds prior to use in the fuel break area to reduce the introduction of invasive plant species. Staging areas shall not be located in weedy areas in order to prevent spread of weed propagules.

Biology 17. FMZ segments will be assessed for their potential to increase access problems. Barriers and/or signage will be placed in key areas to prevent and minimize new intrusions into the Reserve.

Biology 18. Removal of vegetation will be done according to the Fuel Management Plan utilizing the identified menu of treatments as appropriate for each segment. The reduction in habitat quality will be mitigated through restoration of disturbed areas within the Reserve. This will increase the overall carrying capacity of the habitat and the species it supports. The total high quality habitat to be reduced to low quality is approximately 2.8 acres, and the medium quality habitat to be reduced to low quality is 15.3 acres. Low quality areas typically include areas previously impacted by past fuel reduction work and impacts to those areas are expected to be less than significant.

Biology 19. Removal of vegetation for the construction of 0.4 miles of new trails will be mitigated with the closure and restoration of 24.2 miles of existing trails within the Reserve. The closure and rehabilitation of these trails will increase the habitat quality and species utilization of the Reserve.

RESIDUAL IMPACTS AFTER MITIGATION

Upon implementation of the Land Management Plan and the mitigation measures contained herein, all impacts will be less than significant. The habitat quality in the areas proposed to be disturbed will be decreased over time. The habitat impacted by construction of new trails and reduced in quality through implementation of the Fuel Management Plan will be mitigated to a less than significant level by the closure and restoration of existing trails and the restoration of disturbed areas within the Reserve that are currently grazed and/or cultivated. The phasing out of these activities pursuant to provisions in the current lease and completing restoration will increase the overall quality and carrying capacity of habitat, benefiting species of the Reserve.

Upon implementation of mitigation measures, the only impact that has the potential to remain significant is that with regards to the introduction of invasive species. Fuel reduction activities will create open areas that are more susceptible to invasive weeds, Argentine ants, and domestic pets. This impact can only be mitigated through monitoring and adaptive management that, over time, will reduce the impacts to a less than significant level.

CULTURAL RESOURCES

EXISTING CONDITIONS

The Burton Mesa Ecological Reserve is located within what was probably a marginal settlement and subsistence zone during prehistoric and early historic times. A discussion of prehistory, early history, and cultural resource sites in the project area, in addition to impacts and management considerations, is included in the Management Plan. A cultural resource analysis of the Reserve was conducted by Condor Associate Archaeologist, Larry Spanne, M.A. included the following components:

- A records search at the Central Coast Information Center and review of existing records and literature to determine if any known cultural resource locations are within the Reserve boundaries

- A sensitivity analysis of the cultural resources at the site.

- A Phase I field investigation in the proposed fuel management zones and general survey within 100 feet the communities of Vandenberg Village, Mesa Oaks and Mission Hills, as shown in Figure 32. The entire project area was surveyed intensively on foot, wherever possible, along parallel transects at intervals no greater that 15 meters (50 feet). A very few small portions of the proposed fuelbreak segments were not examined due to the presence of extremely dense vegetation. However, surface visibility was adequate over 99 percent of all segments for detection of archaeological materials. All vegetation-free areas were carefully observed in order to identify any artifacts or other culturally derived materials that might have been present. Overall, surface visibility was mostly fair to excellent at the time of the survey, and no problems were encountered that might have substantially affected the results of this investigation (Spanne, 2004).

A total of 53 cultural resource sites were identified during the record search as having been recorded within or immediately adjacent to the Reserve. Due to its sensitivity, this information is not available to the public (confidential Figure 15).

These include:

- 38 Archeological sites
- 1 Historic road or trail corridor
- 15 Archeological isolates

Temporal placement of the 53 cultural sites is as follows:

(three of these sites combine prehistoric and historic deposits)

- 32 Prehistoric archaeological sites

- 2 Historic sites from the Spanish Mission Period
  (Matthew's Orchard and El Camino Real Corridor)

- 14 Historic sites dating from the Late 19th and Early 20th Centuries

- 8 Archeological isolates of unknown age

IMPACTS

The current overall level of impacts from existing activities at the Reserve to cultural resources is considered to be low. However, there are localized instances where impacts may have a higher level of significance.

Cultural 1. Continued unauthorized use of vehicles, both in areas where cultural resources are known to be present as well in other areas where resources are likely to exist, could significantly damage these sites, a significant impact.

Cultural 2. Construction and maintenance of the fuel management zone is not expected to impact cultural resources based upon the intensive survey conducted for this project within the proposed FMZ. No cultural resources were identified in the proposed FMZ segments, and no significant impact would occur.

Cultural 3. Public use of trails in areas of cultural sensitivity could result in the unauthorized collection of artifacts from some of the more visible and accessible sites. This could potentially be a significant impact.

Cultural 4. Construction of kiosks and/or a visitor's center, installation of boundary fencing, and habitat restoration that involves ground disturbance could significantly impact cultural resources.

Cultural 5. Mechanical weed removal activities could significantly impact unknown sub-surface cultural artifacts.

MITIGATION

Cultural 1. Unauthorized vehicles shall be excluded from the Reserve by the installation of barriers or boundary fencing; the extension of existing fencing to block unauthorized vehicle access across Highway 1; and routine patrols of the area would reduce impacts to a level of less than significant.

Cultural 2. If archaeological artifacts are unearthed or exposed during construction of the fuel management zones, informational kiosks, visitor's center, boundary fencing, mechanical weed removal, or habitat restoration activities, all ground disturbing work in the vicinity shall stop immediately, and the artifacts and the site shall be evaluated by an experienced archeologist. An appropriate plan for the evaluation of the artifacts from the site shall be prepared and its implementation overseen by

an experienced archaeologist, approved by the California Department of Fish and Game, prior to restarting ground disturbance at the project site.

Cultural 3. A monitoring system will be designed to routinely check cultural resource sites near trails to determine if adequate protection of the sites is occurring. Measures to protect resources will be implemented at the first sign of off-trail disturbance in their vicinity. Interpretive signs shall include elements that describe cultural resources of the Reserve and educate and inform the public regarding their legal and ethical responsibilities to protect cultural resources.

Cultural 4. If paleontological artifacts are unearthed or exposed during construction or habitat restoration activities, all ground disturbing work in the vicinity shall stop immediately and the Department of Fish and Game notified. The artifacts and the site shall be evaluated by an experienced paleontologist/cultural resources specialist. An appropriate plan for the evaluation of the artifacts from the site shall be prepared and its implementation overseen by an experienced paleontologist.

Cultural 5. If human remains are accidentally discovered or recognized during construction or habitat restoration activities, all excavation and ground disturbing work on or adjacent to the project site (or area of discovery) shall stop immediately. The County Coroner of the County in which the remains are discovered shall be contacted, and the Native American Heritage Commission shall be notified immediately and their recommendations and requirements adhered to, prior to continuation of activities.

RESIDUAL IMPACTS AFTER MITIGATION

Upon implementation of these mitigation measures, all potential cultural impacts will be reduced to a less than significant level.

FIRE PROTECTION

EXISTING CONDTIONS

The chaparral and other communities on the Reserve are adapted to wildfire and the plants within them have a variety of ways to respond successfully to these events where they occur at a frequency and intensity consistent with natural fire cycles. Although three large fires occurred between 1990 and 2000 and burned portions of the Reserve, more than 3,400 acres of the Reserve have not burned in more than 70 years. The age of vegetation alone does not make it more susceptible to a wildfire event - many factors come into play. Wind, moisture conditions, lightning strikes, or increased urban influences all have an affect on the potential for fire. The communities of Vandenberg Village, Mesa Oaks, and Mission Hills lie adjacent to the Reserve. Fire hazards exist with or without the Land Management Plan, and the plan itself does not pose a fire hazard.

IMPACTS

Fire 1. The fuel management zone project is expected to improve the safety of adjacent residential communities, but will not change the response time to local residences and will not cause an increase in fire fighting personnel, equipment, or facilities. The improvement of safety of adjacent residential communities is considered a beneficial impact.

Fire 2. Fire Department access is expected to improve within and adjacent to the Reserve with implementation of the Fuel Management Plan; this is a beneficial impact.

a. The Wildfire Response Plan is expected to improve the effectiveness of fire suppression within and adjacent to the Reserve, and is considered a beneficial impact.

MITIGATION

No mitigation is required.

GEOLOGIC HAZARDS

EXISTING CONDITIONS

The Reserve contains an abundance of sandy soils which are susceptible to erosion over time. The potential exists for trails to exacerbate erosion. At present, approximately 52 miles of trails exist at Burton Mesa Ecological Reserve. Upon implementation of the Land Management Plan, over 28 miles of trails will remain open and 0.4 miles of new trails will be created, resulting in 28.5 miles of trails to provide the community with an enhanced opportunity for nature appreciation and pedestrian recreation.

IMPACTS

The potential impacts of erosion at the site are as follows:

Geology 1. Erosion from poorly designed trails could result in loss of vegetative cover and wildlife habitat on exposed, sandy slopes.

Geology 2. Hiking trails could become difficult to access and create unsafe conditions where soil erosion and loss is high; possibly resulting in trail closures.

Geology 3. Erosion could lead to downcutting and sedimentation in stream beds.

MITIGATION

To prevent erosion on steep slopes at the Reserve, the following shall be implemented.

Geology 1**.** Trails should be located in areas with stable soils to reduce the potential for erosion, and they should be engineered or designed so as to prevent erosion leading to the loss of vegetation. Water bars or rice straw wattles shall be installed on any trail that is located on a steep slope susceptible to erosion.

Geology 2**.** Trails shall be temporarily closed after substantial rain events to prevent foot traffic from contributing to soil loss and rutting. Signs shall be posted in these areas to encourage responsible public use of trails.

Geology 3. Silt fencing or other effective means of minimizing erosion shall be installed when necessary. The Department shall encourage the County and private homeowners in the area to minimize erosion and to install sediment traps on properties adjacent to the Reserve to prevent sediment from entering drainages.

RESIDUAL IMPACTS AFTER MITIGATION

Existing trails and existing erosion problems within the Reserve may take a substantial effort to correct. Funding and personnel to construct, repair or maintain 28 miles of trails may not be immediately feasible. A phased approach to correct existing erosion problems will occur. The

erosion control methods are expected to be highly effective if implemented correctly, prior to substantial rain events. Upon mitigation it is expected that impact from erosion will be less than significant.

HAZARDS

EXISTING CONDTIONS

Sixteen weed species have been identified for immediate removal and may require the use of herbicides or other manual and mechanical removal methods.

IMPACTS

Hazards 1. Visitors to the Reserve and adjacent residents could be exposed to herbicides if those activities are conducted while wind speeds are above 5 miles per hour.

MITIGATION

Hazards 1. Using herbicides for weed removal activities shall be limited to when wind speeds are less than 5 miles per hour.

Hazards 2. All prescriptions and directions on the manufacturer's label shall be followed. Only trained personnel will administer herbicides and follow Department protocols, reporting procedures and safety precautions. Non-toxic or less toxic herbicides shall be used to the greatest extent feasible.

RESIDUAL IMPACTS AFTER MITIGATION

All weed removal impacts would be less than significant upon implementation of mitigation measures.

NOISE AND VIBRATION

EXISTING CONDITIONS

The Reserve is located adjacent to several generally quiet residential neighborhoods. Residences are considered to be more sensitive to noise levels than are commercial and industrial land uses. At present, there are no other sensitive receptors sites, such as hospitals or convalescent homes near the Reserve.

IMPACTS

CEQA Guidelines identify criteria which may be used to determine significant or substantial adverse change in physical conditions within an environment. The following applicable items have been extracted from the CEQA Environmental Checklist Form and are to be considered in determining whether this project may have a significant impact:

Noise 1. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies may be significant.

Noise 2. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above ambient levels may be significant

For the purpose of this EIR, noise is defined as any undesirable sound, from a perceived annoyance to possibly causing physical harm or adverse health effects. Noise is measured on a logarithmic scale of sound pressure known as a decibel (dB). Human speech can range from 45-72 dB. Sounds above 80 dB are considered very loud and sounds above 110 dB are considered deafening. Wood chippers and other mowing equipment have been measured between 80-90 dB on average.

Implementation of the fuel management zone project will involve the removal and/or cutting back of trees, shrubbery, and other ground cover which may include the use of gas powered chainsaws and other equipment. The predominant source of noise during this phase of the project will result from wood chippers which will be used to consolidate the cut fuels material. Residents living within 200 feet of the fuel break segments may be exposed to elevated noise levels for an average of one to three days per year, per segment. This is expected to be a short-term significant impact.

MITIGATION MEASURES

Noise 1. Fuel reduction activities shall be limited to the hours between 8AM and 5PM Monday through Friday.

Noise 2. The Department of Fish and Game or its agents shall make a diligent effort to notify adjacent residents in advance of vegetation removal or chipping within the fuel management zones.

Noise 3. Equipment will not be left idling for long periods; it will be turned off and jacketed when not in an active work mode.

RESIDUAL IMPACTS AFTER MITIGATION

Upon mitigation, short-term noise impacts would be reduced to a less than significant level.

RECREATION

EXISTING CONDITIONS

Existing trails are a combination of former oil and existing utility service roads and an informal network of pathways from surrounding residential areas. The Reserve is currently used by the surrounding community and visitors for a variety of activities, such as walking and hiking, as well as by students and scientists for educational and research purposes. Some existing forms of recreation, such as OHV use, violate Department of Fish and Game regulations, and are in direct conflict with the conservation goals of the Reserve. The Management Plan identifies compatible public use and recreational opportunities within the Reserve, and associated facilities for public enjoyment.

A trails plan has been developed (Figure 19 in the Land Management Plan) that retains 28.1 miles of existing trails, proposes closure of 24.2 miles of trails, and proposes construction of 0.4 miles of new trails. Thus, 28.5 miles of trails will be open and accessible to the public. The trails plan was developed with the following considerations in mind:

- Utilize existing trails where possible.
- Minimize habitat fragmentation and avoid adverse impacts on biological and cultural resources.
- Provide trails that will enhance wildlife-dependent public enjoyment.

Although discussed in the Management Plan, existing regulations restrict unauthorized vehicle and equestrian use. Installation of fencing and barriers to prevent these forms of access on the Reserve implements Section 630, Title 14, California Code of Regulations.

IMPACTS

Recreation 1. The provision of 28.5 miles of trails for public, wildlife-dependent uses is a beneficial impact.

MITIGATION

No mitigation is required.

5.0 SIGNIFICANT ENVIRONMENTAL EFFECTS

INTRODUCTION

No environmental effects have been found to be significant and unmitigable with the implementation of this Land Management Plan. This section addresses impacts that are considered significant but that can be mitigated to a less than significant level.

RESIDUAL IMPACTS AFTER MITIGATION

Upon implementation of the Land Management Plan and mitigation measures contained herein, all impacts will be less than significant. The habitat quality in the areas proposed to be disturbed will be decreased over time. The habitat impacted by construction of new trails and the quality of habitat that will be reduced through implementation of the Fuel Management Plan will be mitigated to a less than significant level by the closure and restoration of existing trails and the restoration of disturbed areas within the Reserve that are currently grazed and/or cultivated. The phasing out of these activities pursuant to provisions in the current lease and the completion of restoration will increase the overall quality of habitat and increasing carrying capacity of habitat for species on the Reserve.

Upon implementation of mitigation measures, the only impact that has the potential to remain significant is that with regards to the introduction of invasive species. Fuel reduction activities will create open areas that are more susceptible to invasive weeds, Argentine ants, and domestic pets. This impact can only be mitigated through monitoring and adaptive management that, over time, will reduce the impacts to a less than significant level.

Because the impacts of implementing the plan and mitigation measures will be less than significant, the project will have no cumulative impacts.

6.0 ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT

INTRODUCTION

This section draws attention to issues that were determined to have no impact or less than significant impacts, therefore eliminated from detailed review.

The following issues were found not to pose significant impacts:

1. **Land Use:** The Land Management Plan (LMP) will not change the character of the community, cause a need for more housing, or induce growth.

2. **Air Quality**: Management of the Reserve will include one or up to a maximum of 6 staff with vehicles to patrol and perform maintenance activities, but emissions will not have a significant impact on local or regional air quality.

3. **Water Resources**: the LMP will not affect quality of groundwater or surface water. Some groundwater may be needed for habitat restoration efforts, but the effect of these short term projects are not expected to be significant.

4. **Mineral Resources**: The LMP will have no effect on aggregate or petroleum resources.

5. **Agricultural Resources:** The LMP will phase out farming and grazing on approximately 500 acres and restore them to native habitats. No significant effect will result.

6. **Visual Resources**: Public views from Highway 1 and other public roads will be maintained. No impacts to visual resources will occur.

7. **Paleontological Resources**: No paleontological resources are known from the Reserve.

8. **Energy Resources**: The LMP will not require a significant consumption of energy.

9. **Coastal Beaches and Sand Dunes**: The Burton Mesa Ecological Reserve is not on the coast and the LMP is not expected to affect sand supply at coastal beaches and sand dunes.

10. **Seismic Hazards**: No structures or uses are proposed that would be significantly affected by seismic hazards.

11. **Geologic Hazards**: No subsidence, expansive soils, landslides, or mudslides are anticipated.

12. **Aviation Hazards**: No aviation hazards will occur as a result of the LMP.

13. **Hazardous Materials/Waste**: Public access will not be allowed in exposed pipeline areas.

14. **Glare**: There will be no lighting or glare as part of the project.

15. **Public Health**: No public health issues will be affected by the LMP.

16. **Transportation/Circulation**: Use of the Burton Mesa Ecological Reserve will not cause a significant increase in traffic or levels of service or safety design issues. There will be no increase in parking demand or other related facilities.

17. **Water Supply**: The habitat restoration efforts will result in an insignificant amount of water demand, and will not affect the quality or quantity of water supply to residential areas.

18. **Waste Treatment and Disposal**: Public restrooms are not proposed. There will be no impact on local sewage and solid waste services.

19. **Utilities**: No new demand for electric, gas, or telephone is expected.

20. **Flood Control/Drainage**: The project would not cause demand for new flood control or drainage facilities.

21. **Law Enforcement**: Level of demand for law enforcement expected to stay the same.

22. **Education**: The LMP will not increase the demand for schools or libraries.

Alternative 1: No Land Management Plan

This alternative is the existing condition, if the project does not proceed. The existing conditions on the property would continue with no Land Management Plan in place to guide the management, monitoring and public uses of the property. The Reserve would be managed consistent with the regulations established under Title 14, Section 630, but none of the proposed beneficial projects would occur, such as restoration, controlled public access and the implementation of both the fuel management plan and wildfire response plan. Significant impacts of this alternative would include continued degradation of the property from uncontrolled uses and continuation of the existing condition with no fuel reduction project.

Alternative 2: Land Management Plan with No Fuel Management Plan

This alternative would process and implement the Land Management Plan without implementing or maintaining the fuel management plan component. The proposed fuel management for 100 foot wide areas of the Reserve adjacent to the communities of Vandenberg Village, Mesa Oaks and Mission Hills would not occur. The Reserve would continue to be managed consistent with the regulations established under Title 14, Section 630. The Department would continue to coordinate with Fire Agencies on the wildfire response plan but no fuel reduction projects would occur within the Reserve. Significant impacts of this alternative would include the potential for increased fire hazard for adjacent residents who do not have defensible space within their own property boundaries.

Alternative 3: Land Management Plan with a Wider Fuel Management Zone

The proposed fuel management plan component proposes fuel reduction for 100 foot wide areas of the Reserve adjacent to the communities of Vandenberg Village, Mesa Oaks and Mission Hills. In this alternative, the fuel management zones could be expanded to 300 feet in width at these locations to create larger areas with reduced fuel loads between the Reserve and adjacent residential communities. This alternative would increase the significant adverse impacts associated with the fuel break project, as discussed in this EIR, five fold. Currently, the impact to Burton Mesa chaparral from the proposed fuel management zone segments is approximately 28 acres. If the fuel management zones were increased from 100 feet to 300 feet in width, the acreage affected would increase to 138 acres. The amount of mitigation required at a mitigation ratio of 2:1 for impacts to this additional high quality habitat would be approximately 219 acres, bringing the total mitigation needed for this alternative to 240 acres. The dramatic difference in impacts between the 100 foot and 300 foot alternatives is due to the prevalence of high quality Burton Mesa Chaparral at distances greater than 100 feet from the urban boundary. To reduce significant effects of direct impacts to habitat, additional public use trails would need to be closed and restored to provide necessary mitigation.

The fuel management plan project is proposed to slow a fire down enough to aid in the protection of lives and property. Research supports that expansion of the fuel management zone to 300 feet is not expected to significantly increase the safety of homes, as discussed in the

Land Management Plan. Fire prevention requires vigilant maintenance by homeowners of the first 35-60 feet around their homes and installation of fire-safe roofs.

Significant impacts associated with this alternative include reduced public access and the loss of 138 acres of Burton Mesa Chaparral, the latter of which is significant and potentially unmitigable.

Alternative 4 : Environmentally Superior Alternative

The Environmentally Superior Alternative is the proposed Land Management Plan project because it would result in the least amount of significant impact while serving the project's objectives of providing opportunities for wildlife-dependent public access. Additionally, the Land Management Plan as written would result in implementation of efficient and effective resource management and monitoring, and would offer balanced approaches for public uses and fuel management. The proposed fuel management zones would impact 2.8 acres of high quality habitat and 15.3 acres of medium quality habitat, and maintain 9.9 acres of existing low quality habitat as low quality habitat. The impacts to high quality habitat would be mitigated at a ratio of 2:1 and impacts to medium quality habitat would be mitigated at a ratio of 1:1, both ultimately resulting in low quality habitat in the treated areas. These impacts would be mitigated through the restoration of approximately 21 acres of currently disturbed habitat found on the Reserve, primarily unnecessary trails and portions currently disturbed by agricultural operations. The restoration would be implemented prior to or concurrent with the phased installation of the fuel management zone. With the implementation of this proposed mitigation, the level of impact is considered less than significant.

Alternatives considered but not proposed for inclusion in this FEIR:

a) Land Management Plan with no Fuel Management Plan component, but with a Roof Retrofit Project.
This alternative would process and implement the Land Management Plan without implementing or maintaining the fuel management plan. Instead, the State of California, acting by and through the Department of Fish and Game, would support and encourage (or co-sponsor with insurance companies) grants that provide low cost loans for homeowners in the area to retrofit Class A roofs and to conduct routine landscape maintenance to enhance defensible space around individual homes. This would have a beneficial impact of increased human safety and potentially lessen biological impacts on the Reserve, due to a reduction in the size of the fuel management zones needed. However, because it would rely on third parties (private citizens) rather than the State to implement, its feasibility is unknown. Significant impacts of this alternative would include increased fire hazard for adjacent residents who do not participate in the program.

b) Prescribed Fire

The Department considered prescribed fire but eliminated it from further review for primarily ecological reasons. Most importantly, because prescribed fires are typically conducted out of season in order to control the intensity and spread, this means they are generally done under moister and cooler conditions with higher fuel moisture levels. Since chaparral and scrub

vegetation types are adapted to a regime of generally intense, dry season fires, imposition of an artificial regime of low intensity cool season fires by prescribed burning can produce undesirable ecological side effects and potentially severely damage vegetation. We acknowledge that prescribed burning can reduce fuel loads, but generally this practice does not prevent a wildfire from burning through a previously treated area. Additionally, out of season prescribed fires using low intensity prescriptions can fail to produce sufficient heat to destroy the seed of opportunistic annuals, thus creating conditions favorable to the introduction of exotic weeds which produce flashy annual fuels which are also hazardous. Should the Department's abilities to implement ecologically appropriate prescribed fires improve, this activity could be considered in the future.

8.0 REFERENCES AND CONSULTANTS

REFERENCES

Comrack, Lyann A. 2004. Burton Mesa Management Area Fuel Break Sensitive Bird Survey, California Department of Fish and Game.

Gevirtz, E., M. Carroll, K. Burton, P. Collins, M. Holmgren, L. Spanne, and A. Nelson. 2005. Land Management Plan for the Burton Mesa Ecological Reserve. Prepared for State of California, The Resources Agency, and Department of Fish and Game.

Hovey, Tim. 2004. Burton Mesa Management Area Fuel Break Amphibian and Reptile Survey, California Department of Fish and Game

Hunt, Lawrence. E. 1993. Unpublished data. Herpetologist, Santa Barbara, California.

Lawhead, David. 2004. Burton Mesa Management Area Fuel Break Mammal Survey, California Department of Fish and Game.

Meyer, Mary and D. Hickson. 2004. Burton Mesa Area Vegetation and Rare Plant Survey in Proposed Fuel Break, California Department of Fish and Game.

Spanne, L. Phase 1 Archaeological Survey Report For Fuelbreaks on the Burton Mesa Ecological Reserve Vandenberg Village and Mission Hills Vicinity. Archaeological Assessment and Management. Prepared for Condor Environmental Planning Services, Inc.

9.0 LIST OF PERSONS WHO PREPARED THIS EIR

LIST OF EIR PREPARERS

Condor Environmental Planning Inc.

Elihu Gevirtz, AICP. Project Manager

Jennifer Jackson, Botanist

NOP, NOC, NOD, AND INITIAL STUDY

FINAL EIR

APPENDIX 8.1

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

Notice of Preparation

TO:

FROM: Kari Lewis
Lands and Facilities Branch
California Department of Fish and Game
1812 Ninth Street
Sacramento, CA 95814

Subject: **Notice of Preparation of a Draft Environmental Impact Report**

California Department of Fish and Game will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the probable environmental effects are contained in the attached materials. A copy of the Initial Study (☒ is ☐ is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but **no later than 30 days** after receipt of this notice.

Please send your response to Kari Lewis at the address shown above. We will need the name for a contact person in your **agency.**

Project Title: Burton Mesa Ecological Reserve Land Management Plan

Project Applicant, if any _____

Date: 4/21/05

Signature: Kari J. Lewis

Title: SENIOR WILDLIFE BIOLOGIST

Telephone: (916) 445-3789

Reference: California Administrative Code, Title 14, Sections 15082(a), 15103, 15375

Form A

Notice of Completion & Environmental Document Transmittal

SCH # 2005041134

Mail to: State Clearinghouse, PO Box 3044, Sacramento, CA 95812-3044 916/445-0613

Project Title: Burton Mesa Ecological Reserve Management Plan

Lead Agency: Department of Fish and Game, Lands and Facilities Branch — Contact Person: Karl Lewis

Mailing Address: 1812 Ninth Street — Phone: (916) 445-3789

City: Sacramento — Zip: 95662 — County: Sacramento

Project Location:

County: Santa Barbara — City/Nearest Community: Lompoc

Cross Streets: U.S. Hwy 1 and Harris Grade Road — Zip Code: 93436 — Total Acres: 5,735

Assessor's Parcel No. Numerous — Section: — Twp. — Range: — Base:

Within 2 Miles: State Hwy #: 1 — Waterways: Santa Ynez River

Airports: Lompoc — Railways: UPRR — Schools: Cabrillo High School and others

Document Type:

CEQA: [ ] NOP [ ] Early Cons [ ] Neg Dec [X] Draft EIR [ ] Supplement/Subsequent EIR (Prior SCH No.) [ ] Other

NEPA: [ ] NOI [ ] EA [ ] Draft EIS [ ] FONSI

Other: [ ] Joint Document [ ] Final Document [ ] Other

RECEIVED
JUL 18 2005
12:45
STATE CLEARINGHOUSE

Local Action Type:

[ ] General Plan Update [ ] General Plan Amendment [ ] General Plan Element [ ] Community Plan
[ ] Specific Plan [ ] Master Plan [ ] Planned Unit Development [ ] Site Plan
[ ] Rezone [ ] Use Permit [ ] Land Division (Subdivision, etc.)
[ ] Annexation [ ] Redevelopment [ ] Coastal Permit [X] Other Management Plan

Development Type:

[ ] Residential: Units ____ Acres ____
[ ] Office: Sq.ft. ____ Acres ____ Employees ____
[ ] Commercial: Sq.ft. ____ Acres ____ Employees ____
[ ] Industrial: Sq.ft. ____ Acres ____ Employees ____
[ ] Educational
[ ] Recreational

[ ] Water Facilities: Type ____ MGD ____
[ ] Transportation: Type ____
[ ] Mining: Mineral ____
[ ] Power: Type ____ Watts ____
[ ] Waste Treatment: Type ____
[ ] Hazardous Waste: Type ____
[ ] Other: ____

Funding (approx.): Federal $ ____ State $ 188,000 Total $ 188,000

Project Issues Discussed in Document:

[ ] Aesthetic/Visual
[ ] Agricultural Land
[ ] Air Quality
[X] Archeological/Historical
[ ] Coastal Zone
[ ] Drainage/Absorption
[ ] Economic/Jobs
[ ] Fiscal
[ ] Flood Plain/Flooding
[X] Forest Land/Fire Hazard
[X] Geologic/Seismic
[ ] Minerals
[X] Noise
[ ] Population/Housing Balance
[ ] Public Services/Facilities
[X] Recreation/Parks
[ ] Schools/Universities
[ ] Septic Systems
[ ] Sewer Capacity
[ ] Soil Erosion/Compaction/Grading
[ ] Solid Waste
[X] Toxic/Hazardous
[ ] Traffic/Circulation
[X] Vegetation
[ ] Water Quality
[ ] Water Supply/Groundwater
[X] Wetland/Riparian
[X] Wildlife
[ ] Growth Inducing
[ ] Landuse
[ ] Cumulative Effects
[ ] Other

Present Land Use/Zoning/General Plan Designation:

Department of Fish and Game Ecological Reserve

Project Description:

The project is a Land Management Plan for the 5,200 acre Burton Mesa Ecological Reserve in northern Santa Barbara County, California. The property is owned by the State of California, administered by the State Lands Commission, and managed, under a 49-year lease by the California Department of Fish and Game. The Land Management Plan guides management of habitats, species, and programs to achieve the Department's mission to protect and enhance wildlife values. It serves as a guide for appropriate public uses of the property, and provides a descriptive inventory of fish, wildlife and native plant habitats which occur on or use the property. It provides an overview of the property's operation and maintenance, and personnel requirements to implement management goals. It serves as a budget planning aid for annual regional budget preparation. It provides a description of potential and actual environmental impacts and subsequent mitigation which may occur during management, and contains environmental documentation to comply with state and federal statutes and regulations.

State Clearinghouse Contact: (916) 445-0613

State Review Began: 7-19-2005

SCH COMPLIANCE 9-1-2005

Please note State Clearinghouse Number (SCH#) on all Comments

SCH#: 2005041134

Please forward late comments directly to the Lead Agency

AQMD/APCD 30

Project Sent to the following State Agencies

- X Resources
- ____ Boating & Waterways
- ____ Coastal Comm
- ____ Colorado Rvr Bd
- X Conservation
- ____ Fish & Game # ____
- ____ Delta Protection Comm
- X Forestry & Fire Prot
- X Historic Preservation
- X Parks & Rec
- ____ Reclamation Board
- ____ Bay Cons & Dev Comm
- ____ DWR
- X OES (Emergency Svcs)

Bus Transp Hous

- X Aeronautics
- ____ CHP
- X Caltrans # 5
- ____ Trans Planning
- ____ Housing & Com Dev

State/Consumer Svcs

- X General Services

Cal EPA

- ____ ARB – Airport Projects
- ____ ARB – Transportation Projects
- ____ ARB – Major Industrial Projects
- ____ Integrated Waste Mgmt Bd
- ____ SWRCB: Clean Wtr Prog
- ____ SWRCB: Wtr Quality
- ____ SWRCB: Wtr Rights
- X Reg. WQCB # 3
- X Toxic Sub Ctrl-CTC

Yth/Adlt Corrections

- ____ Corrections

Independent Comm

- ____ Energy Commission
- X NAHC
- ____ Public Utilities Comm
- ____ Santa Monica Mtns
- X State Lands Comm

Notice of Determination

Form C

To:

☒ Office of Planning and Research

For U.S. Mail: P.O. Box 3044, Sacramento, CA 95812-3044

Street Address: 1400 Tenth St., Sacramento, CA 95814

☒ County Clerk

County of: Santa Barbara

Address: 105 Anapamu Street Santa Barbara CA 93101

From:

Public Agency: CA. Dept. Fish and Game

Address: Lands Program - Wildlife Branch

1812 Ninth Street Sacramento CA 95814

Contact: Kari Lewis

Phone: 916 - 445 - 3789

Lead Agency (if different from above):

Address:

Contact:

Phone:

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2005041134

Project Title: Burton Mesa Ecological Reserve Management Plan and EIR

Project Location (include county): Lompoc, northern Santa Barbara County

Project Description:

The project is a Land Management Plan for the 5,200 acre Burton Mesa Ecological Reserve in northern Santa Barbara County. The property is owned by the State of California, administered by the State Lands Commission, and managed, under a 49-year lease by the California Department of Fish and Game. The final EIR provides a description of potential and actual environmental impacts and subsequent mitigation which may occur during management, and contains environmental documentation to comply with state and federal statutes and regulations.

This is to advise that the California Department of Fish and Game has approved the above described project on

☒ Lead Agency or ☐ Responsible Agency

_____ and has made the following determinations regarding the above described project:

(Date)

1. The project [☐ will ☒ will not] have a significant effect on the environment.
2. ☒ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   ☐ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☒ was ☐ was not] adopted for this project.
4. A statement of Overriding Considerations [☐ was ☒ was not] adopted for this project.
5. Findings [☒ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at: DFG South Coast Regional Office, 4949 Viewridge Avenue San Diego, CA 92123 and on the DFG website: www. dfg.ca.gov

Signature (Public Agency) [signature] Title Acting Director

Date 9/10/07

Date Received for filing at OPR

RECEIVED
SEP 12 2007
STATE CLEARING HOUSE

Authority cited: Sections 21083, Public Resources Code.
Reference Section 21000-21174, Public Resources Code.

Revised 2005

INITIAL STUDY & SCOPE OF WORK

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

Project Description
The project is a Land Management Plan for the 5,200 acre Burton Mesa Ecological Reserve in northern Santa Barbara County, California. The property is owned by the State of California, administered by the State Lands Commission, and managed, under a 49-year lease by the California Department of Fish and Game. The Land Management Plan guides management of habitats, species, and programs to achieve the Department's mission to protect and enhance wildlife values. It serves as a guide for appropriate public uses of the property, and provides a descriptive inventory of fish, wildlife and native plant habitats which occur on or use the property. It provides an overview of the property's operation and maintenance, and personnel requirements to implement management goals. It serves as a budget planning aid for annual regional budget preparation. It provides a description of potential and actual environmental impacts and subsequent mitigation which may occur during management, and contains environmental documentation to comply with state and federal statutes and regulations.

The Plan includes a fuel break plan for the 100 foot wide perimeter of the Reserve that is adjacent to the communities of Vandenberg Village, Mesa Oaks, and Mission Hills. The fuelbreak will be a blended mosaic fuelbreak transitioning from sparse vegetative cover of shrubs adjacent to the urban edge, to that of naturally occurring density. The fuel break plan does not include creation of new roads nor does it include vehicular access by fire fighting agencies. The Land Management Plan includes a wildfire response plan. The Plan includes the planned closure of some trails, maintenance of approximately 30 miles of trails, and creation of less than five new trails. It includes plans for boundary fencing, occasional interpretive signs, exclusion of motorized vehicles and equestrian uses, and phasing out farming and livestock grazing. It plans for habitat restoration and protection of pre-historic and historic cultural resources.

	ISSUE	PROJECT IMPACT DEGREE OF EFFECT*				CUMULATIVE IMPACT DEGREE OF EFFECT*			
		N	LS	PS -M	PS	N	LS	PS -M	PS
GENERAL:	**1. General Plan Environmental Goals and Policies**	X				X			
LAND USE:	**2. Land Use:**								
	A. Community Character	X				X			
	B. Housing	X				X			
	C. Growth Inducement	X				X			
RESOURCES:	**3. Air Quality:**								
	A. Regional	X				X			
	B. Local	X				X			
	4. Water Resources:								
	A. Groundwater Quantity	X				X			
	B. Groundwater Quality	X				X			
	C. Surface Water Quantity	X				X			
	D. Surface Water Quality	X				X			
	5. Mineral Resources:								
	A. Aggregate	X				X			
	B. Petroleum	X				X			

6.	**Biological Resources:**								
	A. Endangered, Threatened, or Rare Species				X				X
	B. Wetland Habitat				X				X
	C. Coastal Habitat	X				X			
	D. Migration Corridors	X				X			
	E. Locally Important Species/Communities				X				X
7.	**Agricultural Resources:**								
	A. Soils	X				X			
	B. Water	X				X			
	C. Air Quality/Micro-Climate	X				X			
	D. Pests/Diseases	X				X			
	E. Land Use Incompatibility	X				X			

	ISSUE	PROJECT IMPACT DEGREE OF EFFECT*				CUMULATIVE IMPACT DEGREE OF EFFECT*			
		N	LS	PS -M	PS	N	LS	PS -M	PS
	8. Visual Resources:								
	A. Scenic Highway	X				X			
	B. Scenic Area/Feature	X				X			
	9. Paleontological Resources	X				X			
	10. Cultural Resources:								
	A. Archaeological			X				X	
	B. Historical			X				X	
	C. Ethnic, Social or Religious			X				X	
	11. Energy Resources	X				X			
	12. Coastal Beaches & Sand Dunes	X				X			
HAZARDS:	**13. Seismic Hazards:**								
	A. Fault Rupture	X				X			
	B. Ground Shaking	X				X			
	C. Tsunami	X				X			
	D. Seiche	X				X			
	E. Liquefaction	X				X			
	14. Geologic Hazards:								
	A. Subsidence:	X				X			
	B. Expansive Soils	X				X			
	C. Landslides/Mudslides	X				X			
	15. Hydraulic Hazards:								
	A. Erosion/Siltation	X				X			
	B. Flooding	X				X			
	16. Aviation Hazards	X				X			
	17. Fire Hazards			X		X			
	18. Hazardous Materials/Waste:								
	A. Above-Ground Hazardous Materials			X		X			
	B. Hazardous Materials	X				X			
	C. Hazardous Waste	X				X			
	19. Noise and Vibration	X				X			
	20. Glare	X				X			
	21. Public Health	X				X			

	ISSUE	PROJECT IMPACT DEGREE OF EFFECT*				CUMULATIVE IMPACT DEGREE OF EFFECT*			
		N	LS	PS -M	PS	N	LS	PS -M	PS
PUBLIC FACILITIES/ SERVICES:	**22. Transportation/Circulation:**								
	A. Public Roads and Highways:								
	(1) Level of Service	X				X			
	(2) Safety/Design	X				X			
	(3) Tactical Access	X				X			
	B. Private Roads and Driveways:								
	(1) Safety/Design	X				X			
	(2) Tactical Access	X				X			
	C. Pedestrian/Bicycle:								
	(1) Public Facilities	X				X			
	(2) Private Facilities	X				X			
	D. Parking	X				X			
	E. Bus Transit	X				X			
	F. Railroads	X				X			
	G. Airports	X				X			
	H. Harbors	X				X			
	I. Pipelines	X				X			
	23. Water Supply:								
	A. Quality	X				X			
	B. Quantity	X				X			
	C. Fire Flow	X				X			
	24. Waste Treatment/Disposal:								
	A. Individual Sewage Disposal System	X				X			
	B. Sewage Collection/Treatment Facilities	X				X			
	C. Solid Waste Management	X				X			
	D. Solid Waste Facilities	X				X			
	25. Utilities:								
	A. Electric	X				X			
	B. Gas	X				X			
	C. Communication	X				X			
	26. Flood Control/Drainage:								
	A. FCD Facility	X				X			
	B. Other Facilities	X				X			

	ISSUE	PROJECT IMPACT DEGREE OF EFFECT*				CUMULATIVE IMPACT DEGREE OF EFFECT*			
		N	LS	PS -M	PS	N	LS	PS -M	PS
PUBLIC FACILITIES/ SERVICES (CONT.):	**27. Law Enforcement/Emergency Svs.:**								
	A. Personnel/Equipment	X				X			
	B. Facilities	X				X			
	28. Fire Protection:								
	A. Distance/Response Time	X				X			
	B. Personnel/Equipment/Facilities/Access	X				X			
	29. Education:								
	A. Schools	X				X			
	B. Libraries	X				X			
	30. Recreation:								
	A. Local Parks/Facilities	X				X			
	B. Regional Parks/Facilities	X				X			
	C. Regional Trails/Corridors	X				X			

DEGREE OF EFFECT:
N = No Impact.
LS = Less Than Significant
PS-M = Potentially Significant Impact Unless Mitigation Incorporated.
PS = Potentially Significant Impact.

DISCUSSION OF RESPONSES TO CHECKLIST

1. **Goals and Policies:** These will be discussed in EIR.
2. **Land Use:** The Land Management Plan (LMP) will not change the character of the community, cause a need for more housing, or induce growth.
3. **Air Quality:** Management of the Reserve will include one or up to a maximum of 6 staff with vehicles to patrol and perform maintenance activities, but emissions will not have a significant impact on local or regional air quality. Prescribed burns of the vegetation are not proposed. Wildfires are anticipated and will have short-term effects on local air quality.
4. **Water Resources:** The LMP will not affect the quality of groundwater or surface water. Some groundwater may be needed for habitat restoration efforts, but the effect of these short term projects are not expected to be significant.
5. **Mineral Resources:** The LMP will have no effect on aggregate or petroleum resources. The oil company owning the oil field to the north of the BMER will continue to have access to all of their facilities.
6. **Biological Resources:** The Fuel Management Plan component of the LMP may have significant adverse impacts to Endangered, Threatened, and Rare Species, Wetlands and Locally Important Species and Communities. These will be discussed in the EIR.
7. **Agricultural Resources:** The LMP will phase out farming and grazing on approximately 500 acres and restore them to native habitats. No significant effect will result.
8. **Visual Resources:** Public views from Highway 1 and other public roads will be maintained. No impacts to visual resources will occur.
9. **Paleontological Resources:** No paleontological resources are known from the Reserve.
10. **Cultural Resources:** The LMP could significantly impact cultural resources. This will be discussed in the EIR.
11. **Energy Resources:** The LMP will not require a significant consumption of energy.
12. **Coastal Beaches and Sand Dunes:** The BMER is not on the coast and the LMP is not expected to affect sand supply at coastal beaches and sand dunes.
13. **Seismic Hazards:** No structures or uses are proposed that would be significantly affected by seismic hazards.
14. **Geologic Hazards:** No subsidence, expansive soils, landslides, or mudslides are anticipated.
15. **Hydraulic Hazards:** Erosion on steep slopes with sandy soils could adversely affect trail users. This will be discussed in the EIR.
16. **Aviation Hazards:** No aviation hazards will occur as a result of the LMP.
17. **Fire Hazards:** Fire hazards will occur with or without the LMP. This will be discussed in the EIR.
18. **Hazardous Materials/Waste:** Hikers on trails near the Point Pedernales Pipeline could be affected if there were a gas leak. This will be discussed in the EIR.
19. **Noise and Vibration:** Short-term noise will occur during chipping of cut fuels as part of the fuelbreak project. This will be discussed in the EIR.
20. **Glare:** There will be no lighting or glare as part of the project.
21. **Public Health:** No public health issues will be affected by the LMP.
22. **Transportation/Circulation:** Use of the BMER will not cause a significant increase in traffic or levels of service or safety design issues on the highway and roads through the Reserve. There will be no increase in parking demand or other related facilities.
23. **Water Supply:** The habitat restoration efforts will result in an insignificant amount of water demand, and will not affect the quality or quantity of water supply to residential areas.
24. **Waste Treatment/Disposal:** Public restrooms are not proposed. There will be no impact on local sewage and solid waste services.
25. **Utilities:** No new demand for electric, gas, or telephone is expected. Existing utilities with maintenance needs on the BMER will be required to work more actively with CDFG, but this is not expected to significantly affect their operations or ability to provide services.
26. **Flood Control/Drainage:** The project would not cause demand for new flood control or drainage facilities. The LMP calls for working with the County and local residents to reduce sedimentation in drainages, but this is expected to have a beneficial affect on flood control facilities.
27. **Law Enforcement:** Existing level of demand for law enforcement by County Sheriff is expected to stay the same.
28. **Fire Protection:** The LMP will not change the response time to local residences and will not cause in increase in personnel, equipment or facilities. The LMP is expected to improve the safety of adjacent residences to the BMER through implementation of the fuelbreak. This will be discussed in the EIR.
29. **Education:** The LMP will not increase demand for schools or libraries, but it will provide educational opportunities. This is considered a beneficial impact.

30. **Recreation:** The BMER will continue to provide non-motorized recreation on designated trails as long as this use is consistent with protection of ecological resources. Implementation of the Trails Plan of the LMP will close some trails, but the net effect will still result in more than 30 miles of publicly accessible trails. The LMP will continue prohibiting motorized access, including OHVs and ORVs, pursuant to Title 14 regulations already adopted by the Fish and Game Commission. This will be discussed in the EIR.

	MANDATORY FINDINGS OF SIGNIFICANCE	YES/MAYBE	NO
	Based on the information contained within Sections B and C:		
1.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	X	
2.	Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one that occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future).		X
3.	Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effect of other current projects, and the effect of probable future projects. (Several projects may have relatively small individual impacts on two or more resources, but the total of those impacts on the environment is significant).	X	
4.	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?		X

	DETERMINATION OF ENVIRONMENTAL DOCUMENT
	On the basis of this initial evaluation:
[ ]	I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION should be prepared.
[ ]	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measure(s) described in section C of the Initial Study will be applied to the project. A MITIGATED NEGATIVE DECLARATION should be prepared.
[ ]	I find the proposed project, individually and/or cumulatively, MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT is required.*
[X]	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
[ ]	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ Date _____

Felix Arteaga, Chief
Lands and Facilities Branch
California Department of Fish and Game

BOTANICAL AND WILDLIFE SURVEYS IN FUEL MANAGEMENT SEGMENTS FINAL EIR

APPENDIX 8.2

BURTON MESA ECOLOGICAL RESERVE LAND MANAGEMENT PLAN

Burton Mesa Ecological Reserve
Fuelbreak Project
October 18, 2004

Vascular Plant Field Assessment
Prepared by Mary Meyer, Plant Ecologist
South Coast Region
Department of Fish and Game

Introduction: The following documents the results of a series of field evaluations of vascular plant species for the Burton Mesa Ecological Reserve Fuelbreak Project. The 5000 + acre Burton Mesa Ecological Reserve is owned by the California State Lands Commission and managed by the California Department of Fish and Game. It is located in northern Santa Barbara County, in the general vicinity of the unincorporated communities of Vandenberg Village, Mission Hills and Mesa Oaks, north of Lompoc. The purpose of this analysis is to identify sensitive plant species and sensitive plant habitats occurring within potential fuelbreak locations.

Seventeen potential fuelbreak areas were examined in the field over the 2003 and 2004 growing season and are shown in Figure 1 (Craig Turner). The assessment area typically was a band of habitat of variable width (up to 300 feet) located at the urban/wildland edge, or along existing roadways.

Methodology: Table 1 shows the dates that field assessments were conducted in 2003. Field work in 2003 emphasized examination of proposed Segments 1-8. Field work was conducted between February 4, 2003 and April 10, 2003. A followup examination was made of Segment 1 on May 30, 2003. Surveyed segment widths are also shown in Table 1. The width surveyed varied, from 300 feet in Segment 1 to 200 feet in Segments 7 and 8. A narrower band, about 50 feet wide, was examined in Segments 3, 4, and 5. Segment locations and survey widths were based primarily upon input we received from the Santa Barbara County Fire Department, specifically, Mr. Steve Hobbs, Fire Captain, Vegetation Management Unit.

Table 2 shows the dates that field assessments were conducted in 2004. Field work in 2004 emphasized conducting a late spring field visit to Segment 8 which had only received an early spring visit the year before, in February 2003. The remaining surveys were conducted from late April through late May, starting with Segment 9 and completed for all the remaining Segments. We did not re-examine Segments 1 though 7 in 2004. Surveyed widths varied, but generally the maximum width surveyed was 300 feet.

Field work in 2003 was conducted by Mary Meyer, Plant Ecologist with the South Coast Region, Department of Fish and Game and Anne Macleod, Scientific Aid also with the South Coast Region. Additional assistance in conducting field assessments in 2004

was provided by Diana Hickson, Associate Botanist with the Department's Vegetation Classification and Mapping Program. In 2004, we generally worked in teams, overseen either by Mary Meyer or Diana Hickson. Other team members included Kari Lewis, Teresa La Blanc, and Craig Turner from the Department's Lands and Facilities Branch in Sacramento and Terri Stewart, Senior Lands Supervisor for the South Coast Region.

Surveys consisted of meandering through the segment on foot and documenting all vascular plants encountered. Surveys emphasized locating rare and/or sensitive vascular plant species, primarily herbs, which could be affected by fuel reduction activities. Surveys also emphasized describing vegetation conditions relative to sensitive/endemic Burton Mesa chaparral shrubs and subshrubs. Sensitive/endemic Burton Mesa shrubs and subshrubs can be very common and often dominate or share dominance in vegetation stands at the Burton Mesa Ecological Reserve. Sensitive shrub and subshrub species are targeted for removal in some locations to achieve fuel reduction goals, but are often too widespread to map beyond a general level.

General information on the vegetation found within potential fuelbreak segments was also gathered. This information is available for further analysis but has not been analyzed in this report. (Cover was approximated for most chaparral dominants in a given stand. Department staff also periodically conducted a RAPID assessment of vegetation in a given stand at various locations within various segments. This procedure allows for the ocular estimation of cover for dominant and co-dominant species within a given stand area).

All vascular plants found to be in a recognizable condition were recorded and are listed in Table 3. Identification of some plant species was confirmed in consultation with Mr. Steve Junak, curator of the herbarium at Santa Barbara Botanic Garden (SBBG). Some specimens of rarer herbs were vouchered at SBBG. Botanical nomenclature generally follows the Jepson Manual (Hickman, 1993).

Weather conditions in 2003 were generally good, with about average levels of rainfall for this area. Several spring storms maintained good growing conditions for herbaceous annuals, particularly from the months of March through late May. Weather conditions in 2004 were substantially drier with very little spring rainfall recorded. For these reasons, it is possible that rare herbs may have been missed or may not have been detected in those segments that were only examined in late spring of 2004.

Results: A list of vascular plant species observed during the course of the surveys is included in Table 3. Sensitive plant species located within the surveyed fuelbreak segments are discussed individually below.

Sensitive Herbs

Seaside bird's beak (*Cordylanthus rigidus* ssp. *littoralis*)

Seaside bird's beak is a state listed endangered plant species, generally occurring in sandy soils west of Lompoc in Santa Barbara County, and in the Monterey Bay area region of Monterey County. This species is a hemi-parasitic annual herb that blooms from May through October. In the Burton Mesa area, its preferred habitat is generally sparsely vegetated to sometimes disturbed open areas within chaparral and woodland habitats. Typical sites include sandy margins of fuelbreaks; sandy, infrequently traveled dirt roads and trails; and sparsely vegetated sandy banks or slopes (Keil and Holland, 1998).

Presence on the Site: A single population of seaside bird's beak was observed in the vicinity of the existing sewer line access roadway and easement in Segment 1 of the proposed fuelbreak. A population of about 500 individuals was observed in April of 2003. The general area is sparsely vegetated with considerable exposed open sand habitat. It was likely disturbed for installation/maintenance of the sewer line in the mid 1990's. Plants are scattered in dense groups to occasional individuals. Associated species include the shrub, mock heather (*Ericameria ericoides*), and numerous native annual herbs that favor open sand habitats. Non-native weeds are infrequent in this area. The bulk of this population is found immediately west of the sewer line easement roadway, with only occasional individuals present east of the sewer line easement roadway.

Recommended Mitigation Measures: The single known population will be fully avoided during any fuel reduction work that may occur in this area. Avoidance measures would include:

1) Conduct a spring survey in the year prior to implementing fall fuel reduction work, in order to locate the full extent of the population within the segment;
2) Utilize temporary fencing, flagging or other appropriate measures to mark occupied habitat areas on the ground to prevent trampling or damage;
3) Ensure any staging and material handling areas are located at least 100 feet away from any known population/individuals;
4) A botanical monitor will be present during work to oversee and ensure that full avoidance is implemented.
5) Implement measures to reduce weed introduction within the segment.

There is potential for dormant seedbank of undetected seaside bird's beak populations to be stimulated to germinate in fuelbreak treatment areas following fuel reduction work (including outside Segment 1). There is therefore potential for a yet-to-be-observed population to appear within fuelbreak areas. Subsequent maintenance of the fuelbreak could adversely impact individuals or populations. To address this potential, the following measures should be implemented:

1) Following initial implementation of fuel reduction work, a spring survey will be performed to determine whether populations of seaside bird's beak, or other rare herbs, have been stimulated to emerge by fuel reduction work. Any areas encountered will be mapped and documented.

2) Subsequent maintenance activities will be implemented to fully avoid any direct or indirect impacts as described in 1-5, above.

Should a population germinate and grow on any area designated as a Fire Department Emergency Vehicle Access route, the following measures should be implemented:

1) Driving over growing plants during a wildfire emergency is acceptable and should result in only short term, minor impacts.

2) Roadway maintenance should only be allowed in the late fall, after the plant has produced a substantial portion of its annual seed production. Use of heavy equipment or major earth moving would be prohibited within the occupied habitat area. Activities that might result in "take" of this species by individuals outside the Department of Fish and Game, may require an incidental take permit pursuant to Fish and Game Code Section 2081(b). Additional CEQA compliance may be required to support issuance of such a permit.

Hoover's bent grass (*Agrostis hooveri*)

Hoover's bent grass is a tufted perennial member of the Poaceae and is listed by the California Native Plant Society (CNPS) in their List 1b. The species is found on dry sandy soils in open chaparral and oak woodlands at elevations less than 600 meters, and is restricted to northern Santa Barbara to southern San Luis Obispo Counties (Keil and Holland, 1998).

Presence on the Site: Hoover's bent grass was observed at two locations- three individuals were observed in September 2004 just east of the central open sand habitat in Segment 1, and a population of about 30 individuals was located in the southeast portion of the South Vandenberg Village segment.

Segment 1: Three individuals were observed adjacent to the riparian area in open sand habitat. There may be other individuals in the area that were overlooked, as it was just outside of the surveyed portion of Segment 1.

Recommended Mitigation Measure:

1) Locate additional individuals, if present, and flag occupied habitat to prevent trampling or removal.

2) A botanical monitor will be present when work occurs to ensure occupied habitat is avoided.

Segment SVDBVillage: A population of about 30 plants was observed in June of 2004. They are located at about 30 feet south of the existing dirt roadway immediately south of the existing residences located on Stardust Road, west of Moonglow Avenue. They are just east of the confluence of the dirt roadway and an old foot trail heading southwest off the roadway. The occupied area is about fifty feet long and 30 feet wide. (g.p.s. reading for the vicinity: 34 degrees N, 41' 559; 120 degrees E, 28' 436, NAD 27 CONAN). The general area has been disturbed in the past, probably by past fuel reduction work, off road vehicles and utility maintenance activities. Individual Hoover's bent grass was often found growing near purple needle grass (*Nasella pulchra*) and the invasive Veldt grass (*Ehrharta calycina*). All individuals encountered appeared stressed by low levels of rainfall in 2004. Some individuals were also being subjected to heavy browse, probably by brush rabbits, especially on individuals located near the cover of shrubs.

Recommended Mitigation Measures for SVDBV Segment:

1) Conduct subsequent surveys during average to higher levels of rainfall to ensure the full extent of the population has been detected, and conduct a spring survey during the growing season prior to any fuel reduction work in the area;

2) Utilize flagging, temporary fencing or other measures to demarcate the population and a surrounding 30 foot buffer, and allow no ground-disturbing activities within that area;

3) To prevent accidental damage to the population from utility maintenance, either a) install a post and cable barrier along the existing disturbed dirt roadway to prevent vehicles from leaving the roadway or turning around on the population (utility vehicles were observed using the area to turn around their trucks and trailers in June 2004); or b) place a row of large boulders along the side of the existing dirt roadway to prevent vehicles from driving into the area. A designated turn around area should be defined at the west end of this dirt roadway where the terrain precludes vehicle travel.

4) Develop and implement a plan to control the spread of Veldt grass in the vicinity of the Hoover's bent grass population.

Straight-awned spineflower (*Chorizanthe rectispina*)

A population of this very rare herb was located on the southern end of Segment 1 near Highway One. This species is an annual herb in the buckwheat family

(Polygonaceae). It is reported to occur in sandy openings in chaparral and dry woodlands and coastal scrub in Monterey, San Luis Obispo and Santa Barbara Counties (Hickman, 1993). The species is a CNPS List 1b. To date, the species has only been collected from one other location in Santa Barbara County, by Dr. David Keil- it was found in an opening near the picnic area east of Lompoc-Casmalia Road (Keil and Holland, 1998). The population at Segment 1 is the second known occurrence for the county (Steve Junak, pers. comm.).

Presence in the site: The single population of about 200 plants (2003) was found growing just southeast of the sewer easement road, and generally straddles a footpath/game trail that skirts a young coast live oak. It was observed growing in sparsely vegetated grassland, gently sloping to the south east, which was likely disturbed in the past, possibly during construction of Highway One. It was growing with tarplant (*Hemizonia fasciculata*), fescue (*Vulpia myuros*), red brome (*Bromus madritensis rubens*), and occasional purple needle grass (*Nasella pulchra*). Occupied habitat was about thirty feet across and about 50 feet long, staddling the foot path. A short distance away, within a few feet, the more common and widespread *Chorizanthe diffusa* abruptly becomes dominant and no more straight-awned spineflowers were seen.

Sometime during the month of October, 2004, the Vandenberg Community Services District implemented sewer manhole maintenance activities and essentially bladed through the bulk of this population, scraping the soil surface up to four inches deep. This area should be observed to determine whether the population will recover from blading and to prevent spread of nearby Veldt grass into this new disturbance.

Recommended Mitigation Measures:

The population will be fully avoided by implementing the same fuel break preconstruction survey and avoidance measures as well as subsequent maintenance avoidance measures as described for seaside bird's beak. In addition, it is critical that a Veldt grass control program be initiated in this general area, due to the proximity of this population to Veldt grass populations which are rapidly expanding along the Highway One corridor. Control of off road vehicles in this general location should also be implemented to reduce potential damage to the spineflower population.

Curly-leafed monardella (*Monardella undulata*)

This species is an annual member of the mint family and is CNPS List 4 plant. It is found in coastal sand dunes from Sonoma County to Santa Barbara County, where it reaches its southern most limit on Vandenberg Air Force Base (Keil and Holland, 1998). Both locations on the preserve where this species was observed were generally sandy, sparsely vegetated openings with few other annual or perennial plant species growing in the immediate area.

Presence on site: Populations of curly-leafed monardella were found at two fuelbreak locations, Segment 1 and Segment 10.

Segment 1: A population of around 40 individuals was found growing in a localized area just south of the central open area along the sewer easement in Segment 1. Most of the plants were found just beyond the edge of the sewer sandy roadway and near the central manhole. Occupied habitat was about thirty feet by fifty feet. The habitat area is mostly sparsely vegetated open sand, with scattered individuals of sand-loving small annual herbs. *Mucronea californica* is common and dominates the herbaceous cover here in mid spring. Later in the summer, *Lessingia glandulifera* var. *pectinata* becomes dominant.

Recommended Mitigation Measures: The occupied habitat area will be fully avoided by implementing the same fuel break preconstruction survey and avoidance measures as well as subsequent maintenance avoidance measures as described for seaside bird's beak.

Segment 10: A population of around 100 curly-leaved monardella's was located on open sand in the northwesternmost corner of the segment, and potentially may lie just outside the northwest segment boundary on an adjacent private land parcel. Plants were found growing on open sand between established stands of chaparral vegetation, on an old roadbed or path. (g.p.s. location in vicinity: 34 degrees N, 43.038'; 120 degrees E, 26.921', NAD 27 CONAN)

Recommended Mitigation Measures:

The occupied habitat area will be fully avoided by implementing the same fuel break preconstruction survey and avoidance measures as well as subsequent maintenance avoidance measures as described for seaside bird's beak. Currently, further fuel reduction work is not being proposed here because existing fuel clearance appears to be adequate. If this changes, spring surveys prior to any fuel reduction work should be performed, and other open sand habitats on the Ecological Reserve near the population should be re-examined to ensure that populations are detected so avoidance measures can be implemented.

California spineflower (*Mucronea californica*)

California spineflower occurs both in coastal and interior sites from Monterey and Kern County south to San Diego County. It is a CNPS List 4 plant. The species is common to locally abundant on the Burton Mesa Ecological Reserve (Mary Meyer, pers.obs.) and Vandenberg Air Force Base (Keil and Holland, 1998). The species occurs in sandy open habitats, often in coastal scrub, coastal dune scrub, and openings in chaparral to elevations of 1400 meters. California spineflower is a low growing annual, producing dark red, unique spiny bracts and pale white flowers which attract abundant insect pollinators. This species has also been identified as the host food plant for larvae of the

rare La Purissima blue butterfly, currently known to exist at only one location in the world, NW of the intersection of Harris Grade Road and Burton Mesa Boulevard.

Presence in the Site: California spineflower is extremely common at the Burton Mesa Ecological Reserve and is typically seen growing abundantly in sparsely vegetated openings, particularly those which lack annual grass cover. The only fuel break segment where the species was specifically mapped was in the previous Segment 1, where a group of rare annual herbs co-occurs with this species. Most other proposed fuelbreak segments contain localized to widespread populations of this species in areas lacking tree, shrub and perennial herb cover and with sparse cover of annual grasses.

Recommended Mitigation Measures:

Full avoidance of habitat occupied by this species outside Segment 1 is generally not feasible, because the species is common and frequent. Currently, proposed procedures for implementing fuel reductions should help minimize adverse impacts to this species. These procedures include efforts to locate staging and chipping areas in the most disturbed sites and measures to reduce the spread of weeds by personnel and equipment. Removal of vegetation in the fall and early winter months prior to significant precipitation will also help minimize impacts from trampling young, fragile rosettes of California spineflower.

Small-seed fiddleneck (*Amsinkia spectabilis* var. *macrocarpa*):

Small-seed fiddleneck is an annual member of the Borage family. It has showy yellow to orange flowers on prickly/hairy stems and grows to be about 1.5 feet tall. The subspecies is a local endemic found only in Santa Barbara and San Luis Obispo Counties, generally near the coast in sandy areas. It is not currently listed by the CNPS. To date, locations on the Ecological Reserve where this species was seen exhibit localized disturbance and often are sites that have been mowed in the past, which favors the conversion of shrubland to ruderal habitats dominated by annual grasses and weedy forbs. Small-seeded fiddleneck seems to do well in these conditions.

Presence on the Site: This subspecies was observed at a number of locations within various segments of the proposed fuelbreak. Generally, it was found growing within habitat that were previously disturbed by vegetation thinning and mowing. Often, it was found in small patches that appeared to have missed being mowed. Patches were generally five to twenty feet in diameter. (Areas that appear to have been previously mowed on the urban/wildland interface on the Ecological Reserve do not appear to be maintained on a consistent, annual basis- for instance, no evidence of mowing in 2004 was observed in areas where this species was found). These types of small patches support populations of a couple of hundred individuals.

The presence of this subspecies was generally noted during surveys but not mapped in detail. A single population was observed in a disturbed area where a dead live oak had

been removed for firewood in the central area of Segment 1 near the sewer road. Another small patch was observed behind the Little League field in Segment 3 (g.p.s. location: 34 degrees N, 42'522; 120 degrees E, 28'472, NAD 27 CONAN). Another patch was observed south of the substation west of Rucker Road (g.p.s. reading in the vicinity: 34 degrees N, 41.48.9"; 120 degrees E, 26.16" NAD 27 CONAN). Another patch was observed on what is probably private property north of the existing church in the north Rucker Road segment.

Recommended Mitigation Measures:

Adverse impacts to localized populations of small-seeded fiddleneck from annual mowing can be minimized by timing mowing late in the spring after most of the fiddleneck flowers have set seed and the seed has hardened off. Generally, mowing at the very end of May should be effective in avoiding damage to annual seed production. However, a botanist should examine populations in the affected area to confirm that this timing method will be effective. Periodically, mowed fuelbreak locations should be examined every few years to determine if additional populations have arisen and to document that the prescription is allowing the species to persist in these locations. It would also be important to ensure that chipping areas and staging areas are not placed at locations that would damage fiddleneck populations.

San Luis Obispo Wallflower (*Erysimum capitatum* ssp. *lompocense*):

The San Luis Obispo wall flower (should be Lompoc wallflower) is a perennial herb that occurs on sandy hillsides, mesas and back dunes in central dune scrub and maritime chaparral at elevations less than 500 meters. It is endemic to sandy hills about Lompoc, including the La Purissima Mission and Burton Mesa (Smith, 1998). It is on the CNPS list 4. This species exhibits a biennial habit- populations include low growing first year individuals which do not elongate and flower, and older individuals that can reach three to four feet in height when blooming. We frequently observed this species to be grazed off at about one foot in height in early spring, probably by mule deer. The grazed individuals subsequently produce numerous lateral branches which proceed to mature and flower. Grazing damage later in the season was not observed.

Presence at the site: This herb is fairly common in localized areas of the Burton Mesa Ecological Reserve. It seems to be observed most often in association with Burton Mesa scrub, rather than Burton Mesa chaparral (manzanita dominated) stands. Often, wallflowers grow up through the base of lower growing shrubs such as mock heather or California sage brush. These may represent locations where they are more protected from deer browse. Wallflower populations were noted during field work but generally they were not mapped at a specific level.

Segment 1: Several groups of wallflowers were observed immediately west of the sewer roadway, midway between Highway 1 and the urban area. About 25 plants were observed just off the edge of the roadway, under the drip line of a large oak in a location

that receives little direct sunlight due to shading by large willows which are on the east side of the roadway (about five feet wide at this location). This group is vulnerable to damage from road maintenance or widening that may be undertaken by the Community Services District, or efforts to widen the sewer roadway under this project for fire department access. Another 25 to 50 individuals were scattered, continuing to the northwest around the north side of the oak woodland dripline. An additional 75-100 individuals were observed growing throughout the adjacent low growing Burton Mesa scrub. This portion of the wallflower population (the portion not on the edge of the sewer roadway) is not within the currently proposed Segment 1 boundary. (The population was gpsed and is on the DFG GIS for the previous Segment 1, see Craig Turner).

Segment 10: San Luis Obispo wall flower was observed on the north end of Segment 10, around the edge of the coast live oak woodland/riparian area. No fuel reduction work is proposed for this area. Wallflowers were also observed just outside the NW corner of this segment, again in an area not proposed for fuel reduction work at this time.

North Rucker Road: San Luis Obispo wallflower was observed at several locations on the north end of this segment. Several g.p.s. points were taken adjacent to populations (Craig Turner). The largest group contained over 60 individuals. These individuals are all located generally outside areas proposed for roadside mowing along Rucker Road, and therefore would be fully avoided under the proposed plan.

East Mesa Oaks: A large group of over fifty wallflowers were observed just under the dripline of coast live oak in previously mowed habitat close to Rucker Road on the far eastern end of this segment. Persistence within the mowed area may be due to several factors. If mowing occurs later in the spring, first year individuals may not be affected and second year individuals may have already set seed allowing for persistence. Inconsistent mowing (for instance, it did not appear mowed during the surveys in April/May 2004) may allow the population to persist, and its location, often right next to the dripline canopy of live oaks, may represent locations that are missed by mowing or mowed inconsistently.

<u>Recommended Mitigation Measures:</u>

Segment 1: The location of San Luis Obispo wallflower immediately adjacent to a narrow section of the sewer roadway (and confined on the opposite side of the dirt roadway by willow forest) may be vulnerable to damage if the roadway requires widening for Fire Department vehicles. If widening is necessary, avoidance is likely not feasible. Given that additional plants occur further interior in the immediate vicinity, the potential loss of these 25 individuals may not be significant. If road widening is required, seed could be collected from the individuals prior to widening activity, and distributed in interior areas on suitable habitat. Translocation of first year rosettes to interior locations, performed in late winter or early spring, may also be feasible.

Segment E Mesa Oaks: The population of wallflowers on the east end of this segment occurs in areas that are periodically mowed. We are currently recommending annual mowing of the first fifty feet adjacent to Rucker Road and first fifty feet south of the existing church. Wallflower populations should not be mowed. To achieve this objective, the population area would need to be staked or marked in the field in a manner that would allow the mowing operator to recognize the area should be avoided. The general area should also be examined every few years to determine if new populations occur or locations have shifted.

Fremont's monkeyflower (*Mimulus fremontii*):

Fremont's monkey flower is described by Smith (1998) as an annual herb with yellow flowers that grows on sandy slopes of Burton Mesa woodland and chaparral in Santa Lucia Canyon (just west of the BMER) and near Vandenberg Village on Lompoc-Casmalia Road. It has been recognized as a new variety, but has not yet been published (Smith, 1998). Fremont's monkeyflower is a CNPS List 4. (Presumably, once described, the new variety would be even rarer?) A population of 50-100 individuals was documented by Suzanne Bernstein with LFR Levine Fricke 2003 on the proposed Clubhouse Estates project area, which is located just west of the Burton Mesa Ecological Reserve (adjacent to proposed Fuelbreak Segment 11). About six locations were found there, and it occurs in the open sand, herb dominated community (LFR Levine Fricke, 2004).

Presence at the site: A small population of Fremont's monkeyflower was observed in open sand habitat, just west of the sewer road, in the central portion of Segment 1, close to the seaside bird's beak population. Only five individuals were seen. The population was too small to collect voucher specimens, and the five individuals were difficult to relocate when re-visited in May, 2003. None were observed in Segment 1 in 2004, probably because of insufficient rainfall.

This species is vulnerable to being overlooked and may not emerge in low rainfall years. Plants observed in 2003 were under three inches tall, typically with one or two large (about one inch long) flowers on a tiny green base.

Recommended Mitigation Measures:

The currently known population is outside the current Segment 1 project location, and is set back about twenty feet from the existing sewer roadway. Open habitats in this location are recommended for full avoidance. The population is vulnerable to damage if sewer maintenance activities occur nearby.

Additionally, all fuelbreak segments not surveyed between the months of March and mid-April should be reexamined prior to any fuel break work to ensure that Fremont monkeyflower populations, if any, are detected. Surveys should be performed the season prior to implementing fuel reduction work in years of average to above average rainfall.

Any occupied habitat encountered should be avoided. For segments where Fire Department vehicular access is recommended, there is the potential for unavoidable impacts if a population is located and it is not feasible to avoid the area. Mitigation should be required for unavoidable impacts to this species.

Sensitive Shrubs

La Purisima manzanita (*Arctostaphylos purissima*):

La Purisima manzanita has a very restricted distribution and is endemic to northern Santa Barbara County where it occurs primarily on the Burton Mesa and in the Purissima Hills. It is on the CNPS List 1b. It is threatened by habitat loss to development, habitat fragmentation inappropriate fire regimes. This species often is co-dominant with *A. rudis* and is indicative of classic Burton Mesa-type maritime chaparral. It can also be present in chamise dominated stands, and occurs occasionally to infrequently in Burton Mesa scrub stands. La Purisima manzanita lacks a burl, and therefore does not resprout following wildfires- the species depends upon its stored bank of seed to replace individuals following fires. Its smooth red bark, clasping leaves, pale pinkish white flowers and gnarly branching pattern produce dramatically beautiful individuals. Manzanita berries are a key food source for local wildlife.

Presence at the site: This species is widespread in the local area and occurs in many of the surveyed fuelbreak segments. This species is most abundant in mature to old growth Burton Mesa chaparral extending from Segment 2 through Segment 8. Chaparral in this area may be greater than 70 years of age. Individuals can reach great size, sometimes 10 to 15 feet across and 15 feet tall.

This species was occasional to infrequent in most chamise-dominated stands in the vicinity of Mission Hills and Mesa Oaks.

Potential Project Impacts: La Purisima manzanita will experience a significant reduction in the number of individuals in those segments identified for thinning of shrubs and sub-shrubs, especially where it is a co-dominant. Therefore, significant impacts are likely to occur from the project, especially in Segments 7 and 8. In segments where the species occurs occasionally to infrequently, we would propose that individuals be targeted for retention. It may not always be feasible to retain specific individuals at locations where Fire Department vehicular access may be created or existing paths have to be widened for vehicle use. Therefore, significant impacts could occur outside Segments 7 and 8, but likely will not be as extensive.

If La Purisima manzanitas have to be thinned out, this will involve cutting individual shrubs just above ground with a chain saw or hand saw. Since this species lacks a burl, it may not resprout following cutting. (Do we know about this?).

An additional impact fuel break installation can have will be to prevent wildfires from occurring within the fuel break itself. Wildfires are necessary to stimulate germination of the seed bank to replace individuals lost in the fire. Mechanical removal of individuals to achieve reduced biomass within fuelbreaks will, over time, gradually eliminate this species from the treated fuelbreak itself because seedbank will not be stimulated by wildfires to germinate and therefore, recruitment of replacement individuals would not occur.

Conclusion: there is potential for significant adverse impacts to this species within the proposed fuelbreak segments where shrubs will be thinned to reduce fuelloads or Fire Department access is being created.

Recommended Mitigation Measures:

Stands where La Purisima manzanita is occasional to infrequent: Avoid and retain all live individuals.

Stands where the species will be removed through thinning: Mitigation is required for unavoidable impacts to habitat areas containing this species. Potential mitigation could include the following:

Purchase compensation habitat at a 2:1 ratio for medium quality or 3:1 ratio for high quality habitat (this is consistent with Santa Barbara County General Plan Guidelines). Habitat should be comparable or higher in quality to that being impacted, and should be in locations that can be effectively managed for habitat value, preferably adjacent to the existing Ecological Reserve. There may be various smaller private land parcels that could be considered for acquisition.

Enhance existing habitat by protecting it from motor vehicle damage or weed invasion: Installation of barriers followed by localized re-planting of chaparral species, and/or re-distribution of fire-treated seedbank, could be explored on the existing preserve to offset loss of habitat from fuelbreak installation. Elimination of weeds that are overtaking chaparral habitat could also be explored.

Restore chaparral habitat: Full restoration of type converted areas that could support Burton Mesa chaparral (including La Purisima manzanita) is also a potential mitigation measure. This may be extremely difficult to achieve, however. To date, restoration of areas cleared in the past for farming, and now dominated by annual grasses, mustards, or other ruderal species, has yet to be successfully achieved. Further experimentation to identify effective techniques to restore this habitat should be pursued.

Shagbark manzanita (*Arcostaphylos rudis*):

Shagbark manzanita is endemic to the central coast of California where it occurs on old stabilized sand dunes from southern San Luis Obispo County to northern Santa Barbara County. This species is threatened by habitat loss due to development, declines due to inappropriate fire regimes, and fragmentation of remaining habitat supporting the species. Shagbark manzanita, as the name implies, has a shredded shaggy bark rather than the smooth bark more typical of other species of manzanita. Shagbark manzanita is frequently a co-dominant in Burton Mesa chaparral stands. Shagbark manzanita differs from La Purisima manzanita in that it can resprout after wildfires.

Presence at the site:

This species is most abundant and dominant in mature to old growth stands in Segments 2 through 8. The species is common to occasional or infrequent in other fuelbreak segments vegetated with Burton Mesa scrub or chamise-dominated areas. As with La Purisima manzanita, old growth individuals are large and form nearly impenetrable stands.

Potential Project Impacts: Shagbark manzanita will experience a significant reduction in the number of individuals in those segments identified for thinning of shrubs and subshrubs, especially at locations where it is a co-dominant. Therefore, significant impacts are likely to occur from the project, especially in Segments 7 and 8. In segments where the species occurs occasionally to infrequently, we would propose that individuals be targeted for retention. It is possible it may not always be feasible to retain specific individuals at locations where Fire Department vehicular access may be created or existing paths have to be widened for vehicle use. Therefore, significant impacts could occur outside Segments 7 and 8, but likely will not be as extensive.

Other impacts associated with installation of the fuelbreak project may be similar to that described for La Purisima manzanita. Individuals removed by cutting to achieve reduced shrub cover within fuelbreaks may resprout at the base, but are unlikely to achieve the large size and habitat value compared with those found in natural stands. Ongoing fuelbreak maintenance would likely prevent treated individuals from recovering much biomass. Although this species is recognized as re-sprouting after wildfires, recruitment of new individuals from seed is still important to the overall survival of the species in a given area. Therefore, fuelbreak areas that would no longer be subject to natural fire regimes will likely experience declines in shagbark manzanita, even if the species is avoided and retained in those areas.

Conclusion: there is potential for significant adverse impacts to this species within the proposed fuelbreak segments where shrubs will be thinned to reduce fuelloads or Fire Department access is being created.

Recommended Mitigation Measures: see discussion under La Purisima manzanita.

Lompoc ceanothus (*Ceanothus cuneatus* var. *fascicularis*):

This variety of ceanothus is an important component of maritime chaparral and coastal sandy mesas in Santa Barbara and San Luis Obispo counties. It is a CNPS List 4 plant. Ceanothus require periodic wildfires to stimulate germination of the seedbank for replacement of individuals and generally does not resprout after fires.

Presence at the site: Lompoc ceanothus is fairly common in stands of Burton Mesa chaparral and occurs occasionally to infrequently in other habitat types on the Ecological Reserve, including Burton Mesa scrub and chamise-dominated stands. As chaparral stands mature and age, Lompoc ceanothus becomes decadent and eventually dies out. This process creates natural openings within otherwise dense chaparral, allowing for establishment of pockets of annual herbs (Odium et al. 1993). Occasionally, Lompoc ceanothus occurs in somewhat dense patches- this was observed Segments 2, 3 and 4, west of the high school.

Potential Project Impacts: Lompoc ceanothus could experience a significant reduction in the number of individuals within fuelbreaks slated for thinning of shrubs, especially in segments supporting Burton Mesa chaparral. Overall project impacts are similar to those described for La Purisima and shagbark manzanitas.

Recommended Mitigation Measures: see discussion under La Purisima manzanita.

Santa Barbara ceanothus (***Ceanothus impressus*):**

Santa Barbara ceanothus is endemic to northern Santa Barbara County and southern San Luis Obispo County, occurring on sandy mesas and Bishop Pine forest, especially at locations that have burned (Smith, 1998). The species has no current listing status. It is frequently shorter, with denser, more compacted foliage than Lompoc ceanothus. It has deep blue flowers and small dark green leaves with deep veination (hence the Latin name *impressus*).

Presence at the site: The species is not particularly common on the Burton Mesa Ecological Reserve, except southwest of Highway One, in stands which burned in the mid 1990's. It appears to be associated with shallow soil areas where the chaparral is not as tall (Odion, et.al. 1993). Occasional individuals were observed in Segments 1, 3, 4, 6, 7, 8, and west and east Mesa Oaks.

Potential Project Impacts: We propose to avoid any direct impacts to this species by not removing any individuals for the purposes of thinning vegetation. There is modest potential for direct impacts should fire department vehicular access need to be expanded and existing paths or routes widened. This is mostly likely to be an issue in Segments 7 and 8. Provided that few individuals are affected, this potential impact is probably less-than-significant.

There is the potential for indirect impacts due to loss of the natural fire regime within proposed fuelbreak segments. Therefore, fuelbreak areas that would no longer be subject to natural fire regimes will likely experience declines in Santa Barbara ceanothus, even if the species is avoided and retained in those areas.

Recommended Mitigation Measures:

1) Retain all living individuals with fuelbreak segments, unless they are in the way of Fire Department Vehicular access.
2) Indirect impacts stemming from loss of rejuvenating wildfire events within the fuelbreaks should be mitigated in a similar manner to that described for La Purisima manzanita. Acquisition of compensation habitat, habitat restoration, or other such mitigation measures, should ensure that this species is represented in the mitigation area.

Chaparral mallow (*Malacothamnus* sp.):

This shrub was identified as an unknown taxon from the Burton Mesa (Smith, 1978). It was subsequently described to be scarce as a form on the Burton Mesa under *Malacothamnus fremontii* (Tehachapi bush mallow) in Smith, 1998. The taxonomy of this group is under further study (Dr. Deiter Wilken, pers.comm). It therefore should be treated as a local endemic and conserved where found.

Presence on the site: This shrub was only observed in the North Mission Hills segment, and appeared confined to the disturbed habitat between Calle Lindero Road and the dirt roadway leading to the La Purisima sector. It may also be present nearby in the north Rucker Road segment, although it was not specifically noted.

Potential Project Impacts: This shrub occurs in the North Mission Hills segment in an area proposed for some fuel reduction work. No removal of living shrubs was recommended here under the current proposed project. Individual chaparral mallow should not be removed from the treated area. Individual shrubs are somewhat lanky and not very twiggy, suggesting they do not contain a lot of biomass.

Conclusion: This plant will be fully avoided within the treatment areas.

Sensitive Subshrubs

A suite of local, endemic subshrubs occur in Burton Mesa chaparral, Burton Mesa scrub, coast live oak woodland and chamise-dominated shrublands on the Burton Mesa. Examples include the following:

Lompoc bush monkey flower (*Mimulus aurantiacus* ssp. *lompocense*)

Prickly phlox (*Leptodactylon californicum* ssp. *tomentosum*)
tomentose form at Burton and Nipomo Mesas

Bush groundsel (*Senecio flaccidus* var. *douglasii*)
An unusual green form with highly dissected leaves is scattered in sandy chaparral-covered hills behind La Purisima Mission, Burton Mesa, to Orcutta and northeast of Buelton (Smith, 1998).

Purple nightshade (*Solanum xantii* var. *hoffmannii*)
Variety *hoffmannii* is reported to be a northern Santa Barbara County endemic, generally glabrous. Forms on the Burton Mesa are pubescent and appear to be intermediate to the species (Smith, 1998).

Presence at the site: Lompoc bush monkey flower is the most widespread and common of these subshrubs. It occurs in most segments and favors stands of Burton Mesa scrub and driplines around coast live oak woodland, or locations in chaparral shaded by coast live oaks. Prickly phlox occurs occasionally, and is particularly noticeable in flower in early spring. Individuals generally are not numerous, and sometimes, they climb up through other low growing shrubs. Bush groundsel was only noted in the N Rucker Road segment. Purple nightshade occurs as occasional individuals at the urban-wildland edge, and is often seen in open, slightly disturbed habitats. Purple nightshade was noted in Segments 2 through 8, Segment 10, and North Rucker Road.

Project Impacts: These subshrubs are generally small in stature and do not produce much biomass. Therefore, we anticipate that there will be no direct, intentional removal of bush groundsel, prickly phlox and purple nightshade. It is possible that an individual of these species could be inadvertently removed within treatment areas where dead brush is removed or shrubs are thinned. This potential impact is anticipated to be less-than-significant.

Due to its abundance, impacts to bush monkey flower are likely to be significant in those segments slated for thinning of brush. It is likely that cut individuals will reshoot following cutting. We do not know how long a reshooting individual will persist.

Recommended Mitigation:

Mitigation is required for loss of bush monkey flower within segments that will be thinned of living brush. Mitigation options would generally follow those described for La Purisima manzanita.

Sensitive Trees

Coast live oak (*Quercas agrifolia*):

Coast live oaks are an important tree species that is present in much of the Burton Mesa chaparral and scrub habitats. Coast live oaks growing on the Burton Mesa sand formation are known for their unique growth form. Specifically, these trees frequently are shorter than typical coast live oaks growing on firmer substrates, exhibit multiple trunks and can have very large limbs emerging low from the central trunk, sometimes even lying on the ground. Coast live oak is an important component of most stands of manzanita-dominated Burton Mesa chaparral, where individual oaks emerge above the shrub layer below. Coast live oak cover in these stands is typically between 5-15%. Individuals are typically widely spaced. Individual coast live oaks can also be present in Burton Mesa scrub and chamise-dominated stands, although usually, they are less frequent than in chaparral.

Where coast live oaks occur in patches and where their canopies merge, these areas can be classified as coast live oak woodland. Coast live oak woodland consists of groups of trees ranging from 15 to 30 feet in height. Canopies of individual trees are frequently touching. The understory beneath individual trees is sometimes open, with dense leaf litter and little other vegetation. More typically, shade-tolerant species occur such as abundant poison oak (*Toxicodendron diversiloba),* coffee berry *(Rhamnus californicus*), wild cucumber (*Marah fabaceous*), woodmint (*Stachys bullata*), California chenopod (*Chenopodium californicum*), paeony (*Paonia californica*), and the saprophytic Indian warrior (*Pedicularis densiflora*).

The coast live oak dripline and adjacent areas immediately outside the oak canopy represent important microsites for Burton Mesa endemic shrub species and shrub species requiring more mesic growth conditions. These areas also tend to support young oaks which may eventually replace mature trees. The rare endemic Burton Mesa manzanitas can often occur as individuals or in small patches just outside the canopy of coast live oak woodlands. This zone is also important for the endemic Lompoc monkey flower (*Mimulus aurantiacus* spp. *lompocensis*) and prickly phlox (*Leptodactylon californicum,* a tomentose form unique to the Burton Mesa). Occasionally, the rare endemic Lompoc ceanothus (*Ceanothus cuneatus* var. *fascicularis*) occurs here. Where shrub vegetation has been gradually overtopped by the oak canopy, decadent shrub biomass is common around the drip line.

Individual coast live oaks and coast live oak woodlands provide important habitat for an array of wildlife species. Dusky-footed woodrat, for example, depends upon coast live oaks and associated mature to decadent shrub vegetation for denning and foraging habitat.

Coast live oaks are considered less susceptible to carrying wildfire than chaparral vegetation (Todd Keeler-Wolf, pers.comm). A canopy fire is more likely to reach oak canopies where decadent shrubs occur around the drip line, creating a fuel ladder effect.

Presence at the site: Individual coast live oaks are present in almost every proposed fuelbreak segment. Coast live oak woodlands were observed in Segment 1, Segment 6, Segment 10, Segment 12 and South Vandenberg Village.

Potential Project Impacts:

Uplifting of coast live oaks and removal of flammable material:

Impacts on Vegetation: The fire department has requested we uplift the lower oak canopy by removing limbs, twigs, living and dead biomass below six feet in height, and dead material above six feet in height. This may cause substantial adverse impacts to the health and vigor of remaining trees and associated wildlife habitat value. While the overall height of live oaks varies at the Burton Mesa, individual trees are usually under twenty feet tall. In certain locations, trees can be even shorter. For instance, most of the live oaks in Segment 1 are around 12 feet tall. Branches commonly reach the ground. The impact of uplifting the canopy to six feet above ground will varying, depending upon the overall health, vigor and stature of the tree in question. For example, coast live oaks near Highway 1 were observed to be around 12 feet tall- uplifting by 6 feet could remove half the tree's canopy. Several dense patches of oak woodland in the central portion of Segment 1 are about 15 to 20 feet tall- uplifting by six feet could remove 1/3 of the biomass. It is likely that the removal of 1/3 to ½ of the overall canopy of a given tree will lead to reduced health and vigor and could cause the gradual decline and death of treated individuals.

A variety of factors will change if oak canopy is removed. Loss of living biomass will reduce the amount of leaves which photosynthesize and provide the tree with its energy for survival. The physical biomass of twigs, limbs and leaves captures fog drip and less biomass would reduce the amount of fog drip captured. Fog drip may provide an important source of additional moisture for tree growth. Physically opening up the lower canopy of the tree will expose this area to increased solar radiation and increased wind, which could lead to sun damage on tree trunks and tissue that was previously shaded, and expose the oak understory to increased dryness. Increased dryness and increased solar radiation beneath oaks could lead to loss of shade-loving understory plants, invasion by weeds, and damage to soil micro-organisms essential to nutrient cycling in the oak leaf litter below. Opportunities for recruitment of new oaks and certain rare endemic plant species which favor the oak drip line could be reduced if trees are uplifted.

Impacts to Wildlife: Uplifting the oak canopy and removing flammable dead material will have substantial adverse impacts to wildlife habitat values. Dead woody material and moist oak leaf litter often supports fungal and insect species which are fed upon by wildlife species such as western grey tree squirrels, dusky-footed woodrats, reptiles, amphibians and many bird species. Dead fallen logs are often nesting sites for salamanders, snakes and other reptiles. Hollow logs and tree limbs provide nesting sites for certain species of birds and small mammals.

The large dens of dusky footed woodrats may be targeted for removal because of their flammability. This will result in loss of those individual dens. It is likely this species will substantially decline in number within treated segments subject to uplifting of oaks and/or removal of decadent material and thinning of shrubs. Loss of suitable nesting sites, loss of material used for nest construction, and loss of shrub cover which contributes to the suitability of these areas to sustain woodrat populations will likely occur. Loss of woodrats here will have a cascading effect on predators who feed on this species.

Recommended Mitigation Measures:

1) We propose to limit uplifting of coast live oak to the following specific conditions: a) in association with the edge of Fire Department vehicle access routes; b) in association with mowed areas along roadsides (like West Rucker Road); c) limited uplifting may occur in association with removal of decadent shrubs around oak driplines.

2) Uplifting will be limited to from two to five feet above the ground. No more than 1/5 of the total canopy shall be removed.

3) Woodrat dens will be retained where they occur, and decadent material and dead brush associated with the surrounding five to eight feet around dens will not be disturbed.

4) We propose to retain downed logs and downed branches four inches in diameter or greater.

5) Oak leaves will not be removed from beneath the canopy.

Sensitive Plant Communities

Most of the shrub-dominated habitat types at the Burton Mesa Ecological Reserve can be considered sensitive, and represent habitats in decline in the local and regional area. Because of the presence of numerous endemic species, including shrubs, subshrubs and forbs, most of the project area can be considered sensitive and impacts from fuel break installation are potentially significant. Additionally, some locations on the Ecological Reserve in proposed segments represent lands previously set aside to offset loss of habitat from development. Examples of these locations include Segment 1 and 2 (originally acquired by Santa Barbara County); habitat associated with Segments 3, 4, and 5 (part of an original 200 acre set aside by Unocal in the early 1990's to offset impacts from pipeline construction); Segment 6 (located on a county managed parcel and called the Kelly-Gusman Preserve) set aside when the North Oaks development went in. Therefore, impacts to sensitive plant species and their associated habitats are even more

significant if fuel break installation occurs in locations that were preserved to mitigate habitat losses elsewhere.

Several other types of habitat do occur within the fuelbreak segments and are discussed briefly below:

Willow Riparian Forest: Forested riparian areas were only encountered within proposed fuelbreak segment 1.

Segment 1 contains a well-developed riparian forest associated with perennial to intermittent streamflow. This streamflow is now controlled by two storm drains which emerge from the Vandenberg Village development, whereas, in the past, streamflow in this area was probably natural. A detailed inventory of this area of Segment 1 was not conducted. The area is vegetated primarily by arroyo willow (*Salix lasiolepis*) with some yellow willow (*Salix lucida* ssp. *lasiandra*). There are extensive patches of basket rush (*Juncus textilis*) and carex (*Carex sp.*) as well as occasional patches of cattail (*Typha* sp.*).* The willow forest lies within a larger matrix of coast live oak woodland.

Proposed Fuel Reduction Work for Segment 1: We currently are proposing limited hand work within the riparian area. We propose to remove flammable invasives, which are primarily pampas grass and some escaped exotics like small pine trees and small palm trees. Some flammable yard wastes were recently deposited on the upstream end of the willow forest, and we plan to remove and chip this material. No removal of riparian trees or associated shrubs and wetland plant species is proposed.

Coast Live Oak Riparian Forest: The northernmost end of Segment 10 supports an ephemeral drainage that was probably the upper end of Davis Creek, prior to construction of the golf course and surrounding housing development. Surrounding this drainage is a stand of large, tall coast live oaks with a riparian understory. Understory species include mugwort (*Artemesia* sp.), blackberry (*Rubus ursinus*), redberry (*Rhamnus crocea*), and wild rose (*Rosa californica*). A red-shouldered hawk nest was noted in the area. Evidence of an old water impoundment was observed (probably it was dammed up for livestock water in the past- there is evidence of berms). A portion of the coast live oak forest associated with this location has been subjected to clearance of the understory by the adjacent landowner, and a substantial part of the area was converted to lawn and fenced into a yard.

No fuel reduction work or fire department vehicle access is proposed for this location.

Isolated Willows: We observed occasional isolated arroyo willows (*Salix lasiolepis*) at various locations in fuelbreak segments. These were primarily located in Segment 3 and 4, and Segment 6 and 7.

No willows will be removed or pruned for fuel reduction work.

Localized seasonal wetlands:

Small seasonal wetlands were observed in several fuelbreak locations. These were mostly found in proposed fuelbreak segments 7 and 8. These areas are associated with a system of ditches, installed to intercept sheet flow just above the existing housing project. Flows are carried to nearby storm drains. Wet areas form at the lowest point here and there along these ditches. Wetland vegetation in these areas was mostly dominated by non-native species such as sheep sorrel (*Rumex acetosella*), umbrella sedge (*Cyperus* sp.) and garden escapes. A small amount of basket rush was seen (*Juncus textilis*).

A larger and more well-developed wetland was observed on private land in Segment 6. This area supports a number of willows, broad patches of basket rush, some patches of *Carex*, and a few cattails.

Potential Project Impacts: no fuel reduction work is proposed for these seasonal wetlands.

Additional Plant Conservation Measures

The following general measures should be required for inclusion in fuelbreak treatment efforts to further minimize adverse impacts to native vegetation and soils:

1) Fuelbreak treatments (other than mowing) should be undertaken from September through December in order to minimize trampling of young herbaceous plants. It may be acceptable to extend the treatement window through the end of February in more disturbed portions of the fuelbreak where native annual forbs are less common.

2) Work should be undertaken during dry periods to the maximum extent feasible. If work is scheduled after the onset of the rainy season, at least one week of dry weather should occur to prevent damage to soils and vegetation.

3) Equipment and personnel should be cleaned and inspected to reduce chances for introducing invasive plants into treatment areas.

4) Staging areas should not be located in weedy areas in order to prevent spread of weed propagules.

References

Hickman, J.C. (ed.). 1993. The Jepson manual: higher plants of California. University of California Press. Berkeley, CA. 1400 pp.

Keil, D.J. and V.L. Holland. 1998. Documented Flora of Vandenberg Air Force Base Santa Barbara County, California. A Report Prepared for the Nature Conservancy and Vandenberg Air Force Base. 97 pp.

LFR Levine Fricke. 2004. Clubhouse Estates Lompoc, California Sensitive Species, Habitat and Tree Survey. 021-10058-00. Revised May 28, 2004. 39 pp.

Odion, D., J. Storrer and V. Semonsen. 1993. Biological Resource Assessment. Burton Mesa Project Area, Santa Barbara County, California. Prepared for Santa Barbara County Resource Management Department. 44+ pp.

Smith, C.F. 1976. A Flora of the Santa Barbara Region, California. 1st ed. Santa Barbara Museum of Natural History. 331 pp.

Smith, C.F. 1998. A Flora of the Santa Barbara Region, California. 2nd ed. Santa Barbara Botanic Garden and Capra Press. 391 pp.

List of Tables (included as separate files)

Burton Mesa Management Area Fuel Break
Sensitive Bird Survey

Conducted by: Lyann A. Comrack, Associate Wildlife Biologist
California Department of Fish and Game
Date: May 24, 2004

Purpose:

To conduct a field assessment of bird use of sections 3, 4; 8-12 of Burton Mesa scheduled for fuel reduction; to focus attention on sensitive bird species likely to be impacted by the fuel reduction activities; to make note of other vertebrate use of the area.

Approach:

Surveyed the fuel reduction treatment areas as per direction from T. Stewart on May 19, 2004. Maps, notes, and supporting documents were delivered at that time. Surveys performed on May 20, 2004 from 0620- 1535. I conducted a field assessment of bird and mammal presence on fuel reduction sections 3, 4, 9-12, accompanied by the Department's herpetologist, Tim Hovey, and scientific aid Jenny O'Brien; I surveyed segment #8 alone.

Field conditions were as follows: air temperature about 58 ° F. warming to about 70 ° F; overcast skies clearing to partly cloudy; < 5 mph wind increasing to about 10+ mph. No tapes, traps or lures were used during the course of this survey.

Findings:

Vertebrate species detected are presented in Table 1.

Four sensitive bird species were detected during field surveys. Yellow warbler (*Dendroica petechia*), Bell's sage sparrow (*Amphispiza belli belli*), and Cooper's hawk (*Accipiter cooperii*), all California Species of Special Concern, were observed on or near the treatment zones. Swainson's thrush (*Catharus ustulatus*), proposed for inclusion on the Department's revised Species of Special Concern list (in prep), was also detected. Details are as follows:

> Singing male yellow warblers were observed and heard in the oak woodland of sections 4 and 8. Yellow warblers sing during migration; it is therefore difficult to determine the breeding status of these individuals based on one site visit. However, at least 50 nesting pairs of yellow warblers are known to nest locally at Vandenberg Air Force Base (Breininger 1988 in Odion et al. 1993). Therefore, it is prudent to assume the Burton Mesa birds are locally nesting individuals.
>
> A single Swainson's thrush was heard calling from coastal sage scrub vegetation in section 8. Migrant Swainson's thrushes move through southern California as

late as mid-June (Garrett and Dunn 1981). The species is apparently fairly common nesting species in Santa Barbara County (Garrett and Dunn 1981). As the coastal subspecies of Swainson's thrush nests in riparian vegetation, it is not expected to be directly disturbed by vegetation clearing in the sections surveyed on this date.

A single male Cooper's hawk was flushed from the ground by Tim Hovey on section 4. This species is not known to nest at Burton Mesa. Typically, it requires taller trees for nesting which offer concealment and protection from disturbance than those found at Burton Mesa. Cooper's hawks are known to nest at Vandenberg Air Force Base (Breininger 1988 in Odion et al. 1993).

Bell's sage sparrow was detected in the Burton Mesa chaparral and coastal sage scrub near the south end of section 10. Two juveniles were seen and heard moving through the shrub zone off-site of the treatment area. Considered a migrant by Odion et al. (1993), the presence of juveniles in May suggests local nesting. The species nests on the ground under shrubs of various species and could therefore be impacted by the fuel reduction vegetation clearing.

Ample evidence of nesting by many bird species was documented (pairing, territorial singing, chases, aggressive behavior, alarm calls, nesting material carried by adults, food carried by adults, begging behavior by young, etc.). The treatment sections appear to support robust populations of chaparral and coastal sage scrub obligate bird species including wrentit (*Chamaea fasciata),* Bewick's wren (*Thryomanes bewickii*), California thrasher (*Toxostoma redivivum*), blue-gray gnatcatcher (*Polioptila caerulea*), spotted towhee (*Pipilo maculates*), and California towhee (*Pipilo crissalis*).

Recommendations:

1) Burton Mesa supports nesting bird species, including several considered sensitive, in all habitats. No fuel reduction activities should occur during the bird breeding season. The bird breeding season should be considered as spanning mid-February through August.

2) Brown-headed cowbirds (*Molothrus ater*), American crows (*Corvus brachyrynchos*), and Western scrub jays (*Aphelocoma californica*) were detected during the survey. Crows, in particular, were very commonly encountered. Brown-headed cowbirds are nest parasites. That is, they lay eggs in the nests of other bird species. Corvids, including crows and jays, are efficient predators on eggs and nestlings of other bird species. Vegetation reduction in the treatment areas will create a so-called edge effect especially favorable to these predatory or parasitic species. Reductions to the breeding populations of prey species in the treatment segments and in adjacent untreated areas may result. Mitigation may include monitoring populations of corvids and cowbirds and developing a control strategy as necessary.

3) To minimize impacts to birds, hand crews should be used to remove vegetation at all sites.

4) Section 12 presently supports an infestation of pampas grass, a non-native and invasive species. Vegetation reduction should focus on the removal of this and other non-native and noxious weeds to achieve fuel modification goals.

References

Breininger, D. 1988. Survey for Least Bell's Vireo in Riparian Habitat on Vandenberg Air Force Base, Santa Barbara County, CA. NASA Technical Memorandum 100984.

Garrett, K. and J. Dunn. 1981. Birds of Southern California Status and Distribution. Los Angeles Audubon Society, Los Angeles CA.

Odion, D., J. Storrer, and V Semonsen. 1993. Biological Resources Assessment Burton Mesa Project Area, Santa Barbara County. Prepared for Santa Barbara County Resource Management Department, Santa Barbara, CA.

Burton Mesa Management Area Fuel Break
Amphibian and Reptile Survey

Conducted by: Tim E. Hovey, Associate Fisheries Biologist
California Department of Fish and Game
Date: June 4th, 2004

Purpose:

To conduct a field assessment for amphibians and reptiles in sections 3, 4; 8-12 of Burton Mesa scheduled for fuel reduction, to assess habitat for sensitive amphibians and reptiles and to determine presence through observational surveys.

Approach:

Observational surveys were conducted on May 19th, 2004 of the above listed segments. Segment outlines, maps and area priorities were provide prior to the surveys by the LMMP supervisor, Terri Stewart. Herpetological surveys were conducted with the assistance of Lyann Comrack, Associate Wildlife Biologist and Jenny O'Brien, Scientific aide. Sensitive bird and herpetological surveys were done simultaneously in all segments except Segment 8.

During the surveys notes were made on species observed, habitat assessment and tracks encountered. Additional information was gathered on mammals encountered during the survey period.

Findings:

Vertebrate species detected are presented in Table 1.

A single specimen of the California horned lizard (*Phrynosoma coronatum*) was observed on Segment 10 and the surrounding habitat would support this species. The California Department of Fish & Game considers the California horned lizard a species of special concern and the Bureau of Land Management lists it as sensitive.

All additional herpetological species (See Table 1) are not of a sensitive nature and with the exception of the California horned lizard the surrounding habitat likely would not support additional sensitive species.

To minimize the impacts to the California horned lizard, I would strongly recommend that fuel break activities occur outside the active period for this species, which is from March to late August. Additionally, I would recommend that hand crews be utilized to conduct fuel breaks to minimize impacts.

Burton Mesa Management Area Fuel Break
Mammal Survey

Conducted by: David Lawhead, Associate Wildlife Biologist
California Department of Fish and Game
Date; June 16, 2004

Purpose:

To conduct a field assessment of mammals within designated fuel reductions zones on the Burton Mesa Management Area. Designated fuel management zones included Sections 2-8, 9, 10, 11, 12, So. Vandenberg Village West, So. Rucker Road, So. Mission Hills North, and So. Mesa Oaks. Assessment of potential impacts to mammals from future fuel reduction activities was the primary focus of the survey.

Approach:

The presence of mammal species within fuel management zones was ascertained by walking the areas in question and recording mammal sightings, calls, tracks, scats, burrows, and other sign. In additions, 50 small mammal live-traps (Sherman box traps – 30 9" traps and 20 12" traps) were placed at two locations (25 traps each), Sections 2-8 and So. Rucker Road, to assess the rodent species present. It was known from previous visits to the sight that woodrat nests are present. To ascertain which species is present, an effort was made to place the small mammal traplines near woodrat nests when possible. No effort was made to assess bats during this survey effort. Also, incidental observations of birds, reptiles and amphibians were also recorded during the survey.

Field surveys were conducted on June 6-9, 2004. The times of observation are as follows: June 7 from 1600-1900; June 8 from 0730-1900, and June 9 from 0630-1300. The field conditions on the three survey days was similar with overcast skies in the morning hours gradually clearing to sunny conditions. Temperatures ranged from 55^0 F to 72^0F, winds from 10-20 mph. On June 9 there was off and on drizzle in the morning hours.

Findings:

Vertebrate species detected are presented in Table 1.

Two sensitive mammal species were detected during wildlife surveys of the Burton Mesa Management Area, badger (*Taxidea taxus*) and western gray squirrel (*Sciurus griseus*). The badger has been listed in the past by CDFG as a California Species of Special Concern, and the western gray squirrel is considered a species of local concern by Santa Barbara County due to reduction in populations.

Badger “diggings”, indicating foraging activity, was found at two fuel management locations, South Rucker Road, and South Mission Hills North. All excavations were relatively shallow indicating that badgers were attempting to excavate rodents. No denning burrows were found. Badgers are likely common on the Burton Mesa property, and forage over a wide area.

The western gray squirrel was detected by Tim Hovey during his survey of fuel management zones 3 and 8, in oak woodland habitat. This species is associated with oak woodland and the Bishop pine forest habitats on Burton Mesa. Despite the relative abundance of oak woodland within or immediately adjacent to the fuel management zones for the Burton Mesa Management Area, this species does not appear to be common within these zones. In three days of mammal surveys during June no gray squirrels were detected.

Previous reports had indicated that the desert woodrat (*Neotoma lepida*) was present on Burton Mesa. This species is considered regionally sensitive due to declining habitat and populations. Woodrat nests are common throughout the chaparral/oak woodland habitats within the fuel management zones, although the vast majority are associated with oak trees. The dusky-footed woodrat is another woodrat species found in many of the same habitats as the desert woodrat, and trapping is necessary to identify which species is present. The results of the small mammal trapping effort only confirmed that the dusky-footed woodrat is present. That does not exclude the possibility that the desert woodrat is also present, but it would require a more intensive trapping effort to confirm this.

Mule deer are relatively common within the fuel management zones on the Burton Mesa Management Area. One area of particular interest is fuel management zone segment 9. The level of deer activity on this area was significantly higher than that found on any other segment. Deer trails were extensive, scat piles were abundant, and even a shed antler was found. This segment is dominated by more open chaparral habitat, some of which appears to have been disturbed in the past for a water/sewer line. There were also a significant number of smaller deer scats suggesting that this area may be heavily used by fawns as well as adults. It’s possible that this area is used by the local mule deer population for fawning.

On the South Rucker Road fuel management zone segment, just south of the church facilities, what appears to be a fox den was found. This multiple-burrow complex was located in a disturbed grassland/ruderal field. It could not be determined whether it was a gray fox or red fox den.

Overall, the Burton Mesa Management Area fuel management zones support a good diversity of mammal species. Having large undeveloped tracts of natural lands adjacent to the urban residential developments has ameliorated the severity of the urban edge effects to some degree, allowing for continued high mammal diversity in the fuel management zones.

One additional observation was made in the course of the mammal survey. A California horned lizard scat was found in the agricultural field within the South Mission Hills North fuel management segment. This observation is in addition to those described in the amphibian-reptile survey report by Tim Hovey.

Recommendations:

It is not likely that fuel removal within the Burton Mesa Management Area fuel modification zones would significantly affect the badger. In fact, it may actually enhance badger foraging by opening up the habitat and encouraging the expansion of a favorite badger prey species, the California ground squirrel. If any denning burrows are found they should not be disturbed during the breeding season.

The western gray squirrel may be impacted by fuel removal, but if fuels removed are primarily shrubs, and not oak trees, then the results are likely not to be significant. If oak trees are removed, that would effectively eliminate squirrel habitat. Where it is possible, oak trees should not be removed for fuel management.

Because woodrat nests are a ready source of combustible fuel, fuel management is likely to have a significant impact upon the woodrat populations occupying the management zones. While woodrat nests are typically found at the base of oak trees, the woodrats forage in the chaparral and sage scrub as well. Removal of the shrubs would reduce and/or eliminate woodrat habitat. Because of the abundance of oak woodland and chaparral habitats on the Burton Mesa Management Area, it is not expected that fuel modification would have a significant impact upon the woodrat population of the Management Area. If it could be confirmed that the desert woodrat was present, the impacts might be considered significant.

It is recommended that significant vegetation clearing be avoided in Segment 9 if possible. Mule deer use here is extensive, and it may be important for fawning. At a minimum, no clearing should be conducted during the breeding season.

Table 1. Burton Mesa Vertebrate Species List for Fuel Management Zones

MAMMALS		
Common Name	**Scientific Name**	**Fuel Management Zone #s/ Comments****
Brush Rabbit	*Sylvilagus bachmani*	8
Audubon's Cottontail	*Sylvilagus audubonii*	8
Rabbit	*Syvilagus sp.*	2-8, 10, 11, SRR, SMO, SMH
Western Gray Squirrel*	*Sciurus griseus*	3,8
California Ground Squirrel	*Spermophilus beecheyi*	2-8, SRR, SVDB
Botta's Pocket Gopher	*Thomomys botta*	2-8, 11, SRR, SMH, SVDB
California Pocket Mouse	*Chaetodipus californicus*	SRR
Pacific Kangaroo Rat	*Dipodomys agilis*	2-8, SRR
Heermann's Kangaroo Rat	*Dipodomys heermanni*	SRR
Dusky-footed Woodrat	*Neotoma fuscipes*	2-8
Woodrat sp.	*Neotoma sp.*	2-8, 10, 11, 12, SRR, SMO, SMH
Deer Mouse	*Peromyscus maniculatus*	SRR, 2-8
California Mouse	*Peromyscus californicus*	2-8
Bobcat	*Lynx rufus*	2-8,9,10, SRR, SMO, SMH
Coyote	*Canis latrans*	Scat, tracks throughout
Domestic Dog	*Canis familiaris*	2-8, 10, 11, SRR, SMO, SVDB
Gray Fox	*Urocyon cinereoargenteus*	8,9,10, SRR, SVDB
Badger	*Taxidea taxus*	SMH, SRR, in vic. of 10
Striped Skunk	*Mephitis mephitis*	SMH, SVDB
Mule Deer	*Odocoileus hemionus*	2-8, 9, SMO, SVDB
BIRDS		
Great Blue Heron	*Ardea herodias*	8 (fly-over)
Turkey Vulture	*Cathartes aura*	4 (fly-over), 9, SMO, SMH, SVBD
Mallard	*Anas platyrhynchos*	8 (fly-over)
Cooper's Hawk	*Accipiter cooperii*	4 (one male)
Red-shouldered Hawk	*Buteo lineatus*	8,9, SVBD
Red-tailed Hawk	*Buteo jamaicensis*	4,9
California Quail	*Callipepla californica*	8,10,11, SMO, SMH
Mourning Dove	*Zenaida macroura*	4,8,9,10,11, SRR, SMO, SMH
Great-horned Owl	*Bubo virginianus*	10 (one flushed from day roost)
Anna's Hummingbird	*Calypte anna*	3,4,8,9,10, SRR
Northern Flicker	*Colaptes auratus*	8,10,11, SRR
Ash-throated Flycatcher	*Myiarchus cinerascens*	10
Pacific-slope Flycatcher	*Empidonax difficilis*	10
Black Phoebe	*Sayornis nigricans*	8,10, SRR, SMH
European Starling	*Sturnus vulgaris*	3,4,10,11
Hutton's Vireo	*Vireo huttoni*	4,10
Western Scrub Jay	*Aphelocoma californica*	8,10,11, SRR, SVDB

Common Raven	*Corvus corax*	2-8
American Crow	*Corvus brachyrhynchos*	3,4,8,9,10,11,12, SRR, SMO, SMH, SVDB
Cliff Swallow	*Petrochelidon pyrrhonota*	9 (fly-over), SVDB
Oak Titmouse	*Baeolophus inornatus*	3,4,8,9,10,11
Bushtit	*Psaltriparus minimus*	3,4,8,9,10,11, SRR, SMO, SMH, SVDB
House Wren	*Troglodytes aedon*	10
Bewick's Wren	*Thryomanes bewickii*	3,8,9,10,11, SMH
Blue-gray Gnatcatcher	*Polioptila caerulea*	4,8,9,10, 11, SRR, SMO, SVDB
Swainson's Thrush	*Catharus ustulatus*	8
Western Bluebird	*Sialia mexicana*	4
American Robin	*Turdus migratorius*	8
Wrentit	*Chamaea fasciata*	3,4,8,9,10,11,12, SRR, SMO, SMH
Northern Mockingbird	*Mimus polyglottos*	Urban interface for all segments
California Thrasher	*Toxostoma redivivum*	3,8,9,10,11, SMH
Cedar Waxwing	*Bombycilla cedrorum*	4,8,10
Orange-crowned Warbler	*Vermivora celata*	10
Yellow Warbler	*Dendroica coronata*	4,8
Townsend's Warbler	*Dendroica townsendi*	10
Common Yellowthroat	*Dendroica occidentalis*	10, SVDB
Spotted Towhee	*Pipilo maculates*	3,4,8,9,10,11,12, SRR, SMO, SMH, SVDB
California Towhee	*Pipilo crissalis*	8,9,10,11, SMO, SVDB
Bell's Sage Sparrow	*Amphispiza belli belli*	10 (2 juv. seen)
Song Sparrow	*Melospiza melodia*	10,11
Dark-eyed Junco	*Junco hyemalis*	3,4,8,10,11
Brewer's Blackbird	*Euphagus cyanocephalus*	SVDB
Brown-headed Cowbird	*Molothrus ater*	4,10
Purple Finch	*Carpodacus purpureus*	4,10
House Finch	*Carpodacus mexicanus*	3,4,8,9,10,11, SRR, SMH, SVDB
Lesser Goldfinch	*Carduelis psaltria*	4,8,9,10,11

REPTILES		
Side-blotch Lizard	*Uta stansburiana*	All
Western Fence Lizard	*Sceloporus occidentalis*	All
Coast Whiptail	*Cnemidophorus tigris*	All
Coast Horned Lizard	*Phrynosoma coronatum*	10, SMH
Common Kingsnake	*Lampropeltis getulus*	11
Western Yellow-bellied Racer	*Coluber constrictor*	12

* = species of local concern
Bold face = California Species of Special Concern

Date of survey 1: 20 May 2004
Time: 0620-1535
Personnel: Lyann Comrack, Tim Hovey, Jenny O'Brien
Weather: 100% overcast in AM, ptly cloudy PM, 58 F warming to 70 F; <5 mph wind in AM to 10+ mph in PM

Date of survey 2: 7-9 June 2004
Times: 1600-1900 (June7); 0730-1900 (June 8); 0630-1300 (June 9)
Personnel: David Lawhead
Weather: 100% overcast in AM (drizzle on June 9), partly cloudy to clear in PM, 55 F to 72 F, strong winds in the PM (10-25 mph)

**SRR – South Rucker Road, SMO – South Mesa Oaks, SMH – South Mission Hills, SVDB – South Vandenberg Village West

Additional Wildlife Sightings: ask mary meyer

Western Gray Squirrel: Observed in far west end of Segment 2, Sept. 10, 2004

Western Gray Squirrel: Observed in riparian area of Segment 1, October 14, 2004

Coast Horned Lizard: Adult observed in North Mission Hills Fuelbreak Segment…far west end, on open sand on an old trail inside otherwise old growth manzanita/oak dominated Burton Mesa Chaparral…seen on 5/17/04, very near:

34 degrees 42'03.9"; 120 degrees 26.03.0" Nad 27…(location of adjacent RAPID assessment)

CULTURAL SURVEYS OF
FUEL MANAGEMENT SEGMENTS
FINAL EIR

APPENDIX 8.3

BURTON MESA ECOLOGICAL RESERVE
LAND MANAGEMENT PLAN

PUBLIC OUTREACH SUMMARY AND RESPONSE TO PUBLIC COMMENTS FINAL EIR

APPENDIX 8.4

BURTON MESA ECOLOGICAL RESERVE LAND MANAGEMENT PLAN

The Burton Mesa Ecological Reserve (BMER) Draft Land Management Plan and Environmental Impact Report was released by the Department of Fish and Game (DFG) on July 19, 2005. The public review and comment period extended from July 19, 2005, to September 9, 2005. A Public Meeting was held on July 21, 2005 at Lompoc City Hall, 100 Civic Center Plaza, Lompoc, California. The Initial Study/Environmental Impact Report (EIR) was posted at the Lompoc Public Library and the Vandenberg Village Public Library in Lompoc, the DFG Santa Barbara Field Office and on the Department's internet web page at www.dfg.ca.gov. It was also circulated to the following public agencies for review: Resources Agency; Regional Water Quality Control Board, Region 3; Department of Parks and Recreation; Native American Heritage Commission; Department of General Services; Office of Emergency Services; Office of Historic Preservation; Department of Forestry and Fire Protection; Department of Conservation; Caltrans, District 5; Caltrans, Division of Aeronautics; Department of Toxic Substances Control; and the State Lands Commission. One public agency responded with comments (Santa Barbara County).

Individuals and/or interest groups who commented on the Land Management Plan (LMP) and Environmental Impact Report (EIR), along with the subject area of their comments, are listed in the attached table (Table A). Comments came in the form of mailed letters, e-mails, and verbal comments or submitted comment cards received at the July 21st Public Meeting

The Department's Land Management Plan Team categorized the 61 comment letters/testimonies received into eleven subject areas. These include: Public Use (Hunting/Firearms, Cemetery, Motor Vehicles, Horses, Bicycles, Dogs, Bee Keeping, Road Use, Trail Use, Model Airplane and Research); Procedure, Education, Patrol/Enforcement/Communication, Funding, Control of Non-native Species, Agriculture, Wetland Habitats, Adjacent Land Use, and Fire Planning/Fuels Management (fire hazard severity, fuel management zones, fire insurance and prescribed fires.)

The Public Use Element in the Land Management Plan and Section II. Property Description, H. "Existing Public Use Features" discusses allowed public uses and associated ecological reserve regulations. Through the Land Management Planning effort, the Department analyzed multiple aspects of various activities in determining whether or not a public use is compatible: including whether it is a wildlife-dependent activity, whether or not it is safe for all users, whether it benefits or impacts natural or cultural resources, and whether or not it increases management and/or maintenance costs on the property.

Public Comments and DFG Responses:

1. Comments on Public Uses:

Eleven specific uses were identified in the comments. Each use is separated out and responded to distinctly by DFG's Land Management Plan team.

a) Hunting and Firearms: Commenters were opposed to hunting on BMER for safety reasons, and were opposed to other firearm activities including shooting and use of paintball firing devices.

DFG Response:

Through the Land Management Planning effort, including biological inventory and public access components, the Department has determined that there are insufficient areas to allow a quality hunting experience within the BMER. The Land Management Plan is amended and Title 14 Regulations are proposed for amendment to reflect this determination. Baseline species surveys and habitat assessment show lack of suitable habitat and insufficient upland game populations on the BMER to adequately support a hunting program. Additionally, it was learned through this process that access to support a safe hunting program is limited. The restrictions placed on the property by oil company easements and above-ground pipelines, the adjacency of the Air Force Base and Prison, and the close proximity to residential and school properties caused DFG to reassess its previously approved regulation that allowed for upland game hunting in designated areas. No hunting areas have ever been designated, so no change in actual use will occur with the plan or regulatory amendments. The property will be monitored and managed adaptively and will allow for future regulatory changes as conditions change or improve.

Shooting and Paintball activities are not considered hunting and are already prohibited at BMER.

b) Cemetery: Commenters requested 150 acres be set aside on the BMER for a National Veteran's Cemetery. Other commenters opposed a cemetery on the BMER.

DFG Response:

Development of a cemetery within the Ecological Reserve is not a compatible activity, nor is it in keeping with the overall purposes of ecological reserves, see the Public Use Element and Section II. Property Description, H. "Existing Public Use Features" in the Land Management Plan**.**

c) Motor Vehicles: The majority of commenters expressed opposition to allowing motor vehicles on the BMER and desired more enforcement of unauthorized vehicles on the BMER. Some commenters supported off-road activities on BMER.

DFG Response:
The use of motorized vehicles on the Ecological Reserve is not compatible and is prohibited, see the Public Use Element and Section II. Property Description, H. "Existing Public Use Features" in the Land Management Plan which explains
Section 630, Title 14, California Code of Regulations (CCR), including the prohibition of motor vehicles on ecological reserves. DFG concurs that improved enforcement of these regulations is needed.

d) Horses: Comments were received in opposition and in support of equestrian use within the BMER. Commenters stated that horses do not damage habitat and equestrians could be a source of volunteer patrol, while other comments referred to existing damage being done at the adjacent La Purisima Mission State Historic Park (off trail use, non-native seed source). Several comments referred to the State Lands Commission Lease with the County of Santa Barbara Sheriff's Department for the Training facility and patrol obligations, suggesting the LMP provide more detail on this topic.

DFG Response:
The Public Use Element and Section II. Property Description, H. "Existing Public Use Features" in the Land Management Plan discuss allowed public uses and associated ecological reserve regulations. Through the Land Management Planning effort, the Department analyzed multiple aspects of various activities in determining whether or not a public use is compatible: including whether it is a wildlife-dependent activity, whether or not it is safe for all users, whether it benefits or impacts natural or cultural resources, and whether or not it increases management and/or maintenance costs on the property. No evidence was found that would warrant a change to the current regulations as they relate to horses. See Section II. Property Description, I. (5) and the Public Use Element in the Land Management Plan for more details, and for information regarding the Sheriff's lease.

e) Bicycles: Comments were received in opposition and in support of bicycle use within the BMER. Statements were made that bikes do not damage habitat and that the biking community would be a source of volunteer patrol. Some expressed concern about off-trail use and habitat damage, cutting of manzanita and other vegetation to keep trails cleared, widening of existing trails, and safety problems associated with bicyclists traveling at high rates of speed.

DFG Response:
The Public Use Element and Section II. Property Description, H. "Existing Public Use Features" in the Land Management Plan discusses allowed public uses and associated ecological reserve regulations which prohibit bicycling on ecological reserves. Through the Land Management Planning effort, the Department analyzed multiple aspects of various activities in determining whether or not a public use is compatible: including whether it is a wildlife-dependent activity, whether or not it is safe for all users, whether it benefits or impacts natural or cultural resources, and whether or not it increases management and/or maintenance costs on the property. No evidence was found that

would warrant a change to the current regulations with respect to bicycling. See the Public Use Element in the Land Management Plan for more details.

f) Dogs: One commenter suggested the allowance of dogs off-leash at BMER.

DFG Response:
The Public Use Element and Section II. Property Description, H. "Existing Public Use Features" in the Land Management Plan discusses allowed public uses and associated regulations which prohibit pets from entering ecological reserves unless they are on a leash of less than 10 feet. Through the Land Management Planning effort, no evidence was provided that would warrant a change to the current regulations pertaining to pets.

g) Bee Keeping: Commenters support bee keeping within the BMER. A local bee keeper commented that his family has been on the site since the 1800's and desires to stay on the grounds.

DFG Response:
Bee keeping activities on the Ecological Reserve are not compatible with the purpose or management of the reserve, see the Public Use Element and Section II. Property Description, H. "Existing Public Use Features" in the Land Management Plan which outlines ecological reserve regulations, including those prohibiting the introduction of species. Specifically, the purpose of an ecological reserve is to conserve populations of plants and wildlife, which include native insects and natural pollination processes. Native insect pollinators evolved in concert with the native vegetation and are effective and sometimes essential pollinators for native flowering plants. Honey bees are not native to this area, and compete directly with native pollinators for pollen and nectar sources. Honey bees can visit different flowering plant species, and travel across larger areas than most native pollinators. They have been documented to sometimes facilitate unnatural hybridization, which can lead to loss of unique, isolated genetic information in populations which previously did not exchange pollen sources. For these reasons, bee keeping on Ecological Reserves is generally not appropriate. If bee keeping were a desirable activity, the State would need to prepare contract documents, solicit bids and provide the opportunity for all qualified bee keepers to submit bids for the site. The Department has determined that it does not have the staffing to conduct the administrative tasks associated with a bee keeping contract on BMER. In addition, the existing unauthorized activity violates the State Constitution, Article XVI, Section 6 "gifting of state resources."

h) Road Use: Commenters supported the use of paved roads within the BMER for horses and bikes. One commenter supported additional construction of roads within the BMER to allow maximum use of the site, including the subsequent building of houses within the BMER.

DFG Response:
There are no known paved roads within the BMER, with the exception of previously paved patches on segments of dirt roads within BMER. The Department will not

construct new roads within the BMER or pave any existing dirt roads. Minor maintenance of unpaved roads may occur in the future. Motorized vehicles, bicycles, housing development and equestrian uses are not allowed within the BMER whether a road is paved or not.

i) **Trail Use**: In general, comments favored trails within the BMER. The County specifically asked that the Trails Map (Fig 19) be revised and made clearer in the Final LMP and provide more information on public access points. A recommendation was made to have trails that connect to other trails outside of the ER. Another recommendation was to suggest input from trail users on which trails should remain open and which should be closed or restored back to habitat.

DFG Response:
The Final Land Management Plan contains a revised Trails Map (Figure 19). The Trails Map will also be updated as needed to indicate whether a trail has been closed for restoration or whether a connecting trail outside of the BMER has become available for public use. Some trails will be closed and restored as mitigation for the Fuel Management Project as shown on the revised Trails Map (Figure 19). The Department will attempt to involve hikers in subsequent revisions of the Trails Map. See the Public Use Element and the Fuel Management Element of the Land Management Plan and EIR for details.

j) **Model Airplanes**: One commenter indicated that use of Model Airplanes in a limited area may be desirable.

DFG Response:
The Public Use Element and Section II. Property Description, H. ”Existing Public Use Features” in the Land Management Plan discusses allowed public uses and associated regulations that prohibit aircraft and motorized vehicles. Further, model airplane use is not a wildlife-dependent activity, nor is it compatible with the purposes of an ecological reserve. Through the Land Management Planning effort, no evidence was provided that would warrant a change to the current regulations to allow for use of Model Airplanes.

k) **Research**: Commenters were supportive of additional research, specifically research that includes mapping of additional locations of sensitive plants and animals, and to include lichens, mosses, and insects (especially aquatic invertebrates) in future survey efforts.

DFG Response:
Research is an area of emphasis that the Department will promote on the BMER. Proposals for valid research will be considered as they are received and partnership arrangements with academic institutions will be pursued. The Biological Element of the Management Plan addresses the need for additional research and surveys on the reserve.

2. Comments on Land Management Plan Procedure and Noticing:

Comments were received regarding insufficient noticing of the Land Management Plan. One commenter stated that the Brown Act must be followed. Some comments assumed the Department had already made decisions on allowable uses within the BMER. Some commenters requested information on the approving entity for the Land Management Plan and EIR. It was also commented that the EIR needs to address cumulative impacts.

DFG Response:

The public meeting was noticed by mail to local residents and interested parties on July 11, 2005, a press release in the local newspaper (Santa Barbara News-Press, July 18, 2005), at the Office of the Santa Barbara County Clerk, on the Department of Fish and Game website, on the website of Condor Environmental Planning Services, and by mail to state agencies by the State Clearinghouse. The Lompoc Record, 7/22/05 and Santa Barbara News-Press, 7/20/05 published various articles on the Land Management Plan/Draft EIR planning process with information on comment submittals. Hard copies of the draft documents were also available at the Lompoc and Vandeburg Village Public Libraries. The public meeting was held pursuant to the provisions of CEQA. No Notice of Preparation (NOP) responses were received during the 30 day notice period for state agencies. The public comment period, July 19, 2005 through September 9, 2005 exceeded the number of days required by law. The Department's land management planning meetings are not subject to the Brown Act. Appropriate uses were determined through the land management planning effort and based on ecological reserve statutory requirements in addition to designation criteria for adoption of regulations by the California Fish and Game Commission. The LMP and EIR were released as draft documents for solicitation of public comments which are evaluated and considered by the Department in publishing the final EIR. The Director of the Department of Fish and Game approves the Final Land Management Plan and Final EIR. Section 5 Significant Environmental Effects in the EIR is amended with the following language to address cumulative impacts:

Because the impacts of implementing the plan and mitigation measures will be less than significant, the project will have no cumulative impacts.

3. Comments on Education:

Multiple comments were received stating the need for and value of education regarding the Burton Mesa. Individuals and groups (La Purisima Audubon Society**,** Citizens Planning Association of Santa Barbara County) wanted to work with the Department to create an educational program at BMER, including development of materials and field trips, provide docent led programs, volunteers and conduct school projects and research programs. One commenter stated that public access programs should be in consideration of the rarity and sensitivity of the chaparral.

DFG Response:

The Public Use Element of the management plan addresses public education, including the development of educational programs, materials and volunteer programs.

4. Comments on Patrol, Enforcement and Communication:

Comments were received on four patrol/enforcement issues, 1) individuals offered to/or currently perform limited patrol and would continue to assist the Department in this effort, 2) statements that additional enforcement patrols and on-site staff (caretaker) are needed on the BMER, 3) individuals suggested the need for contact information and a process by which they can report enforcement issues and problems, and 4) comments regarding the County's Sheriff Equestrian Training Facility. The County specifically commented that a lease between the state and County Sheriff allows for mounted unit patrol as well as off-duty equestrian use in the Reserve, suggesting that the LMP should include a specific policy to allow for Sheriff equestrian use of the Reserve.

DFG Response:

Site security is addressed in the Administration Element of the plan. The Sheriff's Equestrian Lease is specifically cited here and in Section II. Property Description D. Management Units and I. Existing Commercial Lease Features. The Department cautions the public to not take enforcement action on their own, but that violations can be reported through the Department's enforcement hotline (888) 334-2258 (1-888-DFG CALTIP) and by contacting local law enforcement agencies. Public reports of violations of ecological reserve regulations are important to protection of the area. Reserve regulations are enumerated in Section II. Property Description, H. "Existing Public Use Features" and discussed in the Public Use Element of the plan.

6. Comments on Funding:

Comments were received supporting the need to find funds to implement the LMP. In particular, the County of Santa Barbara comments reflected the desire to cooperate in soliciting of Grant Funding for fuel modification at the BMER boundaries.

DFG Response:

Funding management of ecological reserves, including Burton Mesa Ecological Reserve continues to be a challenge. The department will continue to seek funding for implementation of the management plan and will coordinate with the County specifically for fuel management funding. The Department appreciates public support for funding for management of the Burton Mesa Ecological Reserve.

7. Comments regarding Control of Non-native Species:

Commenters strongly support control of non-native plant species in and around the BMER, including Italian thistle, veldt grass, Sahara mustard and pampas grass, which appear to be spreading and increasing rapidly in the area. A recommendation to train and involve a volunteer group specifically for treating non-natives was made. A specific recommendation by the Citizens Planning Association of Santa Barbara was made to involve the County Weed Management program to assist by sponsoring a pampas grass elimination program for homeowners and businesses.

DFG Response:

The Biological Element, Non-Native Species and Nuisance Species section of the LMP addresses the identification, treatment and control of non-native and nuisance species on

the reserve. Treatment of established infestations will be reviewed within the context of the larger reserve ecosystem. They may be more problematic to control, and where these occur on the preserve boundary, they would be a lower priority than smaller infestations in interior habitat areas. Some established iceplant patches may be problematic to remove where they occur on steep sandy slopes abutting residential areas, and if removed, some other form of erosion controlling vegetation would need to be installed. The use of volunteers could greatly assist this effort to control non-native plants and their participation in management activities on the reserve is addressed in the Public Education Element of the LMP. This portion of the plan in section IV. Management Goals and Tasks B (5) will be revised to add the following text in
Task (4): *Coordinate with Santa Barbara County Weed Management Area in controlling non-natives.*

8. Comments on Agriculture:
Comments received include recommendations to not allow agriculture of any kind (including cattle grazing) within the BMER and a comment specifically from the County which stated that the "EIR lacks analysis on the loss of 445 acres dry farmed and 165 acres grazing land. The EIR should analyze impacts to agricultural resources and provide a clear explanation of the thresholds used to make the determination of 'Environmental Effects Found not to be Significant' for agricultural resources."

DFG Response:
The restoration of agricultural land to native habitat as proposed in the management plan does not have an adverse impact to the physical environment as defined by CEQA. In fact, this restoration will have a beneficial effect on the environment, as described in Section IV Management Goals and Tasks B. Biological Element 7. Habitat Restoration and is consistent with the purpose of the BMER. Consequently, it does not constitute a significant environmental effect under CEQA and does not require analysis as such. In addition, the restoration of agricultural areas on BMER is necessary to mitigate impacts of the Fuel Management Plan.

The following information is not required by CEQA but is being included for policy purposes per a California Resources Agency Memo of May 4, 2005. This is consistent with the CEQA Guidelines which state that economic or social information may be included in an EIR or may be presented in whatever form the agency desires. However, economic or social effects of a project shall not be treated as significant effects on the environment (Section 15131, Title 14, California Code of Regulations).

Lands currently under lease for farming within the Burton Mesa ER have been utilized for farming since the 1930s. Farming methods typically include dryland farming of either annual bean crops or annual grasses for hay production. No irrigation is used. The fields have been more or less leveled for many years, but are not laser-leveled, and fields are disked each season prior to planting. In some years, more than one annual crop is produced. Given the fields are unirrigated and crops rely on rainfall and local perched water tables, fine particulates can be picked up and become airborn during windy, dry weather,

which can extend over several months or longer. Weeds establish on the perimeter of fields, reducing the habitat value of adjacent areas and increasing wildfire risk in certain locations. (for instance, adjacent to north Mesa Oaks).

The Department may consider new commercial leases for managed grazing in localized areas to achieve specified restoration targets, if appropriate. Any such use of livestock would require the preparation of a specific restoration plan addressing how this tool would be used and how desirable natives would be protected. However, the Department has no immediate plans to use livestock grazing for management purposes at the present time. Carefully timed and controlled livestock grazing can sometimes be used to control certain types of weed invasions. This is sometimes done with small herds of sheep or goats which can be herded and confined to a localized area. For example, intensive selective grazing pressure can knock down and weaken non-native veldt grass. Additional information about agricultural leases can be found in Section II Property Description G. 1. Agricultural Operations, I. 2. Current Cultivated Agriculture and I. 3. Current Cattle Grazing, as well as in the Commercial Lease Element of the LMP.

9. Comments on Wetland Habitat:

Comments received on wetland habitats include references to the Army Corps of Engineers definition of wetlands (County of Santa Barbara letter) and general comments about wetlands observations and the need to protect them.

DFG Response:

The federal wetland delineation process is aimed at determining whether an area supports predominantly hydrophytic plants, hydric soils and wetland hydrology. It is used to map the extent and limits of wetlands subject to federal regulations. This is not a methodology for classifying wetlands. The Holland system used in Table 20a was developed by the Department of Fish and Game, not the California Native Plant Society. The Department is aware that there is a series of isolated seasonal wetlands which form at various locations along the northern boundary, usually associated with a system of ditches that appear to have been constructed to intercept shallow sheet flow before it reaches the residential area. Department staff have observed wetland dependent plants and Pacific chorus frog tadpoles in these wetlands. The Department appreciates reports of ongoing observations in this area. The LMP addresses protection of these localized wetlands where they occur within areas proposed for public use and management, including fuel reduction areas (such as Segments 7 and 8).

10. Comments on Adjacent Land Use and Development:

Comments received include specific references to private properties adjacent to the BMER.

DFG Response:

The Department is interested in working with local jurisdictions and private land owners on any proposed land use changes on parcels adjacent to the BMER. With respect to property transfers, the Department suggests contacting the County of Santa Barbara about

transactions that may have occurred prior to 1999, when Department of Fish and Game became the land manager for BMER.

11. Fire Planning/Management

Four different categories of comments dealing with Fire Management Planning or Fuels Reduction were received, primarily from the County of Santa Barbara. These are described below with a response given for each.

a) **Fire Hazard Severity**: Comments received include that fuels management should be prioritized in the LMP. The County of Santa Barbara states in their comment letter that the BMER is a "high fire hazard area" and fire management should be strongly emphasized in the LMP.

DFG Response:

The Department is unaware of any official designation of fire hazard severity for the property but has provided a proposed Fuel Management Plan in the LMP. The Department has a proposed plan to reduce fuel loads on the perimeter of the BMER adjacent to residential and other developed areas. Details on fuel management actions and mitigation measures can be found in the Fuel Management Element of the LMP and in the Final EIR discussion on impacts associated with the Fuel Management Plan.

b) **Fuel Modification Zones:** The County of Santa Barbara comments state that Section 4291 of the Public Resources Code and Section 51182 of the Government Code authorize local fire agencies to clear up to 100 feet for fuel management and they recommend at this site to allow a 70% cover reduction within that 100 foot zone. The County suggests the LMP and EIR be modified to reflect this 100 foot clearance allowance. The county also suggests the Department allow for pile burning as a treatment method in the Fuel Management Plan and address how weeds will be controlled in the fuel management zones.

DFG Response:

Government Code Section 51182 does not apply to the Reserve as it represents land kept in a predominantly natural state as habitat for wildlife, plant or animal communities (see Government Code Section 51184). Despite this, DFG has proposed substantial reductions in flammable vegetation, especially within the first 33-66 feet of the urban/wildland interface. These reductions on the Reserve would be in addition to existing structural setbacks, backyards, streets and other areas on private land where the responsibility for creating defensible space adjacent to structures is critical. Additional language added to the Plan under Section V: Burton Mesa Fuel Management Plan D. Menu of Treatment Methods includes a new Section, 8. Pile Burning:

8. Pile Burning

Allow the use of pile burning on a site specific, case by case basis, where other disposal methods are unavailable. Burn piles will be placed on previously disturbed ground to

minimize damage to surrounding habitat and in locations where subsequent weed invasion can be effectively managed. Burn piles may not be placed in areas of wetlands or sensitive habitats.

The maintenance of the Fuel Management Zones (FMZs), including control of weeds, will be done on an as-needed basis. Non-flammable weeds may also be controlled within the treatment areas during fuel reduction work and during periodic fuel break maintenance episodes. An Integrated Pest Management Approach will be used which relies upon a variety of methods including hand removal, seed head removal, and spot treatments with glyphosate-based herbicides. New weed invasions will be prioritized for control efforts within the FMZs. The Plan describes how flammable invasive species would be controlled within the FMZs, and includes methods to reduce the introduction of weeds when treatments occur. Additional language will be added to the Plan under Section V: Burton Mesa Fuel Management Plan, Menu of Treatment Methods. It will explain how general weed control would be performed within the FMZs.
The additional text under D. Menu of Treatment Methods will read as :

9. General Weed control
Non-flammable weeds may also be controlled within the treatment areas during fuel reduction work and during periodic fuel break maintenance episodes. An Integrated Pest Management Approach will be used which relies upon a variety of methods including hand removal, seed head removal, and spot treatments with glyphosate-based herbicides. New weed invasions will be prioritized for control efforts within the FMZs. Treatment of established infestations will be reviewed within the context of the larger preserve ecosystem. They may be more problematic to control, and where these occur on the preserve boundary, they would be a lower priority than smaller infestations in interior habitat areas. Some established iceplant patches may be problematic to remove where they occur on steep sandy slopes abutting residential areas - if removed, some other form of erosion controlling vegetation would need to be installed.

In addition, the Department anticipates a partnership with the County Fire Department to maintain the fuel management zones on an annual basis once initial treatment of the zones is completed.

c) Fire Insurance: The County of Santa Barbara comments state that the LMP should acknowledge the difficulties that the adjacent residents have in obtaining fire insurance, and that Reserve Management practices should include specific actions to reduce fire hazard at the Reserve boundary.

DFG Response:
Coordination with insurance companies is not the Department's direct responsibility and it is beyond DFG's current abilities to commit limited staff time to this purpose. The Department also notes that in review of recently approved development projects in the

area, the issue of difficulties in obtaining fire insurance is not mentioned or addressed. New residential developments continue to be approved adjacent to high fire hazard areas such as the Burton Mesa chaparral. It is the Department's belief that local jurisdictions need to address development proposals adjacent to the BMER and need to account for the required defensible space within their project footprint and mitigate for any impacts associated with loss of habitat pursuant to CEQA. For details on the specific actions proposed by the Department to reduce fire hazard at the Reserve boundary see the Fire Management Element and Fuel Management Plan sections of the LMP.

d) <u>Prescribed Fires:</u> The County of Santa Barbara comment letter states that the LMP should promote prescribed burning as an alternative to wildfire and evaluate this alternative in the EIR.

DFG Response:
As described in the EIR (Section 7.0 Alternatives (b), the Department considered prescribed fire but eliminated it from further review for primarily ecological reasons. Most importantly, because prescribed fires are typically conducted out of season in order to control the intensity and spread, this means they are generally done under moister and cooler conditions with higher fuel moisture levels. Since chaparral and scrub vegetation types are adapted to a regime of generally intense, dry season fires, imposition of an artificial regime of low intensity cool season fires by prescribed burning can produce undesirable ecological side effects and potentially severely damage vegetation. We acknowledge that prescribed burning can reduce fuel loads, but generally this practice does not prevent a wildfire from burning through a previously treated area. Additionally, out of season prescribed fires using low intensity prescriptions can fail to produce sufficient heat to destroy the seed of opportunistic annuals, thus creating conditions favorable to the introduction of exotic weeds which produce flashy annual fuels which are also hazardous. Should the Department's abilities to implement ecologically appropriate prescribed fires improve, this activity could be considered in the future. This response above will be added in full to the EIR, replacing Alternatives Section 7.0 (b).

Table A - Summary of Public Comments Received on the Draft Burton Mesa Management Plan and EIR through September 9, 2005

Name	Support	Prohibit			Allow							Enforcement/ Communication	Partnerships					Contents							Comments
		Hunting	Cemetery	Motor vehicles	Horses	Bicycles	Dogs off-leash	Beekeeping	Cemetery	Roads	Agriculture		Education	Patrol	Funding	Research	Non-native control	Distribution	Fuel Break	Fire Resp.	Ag	Water Line	Dumping	Insurance	
County of Santa Barbara	X				X	X								X					X	X	X			X	Vernal pools (clarify), jurisdictional wetlands, fix trails map, NOP responses, who will cert EIR, biol resources comments, mitigation section. Address cumulative impacts.
Nash, Richard & Carol	X		X															X							
Vickers, John La Purisima Audobon	X												X												Photos bike damage
Beebe Bruce (hearing)	X																								Context comments
Blair Charles (CNPS, Lompoc Valley Bot & Hort Society (hearing)	X																								
Picciuolo, Jon	X																					X			
Beebe, Bruce (telephone)													X										X		
Williams, David & Charlotte	X											X													
Wolf, Kenneth	X											X	X		X										Change name
Junak Steve	X				X	X				X			X			X	X								Paved roads only; Conserve snails; Expand Reserve
Kovacs Naomi, Citizens Planning Association of Santa Barbara County	X	X	X	X								X	X				X								Nature Center
Harmon, Sheila	X			X																					No BBQ's
Vandeman, Mike	X																								Pavement only
Quady, Sherwood & Maurita	X			X																			X		Oakhill – concern re: vernal pool, stuck vehicles, vandalism (coach)
Tevis, Richard						X																			
Mann, Joshua						X																			
Mann, Marilyn						X																			

Name	Support	Prohibit			Allow							Enforcement/ Communication	Partnerships					Contents							Comments
		Hunting	Cemetery	Motor Vehicles	Horses	Bicycles	Dogs off-leash	Beekeeping	Cemetery	Roads	Agriculture		Education	Patrol	Funding	Research	Non-natives Control	Distribution	Fuel Break	Fire Response	Ag	Water Line	Dumping	Insurance	
DelMartini, Lee						X																			
Tevis, Marie						X																			
Anderson, Lisa						X																			
Phillips, Randy (hearing)						X																			
Gill Michael						X																			
Lieziert, Shawn						X																			
Brent, Dan																									Allow access
Wilcox, Marshall																									Allow access
Ruhge, Justin, Concerned Taxpayers, I.N.C.																									Maximum Public Use, Allow Housing near Vandenberg Village
Adam Lieziert						X																			
Prochazka, Martin						X	X																		
Peirtsegaele, Lieven (hearing and letter)						X																			
Dietrich, Steve						X																			
Greenley, Charles				X		X																			
Peirtsegaele, Nikki, Elke Van der Linden, Yvonne						X																			Allow running
Manchester, Dana				X		X																			
Grant, Pamela & Bob						X																			
Clark-Savage, Irish					X	X								X											
Harris, Raymond						X																			Maximize access
Petkunas, Dan					X	X																			
Morrow, Vic & Lydia						X																			
Blodgett, William					X																				
Hernandez, Natalie & Tony					X																				
Crowe, Bob					X																				

Name	Support	Prohibit			Allow							Enforcement/ Communication	Partnerships					Contents							Comments
		Hunting	Cemetery	Motor vehicles	Horses	Bicycles	Dogs off-leash	Beekeeping	Cemetery	Roads	Agriculture		Education	Patrol	Funding	Research	Non-native control	Distribution	Fuel Break	Fire Resp.	Ag	Water Line	Dumping	Insurance	
Obern, Vivian					X																				
McCurdy, Beverly					X																				
Robb, Eleanor (hearing)					X																				
Beattie, Jean (hearing)					X																				Procedural concerns (notice letters, scoping), what are unauthorized uses?
Napior, Jeff (hearing)					X																				
Shaw, Scott (hearing)						X																			
Grant, Robert (hearing)						X																			
Langley Stephen, Karen					X																				Procedural concerns (notice)
Kelly, Lisa Ann & Family				X	X		X																		
French, John								X																	Also two phonecalls – same topic
Smith, Donald																									How did 20 acre parcel become state land – deed restriction; should be available to locals to develop as park. Not a legal transfer of land
Barget, Joe, General Mgr, VVCSD																									Clarify reserve vs preserve
Gribble, Sarah																									Advertising of PlasTEAK for picnic benches

Name	Support	Prohibit			Allow							Enforcement/ Communication	Partnerships					Contents							Comments
		Hunting	Cemetery	Motor Vehicles	Horses	Bicycles	Dogs off-leash	Beekeeping	Cemetery	Roads	Agriculture		Education	Patrol	Funding	Research	Non-natives Control	Distribution	Fuel Break	Fire Response	Ag	Water Line	Dumping	Insurance	
Wilde, Camillo																			X	X					Make fire/fuel highest priority
Bray, Jim (letter, hearing)									X																150 Ac requested on Vandenberg Unit for purpose of Veterans Cemetery
Milligan, Sue									X																
Olla, Alice and Joe					X	X					X			X											
Parker, Wanda														X									X		Allow model airplanes, prohibit paintball shooting. List of animals seen in yard and on reserve.
Saddle Skirts Equestrian Group (17 signatures)					X						X														Allow off-road activities
Forrest, Jack	X	X																							Prohibit commercial activities – bee keeping, cattle grazing, farming. Prohibit horses, bicycles. Consult with trail users on new trails and removal of trails

DETAILED PROJECT DESCRIPTION OF FUEL MANAGEMENT ZONE SEGMENTS

APPENDIX 9

BURTON MESA ECOLOGICAL RESERVE LAND MANAGEMENT PLAN

APPENDIX 9
Detailed Project Description
Fuel Management Zone Segments
July 2005

Segment 1

Segment 1 is located west of Mesa Oaks Circle and below Sirius (close to where it joins with Volans), extending southwest to Highway One and NW to the existing sewer line easement road, and includes terrain extending 20 feet west of the sewer road. The affected area is about 300 feet wide on the upslope end, wider near Highway 1 (600 feet at Highway 1)

Adjacent Land Use: Residential to the east and north

Distance to Residences: 10-30 feet for condos on Mesa Oaks Circle
(assuming the top of embankment is the property line)

Existing Disturbance:

Behind the Condos to base of toe of slope: iceplant dominated (slope 55%)
Storm drains in bottom of riparian area
Localized Sewer Pipes.
Existing Sewer line access road- 5- 9 feet in width

Existing Vegetation: (distances estimated from photo)

0-60 feet - steep slope, iceplant understory, emergent coast live oaks and toyon
60-150(300) - coast live oak woodland
150(300) to 300(600) - willow riparian forest, localized *Juncus textiles/Carex sp.*dominated wetlands, intermittent to permanent stream
150 to 300 feet - patches of mature black sage/chamise with intervening oak woodland

Constraints: Significant stand of wetlands, including forested and herb dominated. Very steep slopes (55%) immediately behind residences. Very lush and dense oak woodland. May support breeding riparian bird guild. May support Californa red-legged frog (present 1998, not present in 2004 spring survey). Sewer easement roadway also slopes to about 15%, creating potential for erosion problems. Open areas associated with roadway support sensitive herbaceous vegetation, including localized populations of *Chorizanthe rectispina* (CNPS 1b), *Cordylanthus rigidus littoralis* (California Endangered), *Monardella undulata* (CNPS List 4)*, Mimulus fremontii (*unique Burton Mesa type), at least three *Agrostis hooveri* (CNPS List 1b), patches of *Erysimum capitatum lompoensis* and other endemics.

Recommended Prescription :

Removal of decadent shrubs: Within 150 feet of residences to east side of sewer road
Remove flammable invasives/exotics: Within 150 feet of residences to east side of sewer road
(primarily pampas grass, maybe a little veldt grass)
(a few small palm trees, pine trees, small privets)
Thin shrubs/subshrubs: between sewer access road and riparian area, approx 100 feet
Uplift Coast Live oaks: between sewer access road and riparian area, approx 100 feet
(short oaks here, sometimes with south and west exposures, therefore should be limited).

Other topics: Difficulties may arise in dealing with a) the steepness of the central/lower sewer roadway in terms of moving vehicles and brush) b) treatment area is primarily forested, a lot of poison oak and it may be logistically difficult to move around in there. It will be challenging to avoid trampling the central open sand habitat area (which will tend to be where folks will want to be walking a lot).

Segment 2

Extends behind residential area from Volans Dr. (off Sirius) to SE corner of Little League Fields

Adjacent Land Use: Residential, with back yards abutting reserve

Existing Disturbance:

97 to 150 feet behind yards previously mowed
Existing dirt path/drivable with 4-wheel drive vehicles

Existing Vegetation:

Previously mowed strip: Supports scattered individual/groups of coast live oaks, large patches of iceplant, and occasional coyote brush and Burton Mesa chaparral shrubs here and there that were missed in previous mowing episodes.

Beyond previously mowed area: terrace drops off to natural terrain, gently sloping to the southwest, vegetated by dense, mature chamise/Burton Mesa chaparral. Dominance shared between chamise and manzanitas. Santa Barbara ceanothus common and sometimes in dense patches.

Constraints:

Previously mowed strip: scattered individual chaparral shrubs (La purissima and shagbark manzanita, Santa Barbara and impressus ceanothus, occasional other subshrub endemics) should be feasible to retain these scattered individuals, depending up the type of mowing equipment used (width of mower and turn around radius).

Recommended Prescriptions:

Mow previously mowed area annually: 0 to 97-150 feet
Do not mow iceplant patches, retain scattered shrubs

Create Vehicular Access for Fire Department Equipment: along existing dirt path

Segment 3:

Along the southern and western edge of the Little League fields south of Albireo Avenue.

Adjacent Land Use: Little League Field

Existing Disturbance:

Previously mowed on Sept. 1994 aerial: width 0 to 60-90 feet (need to verify).
A dirt footpath suitable for 4 wheel driving.

Existing Vegetation:

0-60 (90) feet:	Disturbed, previously mowed, some regrowth, appears less frequently maintained than Seg 2. Scattered regrowth of shrubs. Scattered young willows.
90- beyond:	Burton Mesa chaparral/chamisal with emergent oak, dense, mature.

Constraints: occasional population of *Amsinkia spectabilis,* a few young arroyo willows,

Recommended Prescription:

No treatments are recommended at this time.

Segment 4

Along the southwest edge of the High School playing fields.

Adjacent Land Use: playing fields, no structures

Existing Disturbance:

Previously mowed/cleared in the past, width narrower than in Segment 2 and 3, approximately 30 feet.

Existing path behind high school fence-cleared about 20 feet behind fence.

Existing Vegetation:

0-30 feet:	Disturbed, but with more regrowth due to less frequent maintenance. Scattered emergent oaks.
30- beyond:	Transitions from mature to decadent chamise/Burton Mesa chaparral with emergent coast live oak to mature to decadent Burton Mesa chaparral (old growth) trending northward.

Constraints: Burton Mesa rare endemic shrubs dominate much of the area. Some localized young willows.

Recommended Prescription:

No treatment is recommended for this segment at this time.

Segment 5

Northwest of the High School playing fields, extending east to northern terminus of Constellation Drive.

Adjacent Land Use: playing fields, no structures

Existing Disturbance:

0-20 feet: a narrow footpath, sometimes veering around large trees.
20-beyond: undisturbed old growth

Existing Vegetation:

0-30 feet:

Two patches of large Monterey pines on fenceline on High school property. One large mostly dead coast live oak on reserve- path goes around it.

Two patches of dead/decadent coyote brush scrub, visible on aerial photo

Remainder old growth Burton Mesa chaparral with emergent Coast Live Oak.

30- beyond: Old growth Burton Mesa chaparral

Constraints:

Rare chaparral manzanitas abundant - stand is old growth. Decadence localized, and in chaparral ceanothus often dying out. Occassional *Ceanothus impressus* need to be retained.

Recommended Prescription:

No treatment for this segment is recommended at this time.

Segment 6:

Segment 6 is located entirely on the private parcel owned/managed by County, Kelley Gusman (KG) Preserve. Fuel management is not proposed on this parcel.

Parcel is old growth Burton Mesa chaparral with emergent coast live oak and occasionally, coast live oak woodland. There is a localized seasonal wetland with scattered willow and patches of *Juncus textilis* and other wetland plants here.

Segment 7

Segment 7 is located from the east end of the Kelley Gusman parcel and extends to the west end of Segment 8, just past the terminus of Vanguard Avenue.

It looks like the first 4 houses West of Vanguard, abut the reserve. Then moving west, the segment abuts the KG parcel and houses are set back further.

Adjacent Land Use: Residential, backyards about thirty feet deep.

Existing Disturbance:

Some past clearing has occurred behind the residences, for about 60-80 feet.

There is a series of ditches and an associated berm (material removed from ditch) behind these residences, presumably to intercept sheet flow and carry it to nearby storm drains. Considerable regrowth and patches of recovering vegetation occur here. Localized areas where previously cut vegetation was piled and burned- now weedy and open.

Existing path(s) present in this location.

Existing Vegetation:

0-60 feet: chamise/Burton Mesa chaparral with emergent coast live oaks.

60- beyond: old growth chamise/Burton Mesa chaparral with coast live oak

Constraints:

Burton Mesa rare endemic shrubs common in the area
Ditches create complicated topography - need to maintain drainage

Recommended Prescription:

Create Vehicular Access for fire equipment:
Utilize existing path(s) if feasible. Will likely require flagging a vehicle route on foot, and may require grading. Must avoid wetlands- (no grading of wetlands, may drive over in emergencies).

Thin Shrubs/Subshrubs: 0-100 feet

Remove decadent material 0-100 feet

Removal flammable invasives/exotics: 0-100 feet
(Pampass grass, exotics present)

Uplift Coast Live Oaks: (20 feet either side of vehicle route)
(Primarily in association with the vehicular access route)

Segment 8

Segment 8 extends from Oak Hill Drive, westerly to Vanguard Drive

Adjacent Land Use: Residential, back yards

Existing Disturbance:

0-60 feet: Previously disturbed, ditches, berms, regrowth, previous burn piles.

60-beyond: Undisturbed/ EXCEPT the central area abuts an old disturbance (the molar) which may have been farmed many years ago. Narrow footpath variable distance in habitat. Possible vehicle access route.

Existing Vegetation:

0-60 feet: Burton Mesa chaparral shrubs in patches and individuals, often younger individuals recruited after the ditches were installed, young coast live oaks, small localized wetlands in ditch bottoms, extent of wetlands will vary based upon amount of rainfall in a given year, scattered escaped yard plants.

60- beyond: Mature Burton Mesa chaparral with emergent coast live oak, dominated by *A. rudis*

Central area, likely farmed previously, with Burton Mesa scrub and scattered large and young coast live oaks.

Constraints: Abundant Burton Mesa rare endemic shrubs and small wetlands in ditch bottom.

Recommended Prescription:

Potential vehicular access for Fire equipment:

Attempt to locate on existing path, but would require substantial widening. Will need to determine route with fire department, and may require grading.

Thin Shrubs and Subshrubs:	0-100 feet
Remove Flammable Invasives:	0-100 feet
Yard Waste Removal:	0-100 feet
Remove Decadent Shrubs:	0-100 feet
Uplift Coast Live Oaks	adj to fire access roadway, limit on southern exposures

Other Measures:

Vehicular barriers/vehicle gates/pedestrian access points needed at Vanguard and Oak Hill Drives.

Segment 9

Located behind four residential lots on the north side of Oak Hill Drive

Adjacent Land Use: Residential lots
Private undeveloped land south of preserve, west of lots

Existing Disturbance: Relatively remote and undisturbed, except for a buried water line which is being restored (installed in mid'90-s)

Existing Vegetation:

Western Half: Burton Mesa Scrub with shallow surface drainages with *Juncus* sp.

Eastern Half: Burton Mesa Scrub/Burton Mesa chaparral with emergent coast live oak.

Constraints: Identified as mule deer fawning area. Occassional *Ceanothus impressus*.
5% slopes gently to the south.

Private yards contain numerous pines, cypresses, outbuildings

Recommended Prescriptions:

Segment needs to be better defined. Should primarily focus on clearance for the first lot.
Remove Decadent Shrubs: not a lot of decadence here
Thin Shrubs/subshrubs: 0-50 feet behind lot 1

Other Issues:

There is no direct vehicle access to this location. The shortest distance walking is through the private land from the south. Need to avoid deer fawning season (January through May).

Segment 10

Generally located east of Vandenberg Village, starting on the south end around Manzanita Rd (off St. Andrews Court), running due north behind residences and ending at the NE corner of the reserve, behind the last house on the NE corner of Vandenberg Village. Overall length is about 1900 feet.

Adjacent Land Use: Residential. Property boundary needs better definintion. Unauthorized expansion of private yards onto state property has occurred. Fence lines do not necessarily indicate the property line. Homes are sited on curving streets, with irregular back yards.

Distance to Residences: Variable
Closest home approximately 20 feet

Existing Disturbance:

CCWA State Water line runs north south close to the western boundary abutting the development. Water line was installed in the mid-1990s. Some localized restoration of the waterline was undertaken. There remains a vehicular roadway that is used by CCWA to check the infrastructure. This roadway is occasionally straight. It seems to disappear and become only a footpath on the NE end of the segment.

An existing dirt roadway, probably originally installed by Unocal, runs generally north-south on the eastern portion of the segment. Several footpaths exist running between the CCWA roadway and the older dirt roadway.

Localized encroachment of back yards or staging areas for local residents occurs in various places. Landscaping and infrastructure (fences, sheds, compounds) sometimes occur on the state property. Numerous landscaping plants, including large pines, are in some cases on the state property.

Previous clearing has occurred here in the past, and burn pile sites occur in various locations between remnant coast live oaks/patches of chaparral.

Width of Disturbance (estimated from aerial photograph, assuming an accurate boundary line for southern 1500 feet only):

0-100 (130ft max).

Existing Vegetation:

Southern 1500 feet:

0-60 feet:	generally the most disturbed, with patchy Burton Mesa Scrub, emergent live oaks, landscaping, garden escapes, etc.
60-100 (130) feet:	mature chamise/Burton Mesa chaparral with localized Burton Mesa Scrub, fairly dense cover of live oaks.

Northern 500 feet:

NE existing residence has encroached substantially into preserve and converted area to lawn with emergent large oaks.

Dense coast live oak woodland with riparian understory and localized ephemeral channels.

Band of annual grassland south and north of riparian oak woodland.

Recommended Prescriptions:

Southern 1500 feet

Create Vehicular Access Route for fire equipment:	use existing CCWA roadway.
Remove decadent shrubs:	0-100 feet
Remove flammable invasives/exotics:	0-100 feet
Yard Waste Removal	0-100 feet
Thin Shrubs and subshrubs:	30 feet either side of CCWA roadway Amount to be determined

Northern 500 feet: no clearance or vehicular roadway

Other Topics: May need to do localized survey to locate property line or otherwise determine treatment area boundaries. Need to resolve trespass- gates through fences, yard wastes and firewood are being stored on the reserve. Need to install gates and barriers at appropriate locations. Need a vehicle gate at Manzanita Court.

Segment 11:

This is generally a small segment, pie shaped, located just north of Pinehurst Drive, that is sandwiched in between the Clubhouse Estates private property to the west and the Unocal 100 acre inholding to the north. We do not have physical access to this location.

Adjacent Land Use: residential to the west

Distance to Structures: 80 feet

Existing Disturbance: about 100 feet of the preserve has been previously mowed leaving only emergent coast live oaks. Therefore, about 200 foot wide area behind residences has been cleared and maintained by mowing. Area to the east proposed to be converted to housing, and fuel modifications are required to be placed inside the private property.

Existing Vegetation: 0-100 feet ruderal with emergent live oaks

100-beyond: chamise/Burton Mesa Scrub, transitioning to Burton Mesa Chaparral.

Constraints: none observed

Recommended Prescriptions:

Mow Annual Herbaceous Growth: continue to mow previously mowed area

Other Topics: Unocal 100 acre parcel just north of this location is currently not managed by the Department, but this may change in the near future. Unocal parcel was not surveyed here. Some previous mowing of a fuelbreak has already occurred on the west side of the Unocal parcel.

Segment 12

Segment 12 is generally located south of Burton Mesa Boulevard and just behind three existing commercial buildings. There is a 29 acre private parcel to the southwest of the Segment 12 area- no clearance abutting the undeveloped parcel is recommended, and if it becomes developed, fuel clearance would need to be confined to the private parcel.

Adjacent Land Use: west side abuts commercial buildings and parking lots

Distance to Buildings: 20-60 feet

Existing Disturbance: relatively undisturbed, but portions severely invaded by pampas grass.

Existing Vegetation:

North ½coast live oak woodland with chamise and ceanothus, manzanitas infrequent; chamise, Santa Barbara ceanothus and coyote brush frequently decadent.

South ½ shifts toward chamise/Burton Mesa chaparral with emergent coast live oaks.

Constraints: none observed

Recommended Prescriptions:

Roadside Mowing:	10 feet along the southern edge of Burton Mesa Boulevard
Removal of Flammable Invasives/Exotics:	0-100 feet….primarily pampas grass
Remove Decadent Shrubs/Subshrubs:	0-60 feet
Thin Shrubs and Subshrubs:	0-60 feet
Uplift Coast Live Oaks	0-30 feet

No fire vehicular access proposed here

Segment 13: North Half of South Vandenberg Village (north of Jupiter)

Generally located on the west side of South Vandenberg Village, south of Highway One and north of Jupiter Avenue.

Adjacent Land Use: Residential

Distance to Residences: Small backyards abut steep embankment on Preserve

Existing Disturbance:

0-50 feet: Generally a steep embankment vegetated largely with iceplant
An overgrown dirt roadway occurs at the base of the steep embankment (at least in the northern ½ of this area). Need to determine the drivability of this roadway.

50-beyond: Somewhat undisturbed, with localized areas of more disturbed habitat.

Localized areas with storm drains, urban runoff, some wetland plants, and erosion problems/debris due to poor design of outfalls or lack of maintenance.

Existing Vegetation:

0-50 feet: Highly disturbed, often dominated by iceplant, with scattered California sagebrush and coyote brush, occasional coast live oaks.

50-beyond: North ½ supports considerable oak woodland or Burton Mesa scrub with emergent oak woodland

South ½ generally lacks oaks and supports patches of habitat either dominated by coyote brush, Burton Mesa Scrub, or non-native mustard.

Occassional planted pines on back yard property lines.

Constraints: Substantial slopes are a major constraint. Grading for vehicular access is problematic and would cause considerable disturbance and exacerbate erosion.

Recommended Prescription:

Remove decadent/dead shrubs:	0-100 feet
Remove yard wastes, debris:	0-100 feet
Remove flammable invasives:	0-100 feet

Other Topics: Vehicle Access- further analysis needed as to whether this is feasible or necessary (roadway at base of slope above riparian area was substantially graded and widened during previous wildfire..additional access may therefore not be prudent).

Segment 14: South Half of South Vandenberg Village (south of Jupiter)

Generally located on the west and southwest side of S Vandenberg Village, south of Jupiter Avenue and around the south tip of the village to Moonglow.

Adjacent Land Use: Residential on the east and north side.

Existing Disturbance:

A steep embankment is generally present behind the back yards and often its vegetated by iceplant.

An existing dirt roadway is present on the base of the embankment, and can generally be driven on from Moonglow, north and west for about 700 feet, then it appears overgrown and not drivable.

The vicinity of Moonglow and the vicinity of Jupiter is very disturbed, with considerable weeds present.

Existing Vegetation:

Jupiter Area: very disturbed

Tip of Vela Way: large bishop pines and eucalyptus on back fenceline, coast live oak woodland abutting the pine area. One pine is dead. Cut up dead pine tree parts have been dumped under the woodland; a small seep is present with cattails (not clear if this is natural, or grey water)

Tip of Stardust Road: Another large group of pines behind the back fenceline. Several arroyo willows here. Oak woodland and Burton Mesa Scrub with emergent oaks dominate the area below.

Remainder to Moonglow: Vegetation patchy, includes Burton Mesa Scrub patches, and chamise-dominated patches. Some old disturbance may be due to presence of powerlines .

Constraints: Erosion is a major problem on steep slopes here. Access is poor on the west side.

A population of the rare grass, *Agrostis hooveri* was located in a small area just below the dirt roadway south of Moonglow. Twenty six plants were identified. They are mixed in with *Nassela pulchra* and Veldt grass is invading the area. Location is vulnerable to vehicular damage. A population of yellow-flowered Dudleya also was found nearby.

Bedrock is near the surface in the southwest area off Moonglow and may influence the vegetation- preventing deeper rooting species like manzanitas and oaks from doing well here.

Recommended Prescription:

Create Vehicular Access: limited to existing dirt roadway on south side of Moonglow only - turn around here could damage Agrostis habitat. Need to design a turn around if vehicle access dead ends.

Remove decadent shrubs:	0-100 feet
Remove flammable yard wastes:	0-100 feet
Remove flammable invasives/exotics:	0-100 feet

Pampass grass, pines, veldt grass

Segment 15: West Mesa Oaks

Adjacent Land Use: Residential to the south with existing 45'wide (or greater) mowed fire break. Presumably mowed by Mesa Oaks Homeowners Association.

Distance to Residences: 45 feet existing fire break plus a variable/width of backyards/structures 30 or more feet- homes are on curving street, back yards curving.

Existing Disturbances: Intact BMER abuts existing mowed firebreak

Existing Vegetation: Mature Burton Mesa chaparral, emergent coast live oaks; invasive pines (Torrey and Monterey) present at scattered locations.

Far east end adjacent to Courtney Drive has no firebreak with dense vegetation abutting wooden fences for several backyards before emerging at the mowed fire break.

Constraints: Both rare manzanitas and Santa Barbara ceanothus are present here and typically dominant.
Decadence is primarily ceanothus dying out.

Recommended Prescriptions:

Far East End Without any Clearance:

Determine location of reserve boundary. From the boundary line (which may not be the fence line):

Remove Decadent Shrubs	0-50 feet
Remove flammable Invasives/Exotics	0-50 feet
Thin Shrubs/Subshrubs	0-50 feet
Uplifting Coast Liveoaks	0-20 feet

Remainder with 45 feet or more existing firebreak:

Remove decadent shrubs:	0-30 feet
Remove flammable invasives	0-30 feet

Other measures/actions: Install vehicular barrier at Courtney Drive. Determine if anyone mows the sides of Courtney Drive, or if this is necessary. Verify how HOA accesses the area for mowing (they currently aren't coming off Courtney Drive).

Segment 16: East Mesa Oaks to Rucker Road

Adjacent Land Use: Residential south of the preserve for about 1000 feet (E-W), natural habitat to the south for the remaining eastern 600 feet.
Private parcels on NE corner of Burton Mesa Boulevard and Rucker, one undeveloped parcel (4.57 acres) behind existing developed church (4.86 acres).
No firebreak here (except near Rucker Road on east end)

Distance to Residences: Minimum distance in backyards about 30-40 feet from structures, lots on a curving dead end street on east end are much further from preserve boundary.

Existing Disturbances:

Existing cleared footpath about 5-8 feet wide extends length of southern edge, sometimes leaving our property boundary on east end. (There is a compacted roadbed, 21.5 feet wide extending along the southern edge to the southeastern corner).

Substantial residential yard waste dumping, particularly associated with the westernmost lot. Some past clearing and dumping into intact habitat on west end.

East end- about 120 feet paralleling/abutting west Rucker Road has been mowed, probably by the Mesa Oaks Homeowners Association. About 120 feet south of the church parcel is also mowed. Did not appear to be mowed in 2004.

Existing Vegetation:

Area is largely Burton Mesa chamisal with emergent coast live oak, occasional Burton Mesa chaparral endemics. Generally mature to decadent. Vegetation appears more dense on east side than on West Mesa Oaks.

Constraints: La Purisima and shagbark manzanitas present, but infrequent, therefore it should be feasible to retain most of them. Very rarely, there are occasional *Ceanothus impressus*- these should be retained. A lot of *Erysimum capitatum lompocense* on the east end near mowed areas.

Recommended Prescriptions:

Western 1000 feet -

Yard Waste Removal	0-75 feet
Removal of decadent shrubs:	0-75 feet
Remove flammable invasives/exotics	0-75 feet
Thin shrubs and subshrubs	0-75 feet

Eastern 600 feet - no clearance needed.

Existing mowed firebreak parallel/abutting Rucker Road -

Mow previously mowed area: 0-50 feet
(currently fenced along Rucker and we don't have vehicular access here). Being mowed probably by Homeowners Association

Existing mowed firebreak south of church -

Mow previously mowed area: 0-50 feet
(boundary between actual church parcel and reserve is unclear, probably don't need to mow back (west), which abuts a parking lot).

Other issues: Signs, fencing and a gate are needed along the reserve boundary for management and access control.

Segment 17: West Rucker Road (north of Burton Mesa Boulevard)

Adjacent Land Use: Residential on east side of road (across the street)

Distance to Residences: 60 +/- feet (roadway, front yards to houses)

Two Private Parcels: Parcel 2.68 acres PG&E Substation
Parcel 5 acres Church

Existing Disturbance: Roadside previously mowed in the past, about 10-20 feet

Existing Vegetation:

0- 20 feet: Disturbed, some past clearing and mowing, large oaks and occasional shrubs remaining, weedy, some exotics from yards

20' –interior: chamise/Burton Mesa scrub with emergent oak and scattered mtn. mahogany and redberry. Infrequent manzanitas. Vegetation mature, about 75% total cover.

Constraints: occasional populations of *Amsinkia spectabilis; Erysimum capitatum lompocense,* may contain *Malacothamnus* Burton Mesa type.

Recommended Prescriptions:	Width of Treatment
Roadside Mowing	10- 20 feet
Roadside Uplifting of Shrubs and Oaks	10-20 feet
Yard Waste Removal	30 feet
Removal of decadent shrubs	30 feet
Remove flammable invasives/exotics	30 feet

Private Parcels: Clearance should occur inside the private parcels.

Segment 18: North Mission Hills

Adjacent Land Use: Residential to the south, agriculture on BMER to east

Distance to Residential: 75 +/-feet front yards, roadway/& distance to the preserve boundary. Preserve boundary irregular, somewhat along north edge of roadway.

Distance from residential roadway to DFG access dirt roadway: 75 feet +/-
(between Calle Lindero and the road to La Purissima sector)

Existing Disturbance and Conditions:

[_____] [_____] [*dirt rdwy*] [____] [_____*mature chap*_____ >
(0-75 feet) 0'… 75' 95'….105'
Yards/Calle Lindero *Preserve Starts* *sloping embankment*

0- 75 feet: Disturbed steep embankment, some past clearing, soil exposed to bedrock in certain locations.

75-95 feet: Existing dirt roadway

95-105 feet: Disturbed cut embankment with localized erosion

Existing Vegetation:

0-75 feet: Patchy, cover variable, from largely unvegetated on exposed scraped bedrock to fairly dense patchy shrubs and coast live oaks. Burton Mesa scrub with *Malacothamnus* Burton Mesa type.

95-105 feet: Embankment below intact old growth Burton Mesa chaparral/chamisal-east end transitions to a riparian area below chaparral

Constraints: Existing erosion and potential for exacerbated erosion if more vegetation is removed from slopes.
Need to retain *Malacothamnus* Burton Mesa type
Retain purple needlegrass clumps

Recommended Prescriptions:

Roadside Mowing adj to Calle Lindero	if feasible on terrain
Roadside Uplifting of Shrubs and Oaks;	0-20 feet
Yard Waste Removal	0-75 feet
Removal of flammable invasives/exotics (pampas, Yuccas)	0-75 feet
Removal of decadent shrubs	0-75 feet

Additional Options: mow ruderal area at entrance to dirt road, and install a gate near Rucker to reduce access/unplanned ignition sources.

Other issues: Better understand location of southern preserve boundary.

Management Plan updates and restoration plans should address reduced fuel load restoration of agricultural field where it abuts back yards (about 100 feet).