



Appendices

Photos (clockwise): 1. Cycling, San Gabriel River Bike Trail. NPS Photo. 2. Stream in the San Gabriel River. Photo © Randy Okamura. 3. .Glendora orchards, 1931. Photo courtesy of the Los Angeles County Library. 4. San Gabriel Mountains. NPS Photo.

Appendices

Appendix A: Study Legislation

117 STAT. 840 PUBLIC LAW 108–42—JULY 1, 2003

Public Law 108–42
108th Congress

An Act

To authorize the Secretary of the Interior to conduct a study of the San Gabriel River Watershed, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “San Gabriel River Watershed Study Act”.

SEC. 2. STUDY OF SAN GABRIEL RIVER WATERSHED.

(a) IN GENERAL.—The Secretary of the Interior (hereafter in this Act referred to as the “Secretary”) shall conduct a special resource study of the following areas:

- (1) The San Gabriel River and its tributaries north of and including the city of Santa Fe Springs.
- (2) The San Gabriel Mountains within the territory of the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (as defined in section 32603(c)(1)(C) of the State of California Public Resource Code).

(b) STUDY CONDUCT AND COMPLETION.—Section 8(c) of Public Law 91–383 (16 U.S.C. 1a–5(c)) shall apply to the conduct and completion of the study conducted under this section.

(c) CONSULTATION WITH FEDERAL, STATE, AND LOCAL GOVERNMENTS.—In conducting the study under this section, the Secretary shall consult with the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy and other appropriate Federal, State, and local governmental entities.

(d) CONSIDERATIONS.—In conducting the study under this section, the Secretary shall consider regional flood control and drainage needs and publicly owned infrastructure such as wastewater treatment facilities.

SEC. 3. REPORT.

Not later than 3 years after funds are made available for this Act, the Secretary shall submit to the Committee on Energy and Natural Resources of the Senate and the Committee on Resources of the House of Representatives a report on the findings, conclusions, and recommendations of the study.

Approved July 1, 2003.

Appendix B: Species Tables

Table B1: Federal and State Listed Threatened and Endangered Species

Scientific Name	Common Name	Habitat	Federal Status	State Status	Documented Study Area Locations*
<i>Plants</i>					
<i>Astragalus brauntonii</i>	Braunton's milk-vetch (endemic)	Closed-cone coniferous chaparral, coastal scrub, valley and foothill grassland	FE	None	Azusa, Mount Wilson
<i>Berberis nevinii</i>	Nevin's barberry (endemic)	Chaparral, cismontane woodland, coastal scrub, riparian woodland	FE	CE	Sunland, Glendora, Pasadena, Mint Canyon, San Fernando, Mount Baldy
<i>Brodiaea filifolia</i>	thread-leaved brodiaea (endemic)	Valley and foothill grassland, vernal pools, flood plains, coastal sage scrub	FT	CE	Glendora
<i>Dodecahema leptoceras</i>	slender-horned spineflower (endemic)	Chaparral, cismontane woodland, alluvial fan coastal scrub	FE	CE	Azusa, Mount Wilson, Pasadena, Cajon, Agua Dulce, Mint Canyon, San Fernando, Sunland
<i>Orcuttia californica</i>	California Orcutt grass	Vernal pools, wetlands	FE	CE	Western San Gabriel Mtns., Soledad Basin
<i>Fish</i>					
<i>Catostomus santaanae</i>	Santa Ana sucker	Clear, cool, gravely and rock streams	FT	SSC	Acton, Azusa, Agua Dulce, Condor Peak, Crystal Lake, Glendora, Mount Baldy, Mount San Antonio Sunland, Waterman Mountain, East Fork San Gabriel River, Cattle Canyon, Creek and Bear Creek
<i>Gasterosteus aculeatus williamsoni</i>	Unarmored threespine stickleback	River or creek pools and backwaters with sand or mud bottoms	FE	CE	Acton, Agua Dulce, Mint Canyon
<i>Oncorhynchus mykiss</i>	Southern steelhead	Freshwater streams connecting to the ocean	FE	SSC	(southern ESU - historic)
<i>Amphibians</i>					
<i>Bufo californicus</i>	Arroyo toad	Rivers with shallow gravely pools adjacent to sandy terraces	FE	SSC	Agua Dulce, Chilao Flat, Little Rock Creek
<i>Rana aurora draytonii</i>	California red-legged frog	Dense shrubby riparian vegetation associated with deep, still or slow-moving water	FT	SSC	Sleepy Valley, San Gabriel Mountains

Scientific Name	Common Name	Habitat	Federal Status	State Status	Documented Study Area Locations*
<i>Rana muscosa</i>	mountain yellow-legged frog	Ponds, tams, lakes, and streams at moderate to high elevations	FT	SSC	Crystal Lake, Mount Baldy, Pacifico Mountain, Valyermo, Glendora, Juniper Hills, Condor Peak, Mount San Antonio, Mount Wilson, Sunland, Chilao Flat, Pasadena, Waterman Mountain, San Gabriel Mountains
Reptiles					
<i>Gopherus agassizi</i>	Desert tortoise	Desert oases, riverbanks, washes, dunes rocky slopes	FT	CT	Northern edge of the San Gabriel Mountains.
Birds					
<i>Buteo swainsoni</i>	Swainson's hawk	Open grasslands, riparian systems	S	CT	Rose Hills
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	Riparian areas	FC	CE	Baldwin Park, El Monte, Ontario, Whittier, Near Cattle Canyon, historic record from San Gabriel River (1951)
<i>Empidonax traillii extimus</i>	Southwestern willow flycatcher	Riparian areas, willow thickets, mountain meadows	FE	None	Agua Dulce, Pasadena, El Monte, Mount Wilson
<i>Falco peregrinus</i>	American peregrine falcon	Cliff faces, wetlands, woodlands, other forested habitats, cities, agricultural areas	FSS	CE	Pasadena
<i>Gymnogyps californianus</i>	California condor	Foothill and rangeland forest	FE	CE	San Gabriel Mountains
<i>Haliaeetus leucoccephalus</i>	Bald eagle	Woodlands forests, grasslands, wetlands	-	CE	San Gabriel Valley
<i>Polioptila californica californica</i>	Coastal California gnatcatcher	Coastal sage scrub	FT	None	Arcadia, Baldwin Park, Claremont, El Monte, La Habra, Mint Canyon, Mount Wilson, Ontario, Sunland, San Dimas, San Jose Hills, Rancho Santa Ana Botanical Garden Bio Field Station, Puente Hills, Yorba Linda
<i>Vireo bellii pusillus</i>	Least Bell's vireo	Riparian areas	FE	CE	Azusa, El Monte, Fish Canyon, Tassel Canyon, Whittier Narrows, Tonner Canyon, Yorba Linda
Mammals					
<i>Spermophilus mohavensis</i>	Mohave ground squirrel	Low desert with scattered brush, sandy or gravelly soil	FSS	CT	Mescal Creek, Littlerock, Palmdale, Valyermo (areas just north or adjacent to the study area)

Table B2: Rare and Sensitive Plant Species

Common Name	Scientific Name	Habitat	Federal Status	State Status	CNPS	Documented Study Area Locations*
Abrams' alumroot (endemic)	<i>Heuchera abramsii</i>	Upper montane coniferous forest	FW	None	4	Mount San Antonio
alkali mariposa lily	<i>Calochortus striatus</i>	Chaparral, Mojavean desert scrub, chenopod scrub, meadows and seeps	None	None	1B	Waterman Mountain
alpine sulfur-flowered buckwheat (endemic)	<i>Eriogonum umbellatum var. minus</i>	Subalpine coniferous forest, upper montane coniferous forest	FW	None	4	Mount San Antonio
Big Bear Valley woollypod (endemic)	<i>Astragalus leucolobus</i>	Lower montane coniferous forest, Pinyon and juniper woodlands	FSS	None	1B	Mount San Antonio, Telegraph Peak, Mescal Creek
Brand's star phacelia	<i>Phacelia stellaris</i>	Coastal dunes and scrub, upper montane coniferous forest	Candidate	None	1B	El Monte
California muhly (endemic)	<i>Muhlenbergia californica</i>	Chaparral, coastal scrub, meadows and seeps, lower montane coniferous forest	FW	None	4	San Gabriel Mountains: Big Rock Creek, San Antonio Canyon, Devil's Canyon
California walnut	<i>Juglans californica</i>	Southern oak woodland	None	None	4	San Gabriel Mountains, Puente Hills, San Jose Hills
Coulter's goldfields	<i>Lasthenia glabrata ssp. coulteri</i>	Marshes and swamps, playas, vernal pools	None	None	1B	Mount Wilson, Pasadena, La Habra, Whittier
Crested milk-vetch (endemic)	<i>Astragalus bicristatus</i>	Lower and upper montane coniferous forest	FSS	None	4.3	San Gabriel Mountains
Davidson's bush mallow (endemic)	<i>Malacothamnus davidsonii</i>	Chaparral, cismontane woodland, coastal scrub, riparian areas	FW	None	1B	Glendora, Yorba Linda
Davidson's saltscale	<i>Atriplex serenana var. davidsonii</i>	Coastal bluff scrub, coastal scrub (alkaline)	None	None	1B	Mescal Creek, Condor Peak, Sunland
Duran's rush (endemic)	<i>Juncus duranii</i>	Lower and upper montane coniferous forest, meadows and seeps	FW	None	4	San Gabriel Mtns., Dorr Canyon, NW slope of Mt. Burnham. Lodgepole Picnic San Gabriel Mtns., Little Rock Creek, ca 1 mi downstream from Cooper Creek., Angeles Crest Hwy;

Common Name	Scientific Name	Habitat	Federal Status	State Status	CNPS	Documented Study Area Locations*
Engelmann oak	<i>Quercus englemannii</i>	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland	None	None	4	Monrovia, Pasadena, Pomona
Ewan's cinquefoil (endemic)	<i>Potentilla glandulosa ssp. ewanii</i>	Lower montane coniferous forest, near seeps and springs	None	None	1B	Crystal lake
fragrant pitcher sage (endemic)	<i>Lepechinia fragrans</i>	Chaparral	FW	None	4	San Gabriel Mountains: Switzer's Camp, Mount Wilson
fringed grass-of-parnassus	<i>Parnassia cirrata</i>	Lower and upper montane coniferous forest, meadows and seeps	None	None	1B	Glendora, Mount San Antonio, Crystal Lake
gray monardella (endemic)	<i>Monardella cinerea</i>	Lower and upper montane coniferous forest, subalpine coniferous forest	FW	None	4	Mount San Antonio
Greata's aster (endemic)	<i>Symphotrichum greatae</i> (formerly <i>Aster greatae</i>)	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, riparian woodland	None	None	1B	Mount Baldy, Glendora, Azusa, Mount Wilson, Pasadena, Mount San Antonio, Juniper Hills, Waterman Mountain, Crystal Lake, Pacifico Mountain, Acton, Condor Peak, Chilao Flat, Agua Dulce, San Fernando, Sunland
Hall's monardella (endemic)	<i>Monardella macrantha ssp. hallii</i>	Broadleaf upland forest, Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland	FSS	None	1B	Mount Baldy
hot springs fimbriatylis	<i>Fimbristylis thermalis</i>	Meadows and seeps (alkaline), hot springs	None	None	2	Glendora, Crystal Lake
intermediate mariposa lily (endemic)	<i>Calochortus weedii var. intermedius</i>	Chaparral, coastal scrub, valley and foothill grassland	None	None	1B	La Habra, San Dimas, Yorba Linda, Claremont

Common Name	Scientific Name	Habitat	Federal Status	State Status	CNPS	Documented Study Area Locations*
Jepson's bedstraw (endemic)	<i>Galium jepsonii</i>	Lower and upper montane coniferous forest	FW	None	4	Mt. Waterman, Pacifico Mountain
Johnston's bedstraw (endemic)	<i>Galium johnstonii</i>	Chaparral, lower montane coniferous forest, Pinyon and juniper woodland, riparian woodland	FW	None	4	San Gabriel Mountains: Granite Mountain, Roundtop Mountain, Divide between W Fork Bear Creek and Devils Canyon, horse flats
Johnston's buckwheat (endemic)	<i>Eriogonum microthecum var. johnstonii</i>	Subalpine coniferous forest, upper montane coniferous forest	FSS	None	1B	Mescal Creek, Mount San Antonio
Kern Canyon clarkia (endemic)	<i>Clarkia xantiana ssp. parviflora</i>	Cismontane woodland, Great Basin scrub	None	None	1B	Valyermo
Laguna Mountains jewelflower (endemic)	<i>Streptanthus bernardinus</i>	Chaparral, lower montane coniferous forest,	FSS	None	4	Mt. Baldy, Glendora, Telegraph Peak, Mount San Antonio, Waterman Mountain, Crystal Lake, Pacifico Mountain
lemon lily	<i>Lilium parryi</i>	Lower and upper montane coniferous forest, meadows and seeps, riparian forest,	FSS	None	1B	Pacifico Mountain, San Gabriel Mountains: Little Rock Creek, Prairie Forks, Alder Gulch, Burkhardt trail, Big Cienega spring,
many-stemmed dudleya (endemic)	<i>Dudleya multicaulis</i>	Chaparral, coastal scrub, valley and foothill grassland	FSS	None	1B	Mt. Baldy, Ontario, Claremont, Glendora, Azusa, Baldwin Park, San Dimas, Mount Wilson, Pasadena, El Monte
Mason's neststraw (endemic)	<i>Stylocline masonii</i>	Chenopod scrub, Pinyon and Juniper woodland	None	None	1B	Acton
mesa horkelia (endemic)	<i>Horkelia cuneata ssp. puberula</i>	Chaparral, Coastal sage scrub, cismontane woodland	None	None	1B	Mt. Baldy, Ontario, Glendora, Azusa, Claremont, Baldwin Park, San Dimas, Mount Wilson, Pasadena, El Monte

Common Name	Scientific Name	Habitat	Federal Status	State Status	CNPS	Documented Study Area Locations*
Mojave phacelia (endemic)	<i>Phacelia mohavensis</i>	Cismontane woodland, lower montane coniferous forest, meadows and seeps, Pinyon and juniper woodland	FW	4	4	San Gabriel Mountains: Sulphur Springs, Granite Mountain, Camp Verdugo Pines
mountain oxytrope (endemic)	<i>Oxytropis oreophila</i> var. <i>oreophila</i>	Alpine boulder and rock field, subalpine coniferous forest	None	None	2	Mount San Antonio
Mt. Gleason Indian paintbrush	<i>Castilleja gleasonii</i>	Lower montane coniferous forest, pinyon and juniper woodlands	None	CR	1B	Waterman Mountain, Pacifico Mountain, Chilao Flat, Acton, Condor Peak
ocellated humboldt lily (endemic)	<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	Chaparral, lower montane coniferous forest, riparian forest, coastal scrub	FW	None	4	Mt. San Antonio, Mt. Baldy, Glendora, Azusa, Crystal Lake, Condor Peak, Chilao Flat
Orcutt's linanthus	<i>Linanthus orcuttii</i>	Chaparral, lower montane coniferous forest, pinyon and juniper woodland	None	None	1B	El Monte, Mount Wilson
Palmer's mariposa lily (endemic)	<i>Calochortus palmeri</i> var. <i>palmeri</i>	Chaparral, lower montane coniferous forest, meadows and seeps	FSS	None	1B	Chilao Flat
Parish's gooseberry (endemic)	<i>Ribes divaricatum</i> var. <i>parishii</i>	Riparian woodland	None	None	1B	Whittier, Pasadena, El Monte
Parry's spineflower (endemic)	<i>Chorizanthe parryi</i> var. <i>parryi</i>	Chaparral, coastal scrub,	None	None	3	Mount Wilson, Claremont, Pasadena, Mount Baldy, Ontario
Peirson's lupine (endemic)	<i>Lupinus peirsonii</i>	Joshua tree woodland, lower and upper montane coniferous forest, pinyon and juniper woodland	None	None	1B	Valyermo, Juniper Hills, Crystal lake, Chilao Flat
Peirson's morning-glory (endemic)	<i>Calystegia peirsonii</i>	Chaparral, chenopod scrub, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grasslands	None	None	4	

Common Name	Scientific Name	Habitat	Federal Status	State Status	CNPS	Documented Study Area Locations*
pine green-gentian (endemic)	<i>Swertia neglecta</i>	Lower and upper montane coniferous forest, pinyon and juniper forest	FSS	None	4	Waterman Mtn, Crystal Lake, Chilao Flat
Plummer's mariposa lily (endemic)	<i>Calochortus plummerae</i>	Granitic, rocky areas in chaparral, cismontane woodland, coastal scrub, lower montane, coniferous forest, valley and foothill grassland	FSS	None	1B	Claremont
rayless ragwort	<i>Senecio aphanactis</i>	Chaparral, Cismontane woodland, Coastal scrub	None	None	2	San Dimas
Robinson's pepper-grass	<i>Lepidium virginicum var. robinsonii</i>	Chaparral, Coastal scrub	None	None	1B	Azusa, Ontario, Mt. Wilson
Rock Creek broomrape (endemic)	<i>Orobanche valida ssp. valida</i>	Chaparral, Pinyon and juniper woodland	None	None	1B	Mount Baldy, Telegraph Peak, Valyermo
rock monardella (endemic)	<i>Monardella viridis ssp. saxicola</i>	Chaparral, Lower montane coniferous forest	FSS	None	4	San Dimas
round-leaved boykinia	<i>Boykinia rotundifolia</i>	Lower montane coniferous forest	W	None	n/a	Mount San Antonio (Day Canyon in San Gabriel Mountains)
Salt Spring checkerbloom	<i>Sidalcea neomexicana</i>	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, playas/alkaline, mesic	None	None	2	Ontario, Claremont
San Antonio Canyon bedstraw (endemic)	<i>Galium angustifolium ssp. gabrielse</i>	Chaparral, Lower montane coniferous forest	FW	None	4	Mt. Waterman, Mt. Lowe, Mt. San Antonio
San Antonio milk-vetch (endemic)	<i>Astragalus lentiginosus var. antonius</i>	Lower and upper montane coniferous forest	FSS	None	1B	San Antonio, Telegraph Peak, Valyermo
San Bernardino aster (endemic)	<i>Symphotrichum defoliatum</i>	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, meadows and seeps, marshes and swamps, Valley and foothill grassland	None	None	1B	Ontario, San Dimas, Mount San Antonio, Telegraph Peak, Crystal Lake

Common Name	Scientific Name	Habitat	Federal Status	State Status	CNPS	Documented Study Area Locations*
San Gabriel bedstraw (endemic)	<i>Galium grande</i>	Broadleafed upland forest, chaparral, Cismontane woodland, Lower montane coniferous forest	FSS	None	1B	Azusa, Mount Wilson
San Gabriel linanthus (endemic)	<i>Linanthus concinnus</i>	Chaparral, lower and upper montane coniferous forest	None	None	1B	Mount Baldy, Mount Wilson, Pasadena, Mescal Creek, Pacifico Mountain, Mount San Antonio, Telegraph Peak, Valyermo, Waterman Mountain, Crystal Lake, Chilao Flat
San Gabriel Manzanita (endemic)	<i>Arctostaphylos gabrielensis</i>	Chaparral	None	None	1B	Pacifico Mountain
San Gabriel Mountains dudleya (endemic)	<i>Dudleya densiflora</i>	Chaparral, Coastal scrub, Lower montane coniferous forest	None	None	1B	Glendora, Azusa
San Gabriel Mountains sunflower (endemic)	<i>Hulsea vestita</i> ssp. <i>gabrielensis</i>	Lower and upper montane coniferous forest	FW	None	4	Pacifico Mountain, Mount San Antonio, San Gabriel Mtns, Head of Bad Canyon
San Gabriel River dudleya (endemic)	<i>Dudleya cymosa</i> ssp. <i>crebrifolia</i>	Chaparral	FW	None	1B	Azusa
San Jacinto Mountains daisy (endemic)	<i>Erigeron breweri</i> var. <i>jacinteus</i>	Subalpine coniferous, upper montane coniferous forest	FW	None	4	Mt. San Antonio, Crystal Lake
scalloped moonwort	<i>Botrychium crenulatum</i>	Bogs and fens, lower montane coniferous forest, Meadows and seeps, marshes and swamps	None	None	2	Telegraph Peak, Crystal Lake
short-joint beavertail (endemic)	<i>Opuntia basilaris</i> var. <i>brachyclada</i>	Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland	None	None	1B	Mount San Antonio, Mescal Creek, Telegraph Peak, Valyermo, Juniper Hills, Pacifico Mountain, Mint Canyon, Newhall, Ritter Ridge, Palmdale
short-sepaled lewisia	<i>Lewisia brachycalyx</i>	Lower montane coniferous forest, meadows and seeps	None	None	2	Mount San Antonio

Common Name	Scientific Name	Habitat	Federal Status	State Status	CNPS	Documented Study Area Locations*
slender mariposa lily (endemic)	<i>Calochortus clavatus</i> var. <i>gracilis</i>	Chaparral, coastal scrub, valley and foothill grassland	None	None	1B	Mount Baldy, Glendora, Azusa, Crystal Lake, Agua Dulce,, Mint Canyon
slender silver-moss	<i>Anomobryum julaceum</i>	Broadleafed upland forest, lower montane coniferous forest, North Coast coniferous forest	None	None	2	Waterman Mountain
Sonoran maiden fern	<i>Thelypteris puberula</i> var. <i>sonorensis</i>	Meadows and seeps	None	None	2	Azusa, Mount Wilson
southern alpine buckwheat (endemic)	<i>Eriogonum kennedyi</i> var. <i>alpigenum</i>	Alpine boulder and rock field, subalpine coniferous forest	None	None	1B	Mount San Antonio, Crystal Lake
southern jewel-flower	<i>Streptanthus campestris</i>	Chaparral, lower montane coniferous forest, pinyon and juniper woodland	FSS	None	1B	
southern skullcap (endemic)	<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	Chaparral, cismontane woodland, lower montane coniferous forest	None	None	1B	El Monte
southern tarplant	<i>Centromadia parryi</i> ssp. <i>australis</i>	Marshes and swamps, valley and foothill grassland, vernal pools	None	None	1B	Yorba Linda, Sunland
Tehachapi ragwort	<i>Packera ionophylla</i>	Lower and upper montane coniferous forest	FW	None	4	Los Angeles County
thread-leaved brodiaea (endemic)	<i>Brodiaea filifolia</i>	Valley and foothill grassland, vernal pools, flood plains, coastal sage scrub	FT	1	1B	Glendora
urn-flowered alumroot	<i>Heuchera elegans</i>	Lower montane coniferous forest, Riparian forest, Upper montane coniferous forest	FW	None	4	Falls Canyon (ANF)
woolly mountain-parsley (endemic)	<i>Oreonana vestita</i>	Lower and upper montane coniferous forest, subalpine coniferous forest	FW	None	1B	Mount San Antonio, Mount Baldy, Telegraph Peak, Waterman Mountain, Crystal Lake

Common Name	Scientific Name	Habitat	Federal Status	State Status	CNPS	Documented Study Area Locations*
<p>*Location names refer to USGS quad names in most cases. Where specific locational information was not available, geographic locations are listed (e.g. San Gabriel Mountains, Puente Hills, San Gabriel River).</p> <p>CNPS=California Native Plant Society. The California Native Plant society has developed an inventory of rare and endangered plants that are native to California.</p> <p>1B= Plants considered rare, threatened, or endangered in California and elsewhere. This includes all plants eligible for state listing and those that must be considered while preparing CEQA documents. 2= Plants considered rare in California but more common elsewhere. This includes all plants eligible for state listing and those that must be considered while preparing CEQA documents. 3= More information is need for this plant 4= Limited distribution (Watch List)</p> <p>CE=State Endangered CT= State Threatened CR= State Listed Rare FE = Federal Endangered FT = Federal Threatened FW= Watch List on federal lands based on USFS Region 5 southern California forests Sensitive Species List FSS = Forest Service Sensitive List</p> <p>N/A = Specific location data not available.</p> <p>Sources: CDFG 2006 and 2010; USFS, 2005, Calflora 2007, CNPS 2007 and 2011</p>						

Table B3: Rare and Sensitive Animal Species

Scientific Name	Common Name	Habitat	Federal Status	State Status	Documented Study Area Locations*
Insects					
<i>Callophrys mossii hidakupa</i>	San Gabriel Mountains elfin butterfly	Larval host plant is a sedum spathulifolium	FSS	None	Mount Baldy
<i>Diplectrona californica</i>	California diplectronan caddisfly	Streams, lakes and ponds	FSS	None	Ontario, San Gabriel Mountains
<i>Incisalia mossii hidakupa</i>	San Gabriel Mountains Moss' elfin butterfly	Rocky outcrops, cliffs where stonecrop grows	FSS	None	San Gabriel Mountains
<i>Paleoxenus dohrni</i>	Dorhn's elegant eucnemid beetle	Transition zone forests, higher elevations on incense cedar	FSS	None	San Gabriel Mountains
<i>Plebejus saepiolus aureolus</i>	San Gabriel Mountains blue butterfly	Host plant is sedum saphthufolium. Northern Coastal Scrub, Douglas-Fir Forest, Yellow Pine Forest, Red Fir Forest, Mixed Evergreen Forest, Chaparral	FSS	None	Mescal Creek, Mount San Antonio
<i>Plebulina emigdionis</i>	San Emigdio blue butterfly	Forest openings, at streamsides, in meadows and alpine fell-fields, from cool coastals areas to upper elevations of the California Mountain Ranges	FSS	None	Range includes Bouquet and Mint Canyons/ Los Angeles County
<i>Plejebus saepiolus ssp.</i>	San Gabriel Mountains greenish blue butterfly	Forest openings, at streamsides, in meadows and alpine fell-fields	FSS	None	San Gabriel Mountains
Fish					
<i>Gasterosteus aculeatus microcephalus</i>	partially armored threespine stickleback	Slow water creeks along the California coast	FSS	None	Santa Clara River
<i>Gila orcuttii</i>	Arroyo chub	Pools and runs of headwater creeks and small to medium rivers	FSS	SSC	Agua Dulce, Azusa, Crystal Lake, Mount Baldy, Mount San Antonio, Sunland, Waterman Mountain, Glendora, North East and West Forks of San Gabriel River, Big Mermaids Canyon Creek, Bear Creek
<i>Oncorhynchus mykissi (hatchery stock)</i>	Rainbow Trout	Cold headwaters, creeks, small to large rivers, cool lakes, estuaries	None	None	San Gabriel River upper watershed

Scientific Name	Common Name	Habitat	Federal Status	State Status	Documented Study Area Locations*
<i>Rhinichthys osculus</i> ssp. 3 (endemic)	Santa Ana speckled dace	Requires permanent flowing streams, shallow cobble and gravel	FSS	SSC	Azusa, Condor Peak, Crystal Lake, Glendora, Sunland, Waterman Mountain
Amphibians					
<i>Aneides lugubris</i>	Arboreal salamander	Valley-foothill hardwood, valley-foothill hardwood conifer, chaparral, mixed conifer, oak and sycamore woodlands	FSS	None	San Gabriel Mountains, Puente-Chino Hills
<i>Batrachoseps gabrieli</i> (endemic)	San Gabriel Mtns slender salamander	Bigcone spruce, pine, white fir, incense cedar, canyon live oak, black oak, and California laurel	FSS	None	Crystal Lake, Mount Baldy, Mount San Antonio
<i>Ensatina eschscholtzii croceata</i>	yellow-blotched ensatina salamander	Coniferous habitats, montane hardwood habitats, mixed chaparral	FSS	SSC	San Gabriel Mountains, Pacifico Mountain
<i>Ensatina eschscholtzii</i>	Monterey ensantina salamander	Ponderosa pine, Douglas fir, mixed conifer, montane hardwood, montane hardwood-conifer	FSS	None	San Gabriel Mountains
<i>Spea hammondi</i>	Western spadefoot toad	Grassland, vernal pools, chaparral, pine-oak woodlands, areas of sandy or gravelly soil in alluvial fans, washes and floodplains	FSC	SSC	La Habra, Mint Canyon, San Gabriel Mountains, Whittier, W Puente Hills
<i>Taricha torosa</i>	Coast Range newt	Moist woodlands	None	SSC	Azusa, Condor Peak, Glendora, Mount Baldy, Pasadena, Waterman Mountain, San Gabriel Mountains, Claremont
Reptiles					
<i>Actinemys marmorata pallida</i>	Southern Pacific pond turtle	Coastal dunes, valley-foothill, chaparral and coastal sage scrub	FSS	None	West Fork of the San Gabriel River
<i>Anniella pulchra</i>	California legless lizard	Coastal dune, valley-foothill, chaparral and coastal scrub habitats	FSS	SSC	Palmdale, Pacifico Mtn., Mount Baldy
<i>Aspidoscelis tigris stejnegeri</i>	coastal western whiptail	Valley-foothill hardwood, valley-foothill hardwood-conifer, juniper, chaparral, valley-foothill riparian, mixed conifer.	FSS	None	Baldwin Park, Condor Peak, Chilao Flat, Mount Wilson, San Dimas, Whittier Narrows
<i>Charina trivirgata</i>	rosy boa	Rocky chaparral-covered hillsides and canyons, desert habitat with good cover	FSS	None	Mount Wilson, Pacifico Mtn

Scientific Name	Common Name	Habitat	Federal Status	State Status	Documented Study Area Locations*
<i>Charina trivirgata roseofusca</i>	Coast rosy boa	Rocky chaparral-covered hillsides and canyons, desert habitat with good cover	FSS	None	Coastal slopes of the San Gabriel Mountain
<i>Crotalus ruber</i>	red-diamond rattlesnake	Chaparral, woodland and arid desert habitats in rocky areas with dense vegetation	SC	CSC	Chino Hills (near Yorba Linda and Telegraphy Canyon), Puente Hills, Yorba Linda
<i>Diadophis punctatus modestus</i>	San Bernardino ringneck snake	Open, relatively rocky areas with valley-foothill, mixed chaparral, and annual grass habitats	SC	None	Big Dalton Canyon, Glendora Mtn. Road, Puente-Chino Hills
<i>Emys (Clemmys) marmorata pallida</i>	southwestern pond turtle	Ponds, marshes, rivers, streams, irrigation ditches	FSC	SSC	Ritter Ridge, Azusa, Agua Dulce, La Habra, Sleepy Valley, Sunland, Pasadena, Waterman Mountain, El Monte and Glendora quads, San Gabriel River, Browns Gulch, Yorba Linda
<i>Eumeces skiltonianus</i>	Western skink	Grassland, woodlands, pine forests, sagebrush, chaparral	FSC	None	Puente-Chino Hills, San Gabriel Mountains
<i>Lampropeltis zonata (parvirubra)</i>	California mountain kingsnake (San Bernardino population)	Moist woods, coniferous forests, woodland and chaparral	FSC	SSC	Glendora, San Dimas, Little Dalton Canyon, Big Dalton Canyon
<i>Lampropeltis zonata multifasciata</i>	Coast mountain kingsnake	Rocks and boulders near streams	FSS	None	Mount San Antonio
<i>Phrynosoma coronatum (blainvillii population)</i>	Coast (San Diego) horned lizard	Coastal sage scrub, riparian areas, valley-foothill hardwood	S	SSC	Acton, Agua Dulce, Baldwin Park, Crystal Lake, Mescal Creek, Mount Baldy, Palmdale, Pacifico Mountain, Valyermo, Ritter Ridge, Mt. Wilson, Condor Peak, Claremont, El Monte, Sunland, Mint Canyon, Sleepy Valley, Pasadena, Waterman Mountain, Thompson Creek, Eaton Canyon, Heaton Flat, East Fork San Gabriel River, Tonner Canyon/Chino Hills, Bonelli Regional Park, Yorba Linda
<i>Phrynosoma coronatum (frontale population)</i>	Coast (California) horned lizard	Coastal sage scrub, riparian areas, coniferous forest, broad-leaf woodlands	S	SSC	Mescal Creek, San Gabriel River, Sycamore Canyon in the Puente Hills

Scientific Name	Common Name	Habitat	Federal Status	State Status	Documented Study Area Locations*
<i>Salvadora hexalepis virgultea</i>	Coast patch-nosed snake	Coastal chaparral, desert scrub, washes, sandy flats, and rocky areas, bush desert flats, sagebrush	FSC	SSC	Yorba Linda
<i>Sceloporus graciosus vandenburgianus</i>	Southern sagebrush lizard	Chaparral, pine, and Douglas fir forests	FSS	None	San Gabriel Mountains
<i>Thamnophis hammondi</i>	Two-striped garter snake	Near permanent water or intermittent streams with rock beds	FSC	None	Agua Dulce, Azusa, Glendora, Mint Canyon, Mount Wilson, Ritter Ridge, Pacifico Mountain, Juniper Hills, Sleepy Valley, Little Rock Creek, San Gabriel River
Birds					
<i>Accipiter cooperii</i>	Cooper's hawk	Oak woodlands, riparian areas	None	SSC	Baldwin Park, Palmdale, Puente Hills (Tonner Canyon), Bonelli Regional Park, Whittier Narrows
<i>Accipiter gentilis</i>	Northern goshawk	Oak woodlands, riparian areas	S	SSC	San Gabriel Mountains
<i>Accipiter striatus</i>	Sharp-shinned hawk	Woodlands, riparian areas, chaparral (foraging), scrublands	FSS	SSC	Puente Hills, Bonelli Regional Park
<i>Aegolius acadicus</i>	Northern saw-whet owl	Mature riparian and oak woodlands	FSS	None	San Gabriel Mountains
<i>Agelaius tricolor</i>	tricolored blackbird	Freshwater marshes and riparian areas	None	None	Palmdale, Ritter Ridge, Yorba Linda, Whittier Narrows
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	Steep, rocky areas within coastal sage scrub and chaparral, prefers recently burned areas	FSS	SSC	Mount Baldy, Puente Hills, San Dimas, Bonelli Regional Park
<i>Alectoris chukar</i>	Chukar	Arid, rocky annual grassland and brush/scrub habitat with water available	FSS	None	Mojave desert vegetation associations (range)
<i>Amphispiza belli</i>	Bell's sage sparrow	Dense, dry chamise chaparral with scattered bunches of grass	FSC	SSC	Yorba Linda, western edge of Mojave Desert
<i>Anthus rubescens</i>	American pipit	Annual and perennial grassland, wet meadows, cropland and pasture	FSS	None	Various locations in Los Angeles County
<i>Aquila chrysaetos</i>	Golden eagle	Mountains, desert, and open country, grasslands, deserts and savannas	None	SSC	Big Dalton drainage area, Tonner Canyon/Chino Hills region, Bonelli Regional Park
<i>Asio flammeus</i>	Short-eared owl	Prairies, marshes, dunes, tundra	None	SSC	Bonelli Regional Park

Scientific Name	Common Name	Habitat	Federal Status	State Status	Documented Study Area Locations*
<i>Asio otus</i>	Long-eared owl	Riparian and live oak woodlands	FSS	SSC	Yorba Linda
<i>Aythya american</i>	Redhead	Open water with freshwater marsh vegetation	None	SSC	Whittier Narrows
<i>Buteo regalis</i>	Ferruginous hawk	Rivers, lakes, and coasts; open tracts of sparse shrubs and grasslands, and agricultural areas during winter	None	SSC	Bonelli Regional Park
<i>Callipepla californica</i>	California quail	Chaparral	FSS	None	Puente-Chino Hills
<i>Campylorhynchus brunneicapillus sandiegensis</i>	coastal (San Diego) cactus wren	Coastal sage scrub, vegetation with thickets of prickly pear or cholla cactus	None	SSC	La Habra, Puente Hills, Yorba Linda
<i>Carduelis lawrencei</i>	Lawrence's goldfinch	Oak woodland, chaparral	FSS	None	Puente-Chino Hills
<i>Cathartes aura</i>	Turkey vulture	Habitat with cliffs or large trees for nesting or roosting	FSS	None	San Gabriel Mountains
<i>Catharus bicknelli</i>	Swainson's thrush	Riparian woodland habitat	FSS	None	San Gabriel Mountain foothill canyons
<i>Catharus guttatus</i>	Hermit thrush	Arid, rocky annual grassland and scrub where water is available	FSS	None	San Gabriel Mountains
<i>Chaetura vauxi</i>	Vaux's swift	Redwood and Douglas fir	FSS	SSC	Big Dalton Canyon
<i>Chordeiles minor</i>	Common nighthawk	Riparian habitat, oak woodland, bigcone Douglas fir, freshwater marsh	FSS	None	San Gabriel Mountains
<i>Cinclus mexicanus</i>	American dipper	Fast-flowing montane rivers and streams	FSS	None	San Gabriel Mountains
<i>Circus cyaneus</i>	Northern harrier	Coastal salt marshes, freshwater marshes, grasslands, agricultural fields, desert and brushland	None	SSC	Puente Hills, Whittier Narrows
<i>Cistothorus palustris clarka</i>	Clark's marsh wren	Freshwater marsh with dense reedbeds	None	SSC	Whittier Narrows
<i>Contopus cooperi</i>	Olive-sided flycatcher	Riparian, oak woodland, bigcone Douglas fir	FSS	None	San Gabriel Mountains
<i>Cypseloides niger</i>	black swift	Steep, rocky, often moist cliffs and crive or caves on sea cliffs, deep canyons	FSS	SSC	Mount Baldy, Mount Wilson, Santa Anita Canyon, Wolfskill Falls
<i>Dendroica petechia brewsteri</i>	Yellow warbler	Riparian woodlands, montane chaparral, mixed conifer habitats	FSS	SSC	Big Dalton Canyon, Whittier Narrows

Scientific Name	Common Name	Habitat	Federal Status	State Status	Documented Study Area Locations*
<i>Elanus leucurus</i>	White-tailed kite	Grasslands with scattered trees, near marshes along highways	None	SP	San Jose Hills, Tonner Canyon/Chino Hills, Whittier Narrows
<i>Empidonax wrightii</i>	Gray flycatcher	Riparian, oak woodland, bigcone Douglas fir, mixed chaparral	FSS	None	San Gabriel Mountains
<i>Falco mexicanus</i>	prairie falcon	Grassland, savanna, rangeland, agricultural fields, and desert scrub, cliff ledges	FSS	SSC	Valyermo, Acton, Agu Dulce, Tonner Canyon/Chino Hills
<i>Geothlypis trichas</i>	Common yellowthroat	Riparian	None	SSC	San Gabriel Mountains, Puente-Chino Hills, Whittier Narrows
<i>Glaucidium gnoma</i>	Northern pygmy owl	Valley-foothill hardwood, mixed conifer, valley-foothill riparian, montane riparian	FSS	None	San Gabriel Mountains, Eaton Canyon
<i>Icteria virens</i>	Yellow-breasted chat	Riparian areas	FSS	SSC	Baldwin Park, La Habra, Puente Hills, Bonelli Regional park, Whittier Narrows
<i>Ixobrychus exilis</i>	Least Bittern	Dense reeds with permanent wate	None	SSC	Whittier Narrows
<i>Lanius ludovicianus</i>	Loggerhead shrike	Valley-foothill riparian areas, open habitats with scattered shrubs, perches	FSS	SSC	Puente Hills, Bonelli Regional Park, Whittier Narrows
<i>Megascops kennicottii</i>	Western screech owl	Riparian areas, Joshua tree and mesquite groves, open pine and pinyon-juniper forests	FSS	SSC	San Gabriel Mountains
<i>Melospiza lincolnii</i>	Lincoln's sparrow	Riparian areas, bogs, wet meadows	FSS	None	San Gabriel Mountains
<i>Oporornis tolmiei</i>	MacGillivray's warbler	Valley foothill riparian, coastal Douglas-fir, montane riparian, desert riparian	FSS	SSC	San Gabriel Mountains
<i>Oreortyx pictus</i>	Mountain quail	Montane habitats and seasonally in open conifer and deciduous woodlands and forest, chaparral	FSS	None	San Gabriel Mountains
<i>Otus flammeolus</i>	Flammulated owl	Coniferous habitats from ponderosa pine to red fir forests.	FSS	None	San Gabriel Mountains
<i>Pandion haliaetus</i>	Osprey	Rivers, lakes, and coasts, mixed conifer.	FSS	SSC	Bonelli Regional Park
<i>Patagioenas fasciata</i>	Band-tailed pigeon	Oaks and conifer oak woodlands.	FSS	None	San Gabriel Mountains

Scientific Name	Common Name	Habitat	Federal Status	State Status	Documented Study Area Locations*
<i>Picoides albolarvatus gravirostris</i>	Southern white-headed woodpecker	Lodgepole pine and red-fir habitat	FSS	SSC	San Gabriel Mountains
<i>Piranga rubra</i>	Summer tanager	Desert riparian areas with willows and thickets	FSS	SSC	San Gabriel Mountains
<i>Progne subis</i>	Purple martin	Valley foothill, montane hardwood, montane-hardwood conifer, riparian habitat	FSS	SSC	San Gabriel Mountains
<i>Sphyrapicus thyroideus</i>	Williamson's sapsucker	Lodgepole pine, red fir, Jeffrey pine	FSS	None	San Gabriel Mountains
<i>Stellula calliope</i>	Calliope hummingbird	Ponderosa pine, hardwood-conifer, riparian areas, aspens	FSS	None	San Gabriel Mountains
<i>Strix occidentalis occidentalis</i>	California spotted owl	Oak and conifer habitats	FSS	SSC	San Gabriel Mountains
<i>Tachycineta bicolor</i>	Tree swallow	Open areas, usually near water, including fields, marshes, shorelines, and wooded swamps with standing dead trees	FSS	None	Bonelli Regional Park, San Gabriel Mountains
<i>Toxostoma lecontei</i>	Le Conte's thrasher	Open desert wash, desert scrub, alkali scrub, desert succulent scrub, nests in wash habitat	None	SSC	Mescal Creek, Palmdale, Ritter Ridge
<i>Vermivora ruficapilla</i>	Nashville warbler	Oak woodlands	FSS	None	San Gabriel Mountains
<i>Vermivora virginiae</i>	Virginia's warbler	Arid, shrubby, mixed conifer, pinyon-juniper, mountain chaparral	FSS	SSC	San Gabriel Mountains - Blue Ridge
<i>Vireo gilvus</i>	Warbling vireo	Montane-hardwood, montane-conifer, mixed conifer, ponderosa pine, montane chaparral	FSS	SSC	Whittier Narrows, Puente Hills, San Gabriel Mountains
<i>Vireo plumbeus</i>	Plumbeous vireo	Pinyon-juniper, lodgepole pine, Jeffrey pine	FSS	None	San Gabriel Mountains
<i>Vireo vicinior</i>	Gray vireo	Pinyon-juniper, juniper, chamise-redshank chaparral	FSS	SSC	Little Rock Creek
<i>Wilsonia pusilla</i>	Wilson's warbler	Montane riparian, foothill riparian, aspen, lodgepole pine	FSS	None	San Gabriel Mountains, Whittier Narrows
<i>Zenaida macroura</i>	Mourning dove	Grassland, cropland, pasture, riparian, low-elevation conifer, desert habitats, open chaparral	FSS	None	Puente Hills, San Gabriel Mountains
Mammals					
<i>Antrozous pallidus</i>	Pallid bat	Grasslands, tree cavities, rock crevices, manmade structures	FSS	SSC	Azusa, Acton, Baldwin Park, El Monte, Glendora, Mount Wilson, Ontario, San Dimas

Scientific Name	Common Name	Habitat	Federal Status	State Status	Documented Study Area Locations*
<i>Bassariscus astutus</i>	Ringtail	Mixture of forest and shrublands in association with riparian areas and rocky areas	FSS	None	Historic to San Dimas and San Gabriel Canyons
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	Sandy herbaceous areas, sagebrush, scrub, annual grassland, chaparral and desert scrubs.	None	SSC	Mount Baldy, Ontario
<i>Chaetodipus fallax pallidus</i>	pallid San Diego pocket mouse	Open brushlands and scrub habitats	None	SSC	Valyermo, Juniper Hills, Mescal Creek
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	Caves, tunnels for roosting and vegetation and mesic edges for feeding, sub-alpine and alpine habitats	S	SSC	San Gabriel Mountains
<i>Erethizon dorsatum</i>	Porcupine	Montane conifer, Douglas-fir, alpine dwarf shrub, wet meadow	FSS	None	San Gabriel Mountains
<i>Euderma maculatum</i>	Spotted bat	Arid deserts, grasslands, mixed conifer	FSS	SSC	San Gabriel Mountains
<i>Eumops perotis</i>	Western mastiff bat	Grasslands, tree cavities, rock crevices, manmade structures	S	SSC	Azusa, Baldwin Park, La Habra, Pasadena, Whittier, El Monte, Glendora, Mount Wilson, Ontario, San Dimas
<i>Lasiurus xanthinus</i>	Western yellow bat	Check status with state and CNDDDB.	None	SSC	Azusa, Baldwin Park, Ontario, Pasadena, San Dimas
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	Open brushlands and scrub habitats	FSS	SSC	Baldwin Park, Bonelli Regional Park
<i>Myotis ciliolabrum</i>	Western small-footed myotis	Arid, woody and brushy uplands near water	FSS	None	Mescal Creek
<i>Myotis evotis</i>	Long-eared myotis	Coastal areas	FSS	None	San Gabriel Mountains
<i>Myotis thysanodes</i>	Fringed myotis	Grassland, oak savanna, riparian areas, oak woodland, pinyon-juniper, valley-foothill woodland	FSS	None	Waterman Mountain
<i>Myotis volans</i>	Long-legged myotis	Woodlands, forests, chaparral, coastal scrub	FSS	None	Waterman Mountain
<i>Myotis yumanensis</i>	Yuma myotis	Aric caves, tunnels, buildings, open forests with water	FSS	None	Glendora
<i>Neotamias speciosus speciosus</i>	Lodgepole chipmunk	Closed-canopy forest with sparse undercover including Jeffrey pine, mixed conifer, and red fir	FSS	None	Mount San Antonio, Waterman Mountain

Scientific Name	Common Name	Habitat	Federal Status	State Status	Documented Study Area Locations*
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	Rock outcrops, chaparral, coastal sage scrub and pinyon-juniper woodland	SC	SSC	San Gabriel Canyon, Azusa, Mount Baldy, Ontario, Claremont
<i>Nyctinomops macrotis</i>	big free -tailed bat	Roosts in cliffs and crevices	None	SSC	Azusa, Baldwin Park, Ontario, San Dimas
<i>Odocoileus hemionus</i>	Mule deer	Pine forest but also contain openings, meadows, and riparian habitats	FSS	None	San Gabriel Mountains
<i>Ovis canadensis nelsoni</i>	Nelson's bighorn sheep	Open areas of low-growing vegetation for feeding, with close proximity to steep, rugged terrain for escape, lambing, and bedding	FSS	SSC	Azusa, Crystal Lake, Glendora, Mount Baldy, Mount San Antonio, Waterman Mountain
<i>Puma concolor</i>	Mountain lion	Foothills and mountains	FSS	None	Puente-Chino Hills, San Gabriel Mountains
<i>Sorex (monticulus?)</i>	San Bernadino dusky shrew	Valley foothill and montane riparian habitat, woodland, chaparral, grassland, and wetland habitats	FSS	None	San Gabriel Mountains
<i>Spilogale gracilis</i>	Western spotted skunk	Canyon streams, rocky cliffs, arid valleys, forest and woodland habitats	FSS	SSC	San Gabriel Mountains
<i>Taxidea taxus</i>	American badger	Grasslands, parklands, farms, forest glades, meadows, marshes, brushy areas, hot deserts, mountain meadows, open chaparral, and riparian zones	FSS	SSC	Baldwin Park, Pasadena, San Dimas
<i>Ursus americanus</i>	Black bear	Mature, dense vegetation, and on sheltered slopes	FSS	None	San Gabriel Mountains

*Location names refer to USGS quad names in most cases. Where specific locational information was not available, geographic locations are listed (e.g. San Gabriel Mountains, Puente Hills, San Gabriel River).

FE = Federally-listed Endangered

FT = Federally-listed Threatened

CE = State-listed Endangered

CT = State-listed Threatened

FSS = Forest Service Sensitive Species List

SC= Species of Concern. Species of concern is an informal designation of the US Fish and Wildlife Service. It refers to those species believed to be in decline or in need of concentrated conservation actions as species of concern.

SSC= Species of Special Concern. The California Department of Fish and Game applies this status to animal species not listed under the Federal and California endangered species acts that are declining at a rate that might require listing or have historically low population counts that are threatened.

N/A = Specific location data not available.

Sources: CDFG 2006 and 2010, USFS 2005, CDFG 2008a

Appendix C: New Area Studies Act

TITLE III—STUDY REGARDING ADDITION OF NEW NATIONAL PARK SYSTEM AREAS

SEC. 301. SHORT TITLE.

This title may be cited as the “National Park System New Areas Studies Act”.

SEC. 302. PURPOSE.

It is the purpose of this title to reform the process by which areas are considered for addition to the National Park System.

SEC. 303. STUDY OF ADDITION OF NEW NATIONAL PARK SYSTEM AREAS.

Section 8 of Public Law 91–383 (commonly known as the National Park System General Authorities Act; 16 U.S.C. 1a–5) is amended as follows:

- (1) By inserting “GENERAL AUTHORITY.—” after “(a)”.
- (2) By striking the second through the sixth sentences of subsection (a).
- (3) By redesignating the last two sentences of subsection (a) as subsection (f) and inserting in the first of such sentences before the words “For the purposes of carrying” the following:
“(f) AUTHORIZATION OF APPROPRIATIONS.—”
- (4) By inserting the following after subsection (a):

“(b) STUDIES OF AREAS FOR POTENTIAL ADDITION.—

(1) At the beginning of each calendar year, along with the annual budget submission, the Secretary shall submit to the Committee on Resources of the House of Representatives and to the Committee on Energy and Natural Resources of the United States Senate a list of areas recommended for study for potential inclusion in the National Park System.

“(2) In developing the list to be submitted under this subsection, the Secretary shall consider—

“(A) those areas that have the greatest potential to meet the established criteria of national significance, suitability, and feasibility;

“(B) themes, sites, and resources not already adequately represented in the National Park System; and

“(C) public petition and Congressional resolutions.

“(3) No study of the potential of an area for inclusion in the National Park System may be initiated after the date of enactment of this subsection, except as provided by specific authorization of an Act of Congress.

“(4) Nothing in this Act shall limit the authority of the National Park Service to conduct preliminary resource assessments, gather data on potential study areas, provide technical and planning assistance, prepare or process nominations for administrative designations, update previous studies, or complete reconnaissance surveys of individual areas requiring a total expenditure of less than \$25,000.

“(5) Nothing in this section shall be construed to apply to or to affect or alter the study of any river segment for potential addition to the national wild and scenic rivers system or to apply to or to affect or alter the study of any trail for potential addition to the national trails system.

“(c) REPORT.—

(1) The Secretary shall complete the study for each area for potential inclusion in the National Park System within 3 complete fiscal years following the date on which funds are first made available for such purposes. Each study under this section shall be prepared with appropriate opportunity for public involvement, including at least one public meeting in the vicinity of the area under study, and after reasonable efforts to notify potentially affected landowners and State and local governments.

“(2) In conducting the study, the Secretary shall consider whether the area under study—

“(A) possesses nationally significant natural or cultural resources and represents one of the most important examples

of a particular resource type in the country; and

“(B) is a suitable and feasible addition to the system. ”

(3) Each study—

“(A) shall consider the following factors with regard to the area being studied—

“(i) the rarity and integrity of the resources;

“(ii) the threats to those resources;

“(iii) similar resources are already protected in the National Park System or in other public or private ownership;

“(iv) the public use potential;

"(v) the interpretive and educational potential;
"(vi) costs associated with acquisition, development and operation;
"(vii) the socioeconomic impacts of any designation;
"(viii) the level of local and general public support; and
"(ix) whether the area is of appropriate configuration to ensure long-term resource protection and visitor use;
"(B) shall consider whether direct National Park Service management or alternative protection by other public agencies or the private sector is appropriate for the area;

"(C) shall identify what alternative or combination of alternatives would in the professional judgment of the Director of the National Park Service be most effective and efficient in protecting significant resources and providing for public enjoyment; and

"(D) may include any other information which the Secretary deems to be relevant.

"(4) Each study shall be completed in compliance with the National Environmental Policy Act of 1969.

"(5) The letter transmitting each completed study to Congress shall contain a recommendation regarding the Secretary's preferred management option for the area.

"(d) NEW AREA STUDY OFFICE.—The Secretary shall designate a single office to be assigned to prepare all new area studies and to implement other functions of this section.

"(e) LIST OF AREAS.—At the beginning of each calendar year, along with the annual budget submission, the Secretary shall submit to the Committee on Resources of the House of Representatives and to the Committee on Energy and Natural Resources of the Senate a list of areas which have been previously studied which contain primarily historical resources, and a list of areas which have been previously studied which contain primarily natural resources, in numerical order of priority for addition to the National Park System. In developing the lists, the Secretary should consider threats to resource values, cost escalation factors, and other factors listed in subsection (c) of this section. The Secretary should only include on the lists areas for which the supporting data is current and accurate."

(5) By adding at the end of subsection (f) (as designated by paragraph (3) of this section) the following: "For carrying out subsections (b) through (d) there are authorized to be appropriated \$2,000,000 for each fiscal year."

Appendix D: 2006 NPS Management Policies (Sections 1.2 and 1.3)

1.2 The National Park System

The number and diversity of parks within the national park system grew as a result of a government reorganization in 1933, another following World War II, and yet another during the 1960s. Today there are nearly 400 units in the national park system. These units are variously designated as national parks, monuments, preserves, lakeshores, seashores, wild and scenic rivers, trails, historic sites, military parks, battlefields, historical parks, recreation areas, memorials, and parkways. Regardless of the many names and official designations of the park units that make up the national park system, all represent some nationally significant aspect of our natural or cultural heritage. They are the physical remnants of our past—great scenic and natural places that continue to evolve, repositories of outstanding recreational opportunities, classrooms of our heritage, and the legacy we leave to future generations—and they warrant the highest standard of protection.

It should be noted that, in accordance with provisions of the Wild and Scenic Rivers Act, any component of the National Wild and Scenic Rivers System that is administered by the Park Service is automatically a part of the national park system. Although there is no analogous provision in the National Trails System Act, several national trails managed by the Service have been included in the national park system. These national rivers and trails that are part of the national park system are subject to the policies contained herein, as well as to any other requirements specified in the Wild and Scenic Rivers Act or the National Trails System Act.

1.3 Criteria for Inclusion

Congress declared in the National Park System General Authorities Act of 1970 that areas comprising the national park system are cumulative expressions of a single national heritage. Potential additions to the national park system should therefore contribute in their own special way to a system that fully represents the broad spectrum of natural and cultural resources that characterize our nation. The National Park Service is responsible for conducting professional studies of potential additions to the national park system when specifically authorized by an act of Congress, and for making recommendations to the Secretary of

the Interior, the President, and Congress. Several laws outline criteria for units of the national park system and for additions to the National Wild and Scenic Rivers System and the National Trails System.

To receive a favorable recommendation from the Service, a proposed addition to the national park system must (1) possess nationally significant natural or cultural resources, (2) be a suitable addition to the system, (3) be a feasible addition to the system, and (4) require direct NPS management instead of protection by other public agencies or the private sector. These criteria are designed to ensure that the national park system includes only the most outstanding examples of the nation's natural and cultural resources. These criteria also recognize that there are other management alternatives for preserving the nation's outstanding resources.

1.3.1 National Significance

NPS professionals, in consultation with subject-matter experts, scholars, and scientists, will determine whether a resource is nationally significant. An area will be considered nationally significant if it meets all of the following criteria:

1. It is an outstanding example of a particular type of resource.
2. It possesses exceptional value or quality in illustrating or interpreting the natural or cultural themes of our nation's heritage.
3. It offers superlative opportunities for public enjoyment or for scientific study.
4. It retains a high degree of integrity as a true, accurate, and relatively unspoiled example of a resource.
5. National significance for cultural resources will be evaluated by applying the National Historic Landmarks criteria contained in 36 CFR Part 65 (*Code of Federal Regulations*).

1.3.2 Suitability

An area is considered suitable for addition to the national park system if it represents a natural or cultural resource type that is not already adequately represented in the national park system, or is not comparably represented and protected for public enjoyment by other federal agencies; tribal, state, or local governments; or the private sector.

Adequacy of representation is determined on a case-by-case basis by comparing the potential addition to other comparably managed areas

representing the same resource type, while considering differences or similarities in the character, quality, quantity, or combination of resource values. The comparative analysis also addresses rarity of the resources, interpretive and educational potential, and similar resources already protected in the national park system or in other public or private ownership. The comparison results in a determination of whether the proposed new area would expand, enhance, or duplicate resource protection or visitor use opportunities found in other comparably managed areas.

1.3.3 Feasibility

To be feasible as a new unit of the national park system, an area must be (1) of sufficient size and appropriate configuration to ensure sustainable resource protection and visitor enjoyment (taking into account current and potential impacts from sources beyond proposed park boundaries), and (2) capable of efficient administration by the Service at a reasonable cost.

In evaluating feasibility, the Service considers a variety of factors for a study area, such as the following:

- size
- boundary configurations
- current and potential uses of the study area and surrounding lands
- landownership patterns
- public enjoyment potential
- costs associated with acquisition, development, restoration, and operation
- access
- current and potential threats to the resources
- existing degradation of resources
- staffing requirements
- local planning and zoning
- the level of local and general public support (including landowners)
- the economic/socioeconomic impacts of designation as a unit of the national park system

The feasibility evaluation also considers the ability of the National Park Service to undertake new management responsibilities in light of current and projected availability of funding and personnel.

An overall evaluation of feasibility will be made after taking into account all of the above factors.

However, evaluations may sometimes identify concerns or conditions, rather than simply reach a yes or no conclusion. For example, some new areas may be feasible additions to the national park system only if landowners are willing to sell, or the boundary encompasses specific areas necessary for visitor access, or state or local governments will provide appropriate assurances that adjacent land uses will remain compatible with the study area's resources and values.

1.3.4 Direct NPS Management

There are many excellent examples of the successful management of important natural and cultural resources by other public agencies, private conservation organizations, and individuals. The National Park Service applauds these accomplishments and actively encourages the expansion of conservation activities by state, local, and private entities and by other federal agencies. Unless direct NPS management of a studied area is identified as the clearly superior alternative, the Service will recommend that one or more of these other entities assume a lead management role, and that the area not receive national park system status.

Studies will evaluate an appropriate range of management alternatives and will identify which alternative or combination of alternatives would, in the professional judgment of the Director, be most effective and efficient in protecting significant resources and providing opportunities for appropriate public enjoyment. Alternatives for NPS management will not be developed for study areas that fail to meet any one of the four criteria for inclusion listed in section 1.3.

In cases where a study area's resources meet criteria for national significance but do not meet other criteria for inclusion in the national park system, the Service may instead recommend an alternative status, such as "affiliated area." To be eligible for affiliated area status, the area's resources must (1) meet the same standards for significance and suitability that apply to units of the national park system; (2) require some special recognition or technical assistance beyond what is available through existing NPS programs; (3) be managed in accordance with the policies and standards that apply to units of the national park system; and (4) be assured of sustained resource protection, as documented in a formal agreement between the Service and the nonfederal management entity. Designation as a "heritage area" is another option that may be recommended. Heritage areas have a nationally important, distinctive assemblage of

resources that is best managed for conservation, recreation, education, and continued use through partnerships among public and private entities at the local or regional level. Either of these two alternatives (and others as well) would recognize an area's importance to the nation without requiring or implying management by the National Park Service.

Appendix E: National Historic Landmark Criteria Sec 65.4

The criteria applied to evaluate properties for possible designation as National Historic Landmarks or possible determination of eligibility for National Historic Landmark designation is listed below. These criteria shall be used by NPS in the preparation, review and evaluation of National Historic Landmark studies. They shall be used by the Advisory Board in reviewing National Historic Landmark studies and preparing recommendations to the Secretary. Properties shall be designated National Historic Landmarks only if they are nationally significant. Although assessments of national significance should reflect both public perceptions and professional judgments, the evaluations of properties being considered for landmark designation are undertaken by professionals, including historians, architectural historians, archeologists and anthropologists familiar with the broad range of the nation's resources and historical themes. The criteria applied by these specialists to potential landmarks do not define significance nor set a rigid standard for quality. Rather, the criteria establish the qualitative framework in which a comparative professional analysis of national significance can occur. The final decision on whether a property possesses national significance is made by the Secretary on the basis of documentation including the comments and recommendations of the public who participate in the designation process.

(a) Specific Criteria of National Significance: The quality of national significance is ascribed to districts, sites, buildings, structures and objects that possess exceptional value or quality in illustrating or interpreting the heritage of the United States in history, architecture, archeology, engineering and culture and that possess a high degree of integrity of location, design, setting, materials, workmanship, feeling and association, and:

1. That are associated with events that have made a significant contribution to, and are identified with, or that outstandingly represent, the broad national patterns of United States history and from which an understanding and appreciation of those patterns may be gained; or
2. That are associated importantly with the lives of persons nationally significant in the history of the United States; or
3. That represent some great idea or ideal of the American people; or

4. That embody the distinguishing characteristics of an architectural type specimen exceptionally valuable for a study of a period, style or method of construction, or that represent a significant, distinctive and exceptional entity whose components may lack individual distinction; or
5. That are composed of integral parts of the environment not sufficiently significant by reason of historical association or artistic merit to warrant individual recognition but collectively compose an entity of exceptional historical or artistic significance, or outstandingly commemorate or illustrate a way of life or culture; or
6. That have yielded or may be likely to yield information of major scientific importance by revealing new cultures, or by shedding light upon periods of occupation over large areas of the United States. Such sites are those which have yielded, or which may reasonably be expected to yield, data affecting theories, concepts and ideas to a major degree.

(b) Ordinarily, cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings and properties that have achieved significance within the past 50 years are not eligible for designation. Such properties, however, will qualify if they fall within the following categories:

1. A religious property deriving its primary national significance from architectural or artistic distinction or historical importance; or
2. A building or structure removed from its original location but which is nationally significant primarily for its architectural merit, or for association with persons or events of transcendent importance in the nation's history and the association consequential; or
3. A site of a building or structure no longer standing but the person or event associated with it is of transcendent importance in the nation's history and the association consequential; or
4. A birthplace, grave or burial if it is of a historical figure of transcendent national significance and no other appropriate site,

building or structure directly associated with the productive life of that person exists; or

5. A cemetery that derives its primary national significance from graves of persons of transcendent importance, or from an exceptionally distinctive design or from an exceptionally significant event; or
6. A reconstructed building or ensemble of buildings of extraordinary national significance when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other buildings or structures with the same association have survived; or
7. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own national historical significance; or
8. A property achieving national significance within the past 50 years if it is of extraordinary national importance.

Appendix F: Alternative B: San Gabriel Parks and Open Space Network (Dismissed)

(Excerpt from Newsletter #4, August 2009)

Vision

This alternative concept protects and expands an interconnected system of parks, habitats, and open spaces, connecting urban neighborhoods, mountains, and rivers within a broader ecosystem. Coordinated education and interpretation focuses on connecting people to the special resources and stories of their mountains and watershed. Access to recreational opportunities closer to home is increased.

Description of Concept

Under this alternative concept, a park and open space network would be developed through a partnership of public and private landowners and organizations. The partnership would be comprised of federal, state, and local land management agencies, along with recreation and conservation organizations. A comprehensive plan for a connected system of parks would be created under the partnership, detailing coordinated management strategies to protect and enhance natural resources, cultural resources, recreation, and access. The partnership would coordinate interpretive and educational messaging throughout the network. An information sharing network would be established to organize, consolidate, and distribute scientific information related to the region. An urban satellite office connected to the California Mediterranean Research Learning Center at Santa Monica Mountains National Recreation Area would provide research and educational opportunities to communities and schools. The partnership would serve as a model for future efforts in other areas such as the north slope of the San Gabriel Mountains, the Santa Clara River, and Antelope Valley.

Management Structure

A partnership of land management agencies, conservation organizations and recreation interests would be created. The key roles of the partnership would be to administer the network, share information between partners, and create a comprehensive plan. Lands would continue to be owned and managed by the current owners.

NPS Role

The NPS could provide initial planning and administrative assistance for a specified term. Afterward, the NPS would provide continuing technical assistance to the partnership on a more limited scale, including the development of interpretive and educational materials. The NPS would operate a California Mediterranean Research Learning Center satellite office in the study area. Opportunities for collaboration with the San Dimas Experimental Forest would be explored. The Juan Bautista de Anza National Historic Trail and the Old Spanish National Historic Trail would work under existing authorities to increase interpretation, education, and recreational opportunities.

Funding

The partnership could establish a fundraising organization or be a coordinating body for existing grant programs. The partnership would leverage funds from a variety of sources (e.g. state bonds, Land & Water Conservation Fund) to increase and prioritize funds for new parks, trails, and open spaces within the network. Congressional funding would allow the NPS to provide initial planning assistance to the partnership.

Why this is Important

This alternative concept would increase open space, provide new recreational opportunities in underserved areas, and foster a regional identity based on being part of a broader ecosystem. In addition to expanding parks and recreation areas, the parks and open space network would provide additional habitat connections to significant natural resources in the San Gabriel Mountains, Puente-Chino Hills and the isolated pockets of rare native plant communities located throughout the San Gabriel Valley and Los Angeles coastal plain. Enhanced habitat connections would strengthen regional biodiversity. Additionally, the parks and open space system would provide more opportunities for the public to learn about and enjoy the significant cultural resources of the region such as the Juan Bautista de Anza National Historic Trail and the Old Spanish National Historic Trail. Sites important to interpreting these trails could be incorporated into the network.

Acronyms and Abbreviations

ADA – Americans with Disabilities Act

ANF – Angeles National Forest

ALUC – Airport Land Use Commission

BLM – Bureau of Land Management

CCC – Civilian Conservation Corps

CDC – California Department of Conservation

CDFG – California Department of Fish and Game

CEDD – California Employment Development Department

CEQ – Council of Environmental Quality

CFR – Code of Federal Regulations

CNDDDB – California Natural Diversity Database

CDPR – California Department of Parks and Recreation, also California State Parks

FC – Species identified by the U.S. Fish and Wildlife Service as a candidate for listing under the Endangered Species Act.

FE – (Federally listed endangered species) A species listed as endangered under the Endangered Species Act

FESA – Federal Endangered Species Act

FMMP – Farmland Mapping and Monitoring Program

FR – Federal Register

FT – (Federally listed threatened species) A species listed as threatened under the Endangered Species Act

IBA – International Bird Area

IRWMP – Integrated regional water management plan

JPA – Joint Powers Authority

LA – Los Angeles

LACEDC – Los Angeles County Economic Development Corporation

LADPW – Los Angeles Department of Public Works

LAFCO – Local Agency Formation Commission

LWCF – Land and Water Conservation Fund

MRCA – Mountains Recreation and Conservation Authority

NCCP – Natural Community Conservation Planning Program

NEPA – National Environmental Policy Act

NHL – National Historic Landmark

NF – National Forest

NNL – National Natural Landmark

NM – National Monument

NP – National Park

NPS – National Park Service

NRA – National Recreation Area

NRCS – Natural Resources Conservation Service, United States Department of Agriculture

NRHP – National Register of Historic Places

OHV – Off-highway Vehicles

PCT – Pacific Crest Trail

PEPC – National Park Service Planning, Environment and Public Comment Website

PHLF – Puente Hills Landfill

PL – Public Law

RCD – Resource Conservation District

RCPG – Regional Comprehensive Plan and Guide

RLC – Research Learning Center

RMC – Lower Los Angeles and San Gabriel Rivers and Mountains Conservancy or Rivers and Mountains Conservancy

RWMG – Regional Water Management Group

RNA – Research Natural Area

SCAG – Southern California Association of Governments

SDEF – San Dimas Experimental Forest

SHPO – state historic preservation officer

SP – State Park

SRS – Special Resource Study

USACOE – United States Army Corps of Engineers also U.S. Army Corps of Engineers

UNESCO – United Nations Educational, Scientific and Cultural Organization

USDA – United States Department of Agriculture

USFS – United States Forest Service, U.S. Forest Service, Forest Service

USFWS – United States Fish and Wildlife Service, U.S. Fish and Wildlife Service, or Fish and Wildlife Service

WCA – Watershed Conservation Authority

WPA – Works Progress Administration

WRP – Water Reclamation Plant

Glossary

Alkali: Used in reference to materials that are rich in sodium and/or potassium.

Alluvial fan: A fan-shaped pile of sediment that forms where a rapidly flowing mountain stream enters a relatively flat valley. As water slows down, it deposits sediment (alluvium) that gradually builds a fan.

Alluvium: An unconsolidated accumulation of stream-deposited sediments, including sands, silts, clays or gravels.

Alternatives – A collection of actions assembled to provide reasonable options for solutions to problems.

Anorthosite: a coarse-grained plutonic igneous rock consisting almost entirely of plagioclase feldspar.

Archean Eon: The time interval between 3800-2500 million years ago. The Archean is one of the Precambrian time intervals.

Archeology: The science that focuses on the study of past human cultures.

Arksoic (arkose): A variety of sandstone containing abundant feldspar and quartz, frequently in angular, poorly sorted grains.

Astrophysics: is the application of the principles of physics to astronomical objects beyond the earth; also, the branch of astronomy concerned mainly with the properties and structures of cosmic objects, including the universe as a whole.

Augen: Augen are relatively large, eye-shaped mineral grains in certain types of metamorphic rocks, especially schist and gneiss. (Augen = eyes in German)

Basement rocks: The igneous and metamorphic rocks that exist below the oldest sedimentary cover. In some areas such as shields the basement rocks may be exposed at the surface.

Basin: A circular, syncline-like depression of strata or the site of accumulation of a large thickness of sediments.

Batholith: A very large intrusive igneous rock mass that has been exposed by erosion and with an exposed surface area of over 100 square kilometers. A batholith has no known floor.

Bedrock: Solid rock present beneath any soil, sediment or other surface cover. In some locations it

may be exposed at Earth's surface.

Biotite: A common rock-forming mineral of the mica family. Biotite is a black or dark brown silicate rich in iron, magnesium, potassium, aluminum, and, of course, silica. Like other micas, it forms flat book-like crystals that peel apart into individual sheets on cleavage planes.

Breccia: A clastic sedimentary rock that is composed of large (over two millimeter diameter) angular fragments. The spaces between the large fragments can be filled with a matrix of smaller particles or a mineral cement which binds the rock together

Cenozoic Era: The time span between 66.4 million years ago to the present.

Clastic: A sedimentary rock composed of fragments (clasts) of pre-existing rock or fossils.

Conglomerate: A sedimentary rock made of rounded rock fragments, such as pebbles, cobbles, and boulders, in a finer-grained matrix. To call the rock a conglomerate, some of the constituent pebbles must be at least 2 mm (about 1/13th of an inch) across.

Continental Margin: The interval between the shore and the ocean floor; includes the continental shelf, rise, and slope.

Convergent Plate Boundary: A boundary in which two plates collide. The collision can be between two continents (continental collision), an relatively dense oceanic plate and a more buoyant continental plate (subduction zone) or two oceanic plates (subduction zone).

Craton: The relatively stable nucleus of a continent. Cratons are made up of a shield-like core of Precambrian Rock and a buried extension of the shield.

Critical habitat – habitat designated as critical for a particular species under the Endangered Species Act, including areas on which are found those physical or biological features essential to the conservation of the species.

Crystalline: Being, relating to, or composed of crystal or crystals.

Crust: The rocky, relatively low density, outermost layer of the Earth.

Cultural landscape – a geographic area, including

both the cultural and natural resources, associated with a historic event, activity, or person, or exhibiting cultural or aesthetic values. A way of seeing landscapes that emphasizes the interaction between human beings and nature over time. A traditional ranching area might be part of a cultural landscape.

Cumulative impacts – The incremental effects of an individual project reviewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects in order to ascertain the overall effect on the environment. A cumulative impact assessment is a requirement of NEPA.

Dacite: An igneous, volcanic rock with a high iron content.

Debris flow: A type of landslide made up of a mixture of water-saturated rock debris and soil with a consistency similar to wet cement. Debris flows move rapidly downslope under the influence of gravity. Sometimes referred to as earth flows or mud flows.

Deformation: General term for folding, faulting, and other processes resulting from shear, compression, and extension of rocks.

Deposition: The settling from suspension of transported sediments. Also, the precipitation of chemical sediments from mineral rich waters.

Dike: A sheet-like or tabular-shaped igneous intrusion that cuts across the sedimentary layering, metamorphic foliation, or other texture of a pre-existing rock.

Diorite: Intrusive igneous rock made of plagioclase feldspar and amphibole and/or pyroxene.

Direct impacts (or effects): primary environmental effects that are caused by a project and occur at the same time and place.

Drainage: Any channel that carries water.

Endemic: restricted to or native to a particular area or region.

Eon: The largest time unit on the geologic time scale.

Epoch: A subdivision of geologic time that is longer than an age but shorter than a period. The Tertiary Period is divided into five epochs. From most recent to oldest they are: Pliocene, Miocene, Oligocene, Eocene and Paleocene.

Era: A subdivision of geologic time that is

longer than a period but shorter than an eon. Precambrian, Paleozoic, Mesozoic, and Cenozoic are the eras of the time scale from oldest to youngest.

Erosion: A general term applied to the wearing away and movement of earth materials by gravity, wind, water and ice.

Environmental assessment (EA) – A concise public document that provides evidence and analysis of the potential environmental and socioeconomic impacts of a proposed federal action. An EA provides sufficient information for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI). An EA includes brief discussions of the need for the proposal, of alternatives, of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted. Required by the National Environmental Policy Act (NEPA).

Fault: A fracture or fracture zone in rock along which movement has occurred.

Fault System: Two or more fault sets which interconnect.

Fault Zone: A fault expressed as an area of numerous small fractures.

Feldspar (and feldspathic): Family of silicate minerals containing varying amounts of potassium, sodium and calcium along with aluminum, silicon and oxygen. Potassium feldspars contain considerable potassium. Plagioclase feldspars contain considerable sodium and calcium. Feldspar crystals are stubby prisms, generally white, gray, or pink.

Flood Plain: An area of alluvium-covered, relatively level land along the banks of a stream that is covered with water when the stream leaves its channel during a time of high flow. Fluvial

Fluvial: Term used to describe river or stream-related features or processes. **Fluvial deposits** are sediments deposited by the flowing water of a stream.

Formation (geologic): A laterally continuous rock unit with a distinctive set of characteristics that make it possible to recognize and map from one outcrop or well to another.

Fossil: Remains, imprints or traces of an ancient organism that have been preserved in the rock record. Bones, shells, casts, tracks and excrement can all become fossils.

Gabbro: A dark, coarse-grained intrusive igneous rock. Gabbro is made of calcium-rich plagioclase, with amphibole and/or pyroxene, and is chemically equivalent to basalt.

Garnet: Family of silicate minerals containing varying amounts of aluminum, iron, magnesium, and calcium. Schist and gneiss often have tiny, glassy red garnet dodecahedrons.

Geomorphic province: Naturally defined geologic regions that display a distinct landscape or landform. Earth scientists recognize eleven provinces in California. Each region displays unique, defining features based on geology, faults, topographic relief and climate.

Gneiss: A coarse-grained, foliated rock produced by regional metamorphism. The mineral grains within gneiss are elongated due to pressure and the rock has a compositional banding due to chemical activity.

Granitic: A general term for intrusive igneous rocks that look similar to granite but may range in composition from quartz-diorite to granite. All granitic rocks are light colored; feldspar and quartz are visible in hand specimen.

Granodiorite: An intrusive igneous rock similar to granite, but contains more plagioclase than potassium feldspar.

Groundwater: Water that exists below the water table in the zone of saturation. Ground water moves slowly in the same direction that the water table slopes.

Ground Water Recharge Area: A location where surface water or precipitation can infiltrate into the ground and replenish the water supply of an aquifer.

Habitat: The physical location or type of environment in which an organism or biological population lives or occurs; often characterized by a dominant plant form or physical characteristics (i.e., the oak-savanna, wetland, or a coastal habitat).

Holocene: An epoch of the Quaternary Period beginning 10,000 years ago and continuing today.

Hornblende: A rock made up mostly amphibole and plagioclase feldspar. Although the name amphibolite usually refers to a type of metamorphic rock, an igneous rock composed dominantly of amphibole can be called an amphibolite too.

Hydrology: The science of Earth's water, its movement, abundance, chemistry and distribution

on, above and below Earth's surface.

Igneous Rock: A rock formed by the crystallization of magma or lava.

Indirect impacts (or effects): Also referred to as secondary effects, indirect impacts are caused by a project and occur later in time or at some distance from the project; however, they are still reasonably foreseeable.

Infrastructure: A general term describing public and quasi-public utilities and facilities such as roads, bridges, sewers and sewer plants, water lines, storm drainage, power lines, parks and recreation, public libraries, fire stations, sidewalks and streetlights. Can also be considered a permanent installation such as lighting, sidewalks, buildings and water systems.

Inholding: private land located within publicly owned land areas.

Intermittent flow: flow regimes occur irregularly or seasonally

Irreversible impacts: effects that cannot be changed over the long term or are permanent.

Irretrievable impacts: effects to resources that, once gone, cannot be replaced.

Landslide: A downslope movement of rock and soil over a failure surface and under the influence of gravity. Slumps, earthflows, debris flows and debris slides are examples.

Mafic: A term used to describe an igneous rock that has a large percentage of dark-colored minerals such as amphibole, pyroxene and olivine. Mafic rocks are generally rich in iron and magnesium. Basalt and gabbro are examples of mafic rocks.

Mineral: A naturally occurring chemical compound or limited mixture of chemical compounds. Minerals generally form crystals and have specific physical and chemical properties which can be used to identify them.

Mitigation: Mitigation includes: (a) Avoiding an impact altogether by not taking a certain action or parts of an action; (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; (e) compensating for the impact by replacing or

providing substitute resources or environments.

Metamorphic: A rock that has undergone chemical or structural changes produced by increase in heat or pressure, or by replacement of elements by hot, chemically active fluids.

Miocene: An Epoch that includes the time interval of about 23.7 to 5.3 million years ago.

Monzonite: An intermediate igneous intrusive rock composed of approximately equal amounts of sodic to intermediate plagioclase and orthoclase feldspars with minor amounts of hornblende, biotite, and other minerals

Mylonite (mylonitic): A brecciated metamorphic rock frequently found in a fault zone. The fractured texture is thought to form by the crushing actions of fault movement.

National Park System: the sum total of the land and water now or heretofore administered by the Secretary of the Interior through the National Park Service for park, monument, historic, parkway, recreational or other purposes.

North American Plate: The North American Plate is a tectonic plate covering most of North America, Greenland, Cuba, Bahamas, and parts of Siberia, Japan, and Iceland.

Orogeny: A compressive tectonic process that results in intense folding, reverse faulting, crustal thickening, uplift and deep plutonic activity. A mountain-building episode.

Paleomagnetism: The study of Earth's magnetic field over time. When rocks that contain magnetic minerals are deposited, the character (vertical and horizontal orientation) of Earth's magnetic field is locked within the rocks. This information can be used to study changes in Earth's magnetic field as well as the movement of plates over time.

Paleontology: The study of ancient life through fossils.

Paleozoic Era: Includes the time from about 570-245 million years ago.

Pacific Plate: An oceanic tectonic plate beneath the Pacific Ocean.

Plate Tectonics: The theory that the Earth's outer shell is made up of about a dozen lithospheric plates that move about and interact at their boundaries.

Playa: Playas are shallow, short-lived lakes that form where water drains into basins with no

outlet to the sea and quickly evaporates. Playas are common features in arid (desert) regions and are among the flattest landforms in the world.

Pleistocene Epoch: The earliest Epoch of the Quaternary Period, beginning about 1.6 million years ago and ending 10,000 years ago. Commonly known as the '**Ice Age**', a time with episodes of widespread continental glaciation.

Pliocene: The latest Epoch of the Tertiary Period, beginning about 5.3 million years ago and ending 1.6 million years ago.

Pluton: A large body of intrusive igneous rock that solidified within the crust. Batholiths and Stocks are types of plutons.

Porphyry: A variety of igneous rock consisting of large-grained crystals, such as feldspar or quartz, dispersed in a fine-grained feldspathic matrix or groundmass.

Precambrian: The 'unofficial' time period that encompasses all time from the Earth's formation, 4.55 billion years ago to 570 million years ago, the beginning of the Paleozoic Era.

Prime Farmland: land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and that is available for these uses.

Proterozoic Eon: The 'Precambrian' time interval from 2.5 billion to 570 million years ago.

Pyroxene: Family of silicate minerals containing iron, magnesium, and calcium in varying amounts. Differ from amphibole family by lack of water in the crystals.

Quaternary: The most recent Period of the Cenozoic Era. This era encompasses the time interval of 1.6 million years ago through today.

Rift Zone: A region of Earth's crust along which divergence is taking place. A linear zone of volcanic activity and faulting usually associated with diverging plates or crustal stretching.

Right-Lateral Fault: A fault with horizontal movement. If you are standing on one side of the fault and look across it, the block on the opposite side of the fault has moved to the right

Riparian (land, area or habitat) – The land and vegetation bordering a natural watercourse such as a river or stream. Riparian habitat provides food, nesting habitat, cover, migration corridors, riverbank protection, erosion control and improved

water quality, and numerous recreational and esthetic values.

Sag pond: A body of water, which forms as water collects in the lowest parts of the depression that forms between two strands of an active strike-slip fault. The relative motion of the two fault strands results in a stretching of the land between them, causing the land between them to sink.

Sediment: A loose, unconsolidated deposit of weathering debris, chemical precipitates or biological debris that accumulates on Earth's surface.

Schist: A metamorphic rock containing abundant particles of mica, characterized by strong foliation, and originating from a metamorphism in which directed pressure plays a significant role.

Siltstone: A clastic sedimentary rock that forms from silt-size (between 1/256 and 1/16 millimeter diameter) weathering debris.

Socioeconomic analysis – The task of assessing the impact of a plan or project on a community's or region's social structure, on a community's fiscal health, on a region's economic basis, and similar socioeconomic considerations.

Special Resource Study: A study conducted by the National Park Service to determine whether an area is appropriate to be managed as a unit of the National Park System. It considers whether: (1) the resources in the area are nationally significant, (2) there are other means of protecting the area's resources, (3) the area's resources are already represented in the National Park System, and (4) if it is feasible for the NPS to protect and manage the resources.

State land conservancy – An independent state agency established to fund or acquire and manage land in order to preserve open space or habitat, provide for low-impact recreational or educational uses, or other similar purposes, with a specific regional focus.

Subduction Zone: An area at a convergent plate boundary where an oceanic plate is being forced down into the mantle beneath another plate. These can be identified by a zone of progressively deeper earthquakes.

Subsidence: A lowering of the land surface in response to subsurface weathering, collapse or slow settlement of underground mines, or the production of subsurface fluids such as ground water or oil.

Surficial materials: Any loose, unconsolidated sedimentary deposit lying on bedrock.

Syenite: A coarse-grained intrusive igneous rock of the same general composition as granite but with the quartz either absent or present in relatively small amounts (<5%).

Tertiary Period: The earliest Period of the Cenozoic Era, beginning about 66.4 million years ago and ending 1.6 million years ago.

Terrane: A rock formation or assemblage of rock formations that share a common geologic history. A geologic terrane is distinguished from neighboring terranes by its different history, either in its formation or in its subsequent deformation and/or metamorphism. Terranes are separated by faults.

Topography: The shape of Earth's surface or the geometry of landforms in a geographic area.

Transform Fault/Transform Plate Boundary: A strike-slip fault that connects offsets in a mid-ocean ridge.

Thrust Fault: A reverse fault that has a dip of less than 45 degrees.

Unconsolidated: A term used when referring to sediment that has not been lithified into a rock.

Uplift: A structurally high area in Earth's crust formed by movements that bend the crust into a structure such as a dome or an arch.

Volcanic rock: Igneous rock that cools and solidifies at or very near the Earth's surface. Volcanoes produce volcanic rock.

Wash: A normally dry stream bed that occasionally fills with water.

Watershed: The geographic area that contributes runoff to a stream. It can be outlined on a topographic map by tracing the points of highest elevation (usually ridge crests) between two adjacent stream valleys. The watershed of a large river usually contains the watersheds of many smaller streams.

Zoning – The division of a city or county into areas, or zones, which specify allowable uses for real property and size restrictions for buildings and lots within these areas. A zoning ordinance is a law that divides land into zones, specifies uses permitted in each zone, and standards required for each use. Typical zoning classifications include different types of agricultural, residential, industrial and commercial zones.

References

- Atchison, Topeka, and Santa Fe Railway
1938 "Citrus Fruits" Chicago, IL: Atchison, Topeka, and Santa Fe Railway Co.
- Audubon Society
2007 *Birds and Science: California Important Bird Areas (IBAs)*. Available on the internet at: [<http://iba.audubon.org/iba/stateIndex.do?state=US-CA>].
- Axelrod, D.I.
1978 "The origin of coastal sage vegetation, Alta and Baja California." In, *American Journal of Botany* 65(10): 1117-1131.
- Bailey, Harry P.
1966 *The climate of southern California*. Berkeley : University of California Press.
- Bean, Lowell John; Smith R. Charles
1978 "Gabrielino; Serrano" In *California*, edited by Robert F. Heizer, Volume 8. *Handbook of North American Indians*, edited by William C. Sturtevant. Washington DC: Smithsonian Institution
- Beck, Warren A. and Ynez D. Haase
1974 *Historical Atlas of California*. Norman: University of Oklahoma Press.
1989 *Historical atlas of the American West*. Norman: University of Oklahoma Press.
- Bigger, Richard
1959 *Flood Control in Metropolitan Los Angeles*. University of California Press.
- Billington, David P., Donald C. Jackson, and Martin V. Melosi.
2005 *The History of Large Federal Dams: Planning, Design, and Construction*. Denver, CO. Prepared for Bureau of Reclamation, U.S. Army Corps of Engineers, and National Park Service
- Blackburn, Thomas C. and Kat Anderson (Editors)
1993 *Before the Wilderness: Environmental Management by Native Californians*. Ballena Press: Menlo Park, Ca.
- [BLM] Bureau of Land Management, U.S. Department of the Interior
2006 *West Mojave Plan*. California Desert District: Moreno Valley, CA.
1994 *South Coast Resource Management Plan*. California Desert District: Palm Springs, CA.
- Burcham, L. T.
1957 *California Range Land: An Historico-Ecological Study of The Range Resource of California*. University of California: Davis, CA.
- California Center for Public Health Advocacy
2006 *Overweight Children in California Counties & Communities, 2004: Los Angeles County*. Available at: http://www.publichealthadvocacy.org/county/Los_Angeles_Fact_Sheet.pdf
- California Coastal Conservancy
2001 *Southern California Wetland Recovery Project Regional Plan*. <http://www.coastalconservancy.ca.gov/scwrp/>
- [CDF] California Department of Finance
2007a *Population Projections for California and Its Counties 2000-2050*, Sacramento, California, July 2007.
2007b *Race/Ethnic Population with Age and Sex Detail, 2000-2050*, Sacramento, California, July 2007.
- [CDFG] California Department of Fish and Game (CDFG)
2008a *CWHR Version 8.2 personal computer program*. California Interagency Wildlife Task Group. Sacramento, California

- 2008b *Natural Community Conservation Planning (NCCP): Status of Current Planning Efforts*. Available on the internet at: <http://www.dfg.ca.gov/habcon/nccp/status.html> (Accessed March 2008).
- 2007 *California Wildlife: Conservation Challenges (Comprehensive Wildlife Conservation Strategy)*. Available on the internet at: <http://www.dfg.ca.gov/habitats/WDP/report.html> (Accessed March 2007).
- 2006 *California Natural Diversity Database*. Accessed October 2006. Available on the internet at [<http://www.dfg.ca.gov/bdb/html/cnddb.html>].
- 2003 *Atlas of the Biodiversity of California*. Sacramento: California Department of Fish and Game.
- 2000 The Status of Rare, Threatened, and Endangered Animals and Plants of California. CDFG: Sacramento, CA. [http://www.dfg.ca.gov/hcpb/species/search_species.shtml]
- 1993 *Southern California Coastal Sage Scrub NCCP Conservation Guidelines*. Sacramento: California Department of Fish and Game.

California Department of Parks and Recreation

- 2002 *California Recreation Trails Plan, Phase 1*. Department of Parks and Recreation Planning Division, Statewide Trails Office: Sacramento, CA.

California Department of Water Resources

- 2003 *Bulletin 118: Basins and Subbasins of the South Coast Hydrologic Region*. Available on the internet at: http://www.water.ca.gov/groundwater/bulletin118/south_coast.cfm

California Geological Survey

- 2004 *Significant California Earthquakes*. Compiled from: T. Topozada and others, 2000, Epicenters of and areas damaged by $M \geq 5$ California earthquakes, 1800-1999 (CDMG Map Sheet 49); Updated (3/2004) with data from: Topozada, T. R. and D. Branum (2002) California $M \geq 5.5$ earthquakes, history and areas damaged, in Lee, W. H., Kanamori, H. and Jennings, P., International Handbook of Earthquake and Engineering Seismology, International Association of Seismology and Physics of the Earth's Interior; National Earthquake Information Center (<http://neic.usgs.gov/>); Nevada Bureau of Mines and Geology (<http://www.seismo.unr.edu/ftp/pub/updates/louie/graphics/brochure.html>); and loss information from C. Stover and J. Coffman, 1993, Seismicity of the United States (USGS Professional Paper 1527). Available on the internet at: http://www.conservation.ca.gov/CGS/rghm/quakes/Pages/eq_chron.aspx

California Native Plant Society

- 2011 *Inventory of Rare and Endangered Plants (online edition, v8-01a)*. California Native Plant Society. Sacramento, CA.
- 2006 *Inventory of Rare and Endangered Plants (online edition, v7-11mar)*. California Native Plant Society. Sacramento, CA. Available on the internet at: <http://www.cnps.org/inventory>

California Regional Water Quality Control Board – Los Angeles Region

- 2000 *State of the Watershed – Report on Surface Water Quality: The San Gabriel River Watershed*. Available on the internet at: http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/regional_program/wmi/water_report/SanGabrielRiverState.shtml

Carter, Bruce A.

- 1982a "Geology of the San Gabriel Anorthosite-Syenite Body, Los Angeles County, California." In Fife, D. L., and Brown, A. R., (Editors). *Geology and mineral wealth of the California Transverse Ranges: South Coast Geological Society, Mason Hill Volume, Annual Symposium and Guidebook Number 10*. Santa Ana, CA: South Coast Geological Society.
- 1982b "Early Geologic Studies of the Transverse Ranges, California." In Fife, D. L., and Brown, A. R., (Editors). *Geology and mineral wealth of the California Transverse Ranges: South Coast Geological Society, Mason Hill Volume, Annual Symposium and Guidebook Number 10*. Santa Ana, CA: South Coast Geological Society.

- Cassity, Michael, Ph.D.
2004 *Route 66 Corridor National Historic Context Study*. Broken Arrow, Oklahoma. Prepared for the National Park Service.
- [CEDD] California Employment Development Department
2010 *Local Area Profiles*. <http://www.labormarketinfo.edd.ca.gov>. Accessed 12/17/2010.
- Centers for Disease Control and Prevention
2001 *Increasing Physical Activity: A Report on Recommendations of the Task Force on Community Preventive Services ("Increasing Physical Activity")*, available on the internet at: www.cdc.gov/mmwr/preview/mmwrhtml/rr5018a1.htm].
- [CEQ] Council on Environmental Quality, Executive Office of the President
1978 "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act." *Federal Register* 43: 55978–56007.
- Chavez, D., and N. Knap
2004 *Management problems of and strategies for off-highway vehicle management: National Forests in California*. Unpublished Report. U.S. Department of Agriculture, Forest Service.
- Chester, Tom
2004 San Gabriel Mountains: The Waterfalls. Available on the internet at: <http://tchester.org/sgm/lists/waterfalls.html>.
- The City Project
2007 *Healthy Parks, Schools and Communities: Mapping Green Access and Equity*. Available on the internet at: <http://www.cityprojectca.org/ourwork/mappinggreenaccess/index.html>.
- Clark, William B.
1998 *Gold districts of California*. Sacramento, Calif.: Dept of Conservation, Division of Mines and Geology.
- Cleland, Robert Glass and Glenn S. Dumke
1966 *Wilderness to Empire: A History of California*. Edited by Glenn S. Dumke. New York: Knopf.
- Cleland, Robert Glass
1941 *The Cattle on a Thousand Hills, Southern California 1850-1870*. San Marino: Huntington Library.
- Conkling, Steven W. and Brad Sturm
1997 *Final Report, National Register of Historic Places: Evaluation for the Proposed Mount San Antonio Historic Mining District, Angeles National Forest*. LSA Associates, Inc. Prepared for the Angeles National Forest.
- Cook, Sherburne F.
1978 "Historical Demography" In *California*, edited by Robert F. Heizer, Volume 8. *Handbook of North American Indians*, edited by William C. Sturtevant, Washington DC: Smithsonian Institution
- County of Los Angeles Libraries
2006 *Frequently Asked Questions, Antelope Valley*. Available on the internet at: <http://www.colapublib.org/history/antelopevalley/faq.html> Accessed July 31, 2006.
- Cranz, Galen
2000, June. "Changing Roles of Urban Parks: From Pleasure Garden to Open Space." *Landscape* 22:3 (Summer 1978) pp.9-18
- Crespi, Juan, trans. Alan K. Brown
2001 *A Description of Distant Roads: Original Journals of the First Spanish Expedition into California, 1769-1770*. San Diego, CA : San Diego State University Press, 2001.
- Crump, Spencer
1962 *Ride the Big Red Cars: How Trolleys Helped Build Southern California*. Los Angeles, CA: Crest Publications.

- Davis, F.W., Peter A. Stine and David M. Stoms
 1994 "Applications of Remote Sensing and Geographic Information Systems for the Distribution and Conservation Status of Coastal Sage Scrub in Southwestern California." In *Journal of Vegetative Science*, 5(5): 743-756.
- Davis, F.W., D.M. Stoms, A.D. Hollander, K.A. Thomas, P.A. Stine, D. Odionn, M.I. Borchert, J.H. Thorne, M.V. Gray, R.E. Walker, K. Warnter, and J. Graae
 1998 *The California Gap Analysis Project – Final Report*. Santa Barbara, CA: University of California. Available on the internet at [<http://gis.ucsc.edu/Projects/VWP/report.pdf>]
- Deinstadt, J.M., E.J. Pert, F.G. Hoover, and S. Sasaki
 1990 *Survey of fish populations in six southern California streams: 1987*. Calif. Fish and Game, Inland Fisheries Division, Admin. Rep. 90-1.56 p.
- Dibblee, Thomas W.
 1982 "Geology of the San Gabriel Mountains, Southern California." In Fife, D.L., and Minch, J.A., eds., *Geology and mineral wealth of the California Transverse Ranges*. Santa Ana, CA: South Coast Geological Society Annual Symposium and Guidebook, no. 10.
- Dumke
 1944 *The Boom of the Eighties in Southern California*. San Marino, CA: Huntington Library
- Ehlig, Perry L.
 1982 "The Vincent Thrust: Its Nature, Paleogeographic Reconstruction Across the San Andreas Fault and Bearing on the Evolution of the Transverse Ranges, San Gabriel Mountains." In Fife, D. L., and Brown, A. R., (Editors). *Geology and mineral wealth of the California Transverse Ranges: South Coast Geological Society, Mason Hill Volume, Annual Symposium and Guidebook Number 10*. Santa Ana, CA: South Coast Geological Society.
- Engelhardt, Fr. Zephyrin, O.F.M.
 1908 *The Missions and Missionaries of California*. San Francisco, CA: James H. Barry Co.
- Fages, Pedro
 1919 *An historical, political, and natural description of California*; translated by Herbert I. Priestley. Catholic Historical Review. Vol. 4, no. 4 (Jan. 1919); v. 5, no. 1 (Apr. 1919).
- Farnsworth, R.W.C.
 1883 *A Southern California paradise (in the suburbs of Los Angeles), being a historic and descriptive account of Pasadena, San Gabriel, Sierra Madre, and La Cañada*; with important reference to Los Angeles and all Southern California, and containing map and illustrations. Pasadena: R.W.C. Farnsworth.
- Fischler, Stanley I.
 1979 *Moving Millions: An Inside Look at Mass Transit*. New York, New York: Harper & Row.
- Fisher, Robert, United States Geological Survey
 2007 Personal communication with Barbara Butler, National Park Service, Pacific West Region, January 2007.
- [FMMP] Farmland Mapping and Monitoring Program, California Department of Conservation Division of Land Resource Protection
 2008 *California Farmland Conversion Report 2006-2008*. Available on the internet at: http://redirect.conservation.ca.gov/DLRP/fmmp/county_info_results.asp
 2002 *California Farmland Conversion Report 2000-2002*. http://redirect.conservation.ca.gov/DLRP/fmmp/county_info_results.asp

Friends of Pio Pico State Historic Park

2011 E-mail message from Carolyn Schoff, to Barbara Butler, NPS landscape architect, February 16, 2011, regarding visitation to Pio Pico State Historic Park.

Garcia, Matt

2001 *A World of its Own: Race, Labor, and Citrus in the Making of Greater Los Angeles, 1900-1970.* Chapel Hill, NC: University of North Carolina Press.

Gumprecht, Blake

1999 *The Los Angeles River: Its Life, Death and Possible Rebirth.* Baltimore: Johns Hopkins University Press.

Hafen, Le Roy Reuben, Armijo, Antonio

1954 *Old Spanish Trail: Santa Fe to Los Angeles, Far West and the Rockies historical series, 1820-1875, v.1,* Glendale, CA: A. H. Clark Co.

Hall, William H.

1888. *Report of the state engineer of California on irrigation and the irrigation question.* State Office: Sacramento: 1886-88.

Halsey, Richard W.

2008 *Fire, Chaparral, and Survival in Southern California: Revised and Updated.* Sunbelt Publications: San Diego, CA.

Hanes, T. L., R.D. Friesen, and K. Keane.

1989 "Alluvial scrub vegetation in coastal southern California." In Abell, Dana (Tech. Coordinator) *Proceedings of the California Riparian Systems Conference: protection, Management, and Restoration for the 1990; September 22-24, 1988; Davis, California.* Berkeley, CA: Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture.

Hayhoe, Katherine, Daniel Cayan, Christopher B. Field, Peter C. Frumhoff, Edwin P. Maurer, Norman L. Miller, Susanne C. Moser, Stephen H. Schneider, Kimberly Nicholas Cahill, Elsa E. Cleland, Larry Dale, Ray Drapek, R. Michael Hanemann, Laurence S. Kalksteinl, James Lenihan, Claire K. Lunch, Ronald P. Neilson, Scott C. Sheridan, and Julia H. Verville.

2004 "Emissions pathways, climate change, and impacts on California." *Proceedings of the National Academy of Sciences, USA.* August 24, 2004, vol. 101, no. 34, 12422-12427.

Hilton, George W. and John F. Due

1960 *The Electric Interurban Railways in America.* Stanford, CA: Stanford University Press.

Institute for Astronomy, University of Hawaii

Available on the internet at: <http://www.ifa.hawaii.edu/mko>

Johnston, Bernice Eastman

1962 *California's Gabrielino Indians.* Los Angeles: Southwest Museum.

Jones and Stokes

2004 *Final Inventory and Evaluation Report for the San Dimas Experimental Forest, Los Angeles, California.* Prepared for the United States Department of Agriculture Forest Service, Angeles National Forest. Arcadia, California.

Joseph, Stephen E., Criscione, Joseph J., Davis, Terry E. and Perry L. Ehlig.

1982 "The Lowe Igneous Pluton." In Fife, D.L., and Minch, J.A., eds., *Geology and mineral wealth of the California Transverse Ranges.* Santa Ana, CA: South Coast Geological Society Annual Symposium and Guidebook, no. 10.

Joslin, Les

1995 *Uncle Sam's Cabins: A Visitor's Guide to Historic U.S. Forest Service Ranger Stations of the West.* Bend, OR: Wilderness Associates

- Keating, Michael T., M.A.
2006 *Black Gold in the Golden State*. Claremont Graduate University
- Keeley, Jon E.
2005 *Alien Plant Invasion Following Fire in California Shrublands*. Western Ecological Research Center. Publication Brief for Managers. Three Rivers, CA. Available on the internet at: <http://www.werc.usgs.gov/pubbriefs/index.html>
- King, William F.
1990 *The San Gabriel Valley: Chronicle of an Abundant Land*. Chatsworth, CA: Windsor Publications.
1975 *The Vintage Years, Our Valley Before 1945*. Walnut, California: Mt. San Antonio College Community Services.
- Kroeber, Alfred L.
1976 *Handbook of the Indians of California*. New York: Dover Publications
- [LACEDC] Los Angeles County Economic Development Corporation
2010 *2010-2011 Mid-Year Update Economic Forecast and Industry Outlook, July 2010*. Available on the internet at: <http://laedc.org/reports/>
- [LADPW] Los Angeles County Department of Public Works
2006a *San Gabriel River Corridor Master Plan*. Available on the internet at: <http://dpw.lacounty.gov/wmd/watershed/sg/mp/mp.cfm>.
2006b *Greater Los Angeles County Region Integrated Resource Water Management Plan*. Available on the internet at: <http://www.ladpw.org/wmd/irwmp/>.
2006c *Hydrology Manual*. Water Resources Division: Alhambra, California. Available on the internet at: <http://dpw.lacounty.gov/wrd/publication/>
2004 *San Gabriel River and Montebello Forebay Water Conservation System*. Available on the internet at: <http://dpw.lacounty.gov/wrd/publication/system/montebello.cfm>
2005 *Santa Clara River Enhancement and Management Plan*. Prepared By: AMEC Earth & Environmental.
- Leadabrand, Russ
1966 *A Guidebook to the Mojave Desert of California, including Death Valley, Joshua Tree National Monument, and the Antelope Valley*. Los Angeles, CA: W. Ritchie Press.
- Lillie, Robert J.
2005 *Parks and Plates: The Geology of our National Parks, Monuments and Seashores*. New York: W.W. Norton and Company.
- Los Angeles Almanac
2005 *Headline History: Los Angeles County Pre-history to 1799-A.D.* Available on the internet at: <http://www.laalmanac.com/history/hi01a.htm>. Accessed July 29, 2005
- Los Angeles County
2009 *The County of Los Angeles Annual Report 2009-2010*. Public Affairs, Chief Executive Office, Los Angeles, California
- Los Angeles County Department of Public Health
2009 *Key Indicators of Health by Service Planning Area; June 2009*. Los Angeles County Department of Public Health, Office of Health Assessment and Epidemiology. Available on the internet at: <http://www.publichealth.lacounty.gov/docs/keyindicators.pdf>
- Los Angeles County Department of Regional Planning
2010a E-mail message from Joan Rupert, to Barbara Butler, NPS landscape architect, December 9, 2010, regarding visitation to county parks.

- 2010b *Revised Draft Santa Clarita Valley Area Plan: One Valley One Vision*. Los Angeles County Department of Regional Planning, Los Angeles, California
- 2008 *Draft General Plan*. Available on the internet at: <http://planning.lacounty.gov/generalplan>
- Los Angeles County Libraries
- 2006 Antelope Valley Community History. Available on the internet at: <http://www.colapublib.org/history/antelopevalley/>
- Major, J. and D.W. Taylor
- 1977 "Alpine." In *Terrestrial vegetation of California (new expanded edition)*. Barbour, M.G and J. Major., eds. Sacramento, CA: California Native Plant Society; 601-675.
- Matti, Jonathan C., Morton, Douglas M. and Brett F. Cox.
- 1992 *The San Andreas Fault System in the Vicinity of the Central Transverse Range sProvince, Southern California*. Open-File Report 92-354. Department of the Interior, U.S. Geological Survey.
- Mattison, M. Elise and Allan G. Barrows.
- 2003 *Seismic Hazard Zone for the Ritter Ridge Quadrangle, Los Angeles County, California*. California Department of Conservation, California Geological Survey. Sacramento, California.
- Mayer, Kenneth E. and William F. Laudenslayer, Jr., editors
- 1988 *A Guide to Wildlife Habitats of California*. State of California: Sacramento.
- McCulloh, Thane H., Beyer, Larry A. and Ronald W. Morin
- 2001 *Mountain Meadows Dacite: Oligocene intrusive complex hat welds together the Los Angeles Basin, northwestern Peninsular Ranges, and Central Transverse Ranges, California*. Washington, DC: USGS Information Services.
- McPhee, John
- 1989 *The Control of Nature*. New York: Farrar, Straus, Giroux.
- [Metro] Los Angeles County Department of Transportation
- 2006 Los Angeles County Metropolitan Transportation Authority (Metro) Bicycle Transportation Strategic Plan. Available on the internet at: http://www.metro.net/board/Items/2006/02_February/20060215P&Item6%20Atta.pdf
- Miller, Crane S. and Richard S. Hyslop
1983. *California: The Geography of Diversity*. Mayfield Publishing Company: Palo Alto, CA.
- Mistretta, Orlando
- 2007 Personal communication with Barbara Butler, National Park Service, Pacific West Region April 2007.
- Morton, Douglas M. and Fred K. Miller
- 2003 *Preliminary geologic map of the San Bernardino 30'x60' quadrangle, California: Detailed description of Map Units, version 1.0*. Open-File Report 03-293. Department of Interior, U.S. Geological Survey.
- Morton, Paul K.
- 1982 "Mineral deposits of the Transverse Ranges." In *Geology and Mineral Wealth of the Transverse Ranges*. South Coast Geological Society: Santa Ana, CA
- Mount, Jack D.
- 1971 "A Late Miocene Flora from the Solemint Area, Los Angeles County, California." *Bulletin of the Southern California Paleontological Society*, vol. 3, no. 3, pp. 1-4 & 8.
- Mount Wilson Observatory
- 2007 Information extracted from Mount Wilson Observatory web site: <http://www.mtwilson.edu/>. Accessed in 2007.
- Muir, John
- 1894 *The Mountains of California*. The Century Company: New York.

- Murphy, Roy and Julia Murphy
1985 *The San Gabriel Mountains*. Arcadia, CA: Big Santa Anita Historical Society.
- [NPS] National Park Service
2010 *A Socioeconomic Atlas for National Park Units in California*. Prepared by Jean McKendry, College of Natural Resources, University of Idaho, Moscow, Idaho.
- 2009 *National Park Visitor Spending and Payroll Impacts 2008*. Prepared by Daniel J. Stynes, Department of Community, Agriculture, Recreation and Resource Studies Michigan State University, East Lansing, Michigan.
- 2008a *National Natural Landmarks: NNL Guide*. Available on the internet at: [<http://www.nature.nps.gov/nnl/index.cfm>]
- 2008b NPS Rustic Architecture in the West (<http://www.nps.gov/history/hdp/exhibits/parkitect/>)
- 2006 *Management Policies*.
- 2000 *History in the National Park Service: Themes and Concepts (updated)*. Also 1987 *Thematic Framework*. Available on the internet at [http://www.cr.nps.gov/history/online_books/thematic87/theme1-16.htm]
- 1998 *Padua Hills Theater National Register of Historic Places Nomination Form*. Available on the internet at: <http://www.cr.nps.gov/nr/feature/Hispanic/2000/padua.HTM>
- 1996 *Juan Bautista de Anza National Historic Trail Comprehensive Management Plan*.
- 1995 Route 66 Special Resource Study.
- 1991 Mount Lowe Railway National Register of Historic Places Nomination Form. Prepared by Charles G, Seims.
- 1990 *Natural History in the National Park System and on the National Registry of Natural Landmarks*. Natural Resources Report, NPS NR NRTR-90/03. Washington, D.C.: National Park Service.
- 1989 National Historic Landmark Astronomy Theme Study. Available on the internet at: http://www.nps.gov/history/history/online_books/butowsky5/astro0.htm
- 1986 *Architecture in the Parks*, National Historic Landmark Theme Study, Laura Soullière Harrison
- 1979 *A Survey of Potential Natural Landmarks, Biotic Themes, of the Mojave-Sonoran Desert Region*. Prepared for the Heritage Conservation Recreation Service, United States Department of the Interior by Paul S. Martin. Tucson: University of Arizona.
- 1977 *Rustic Architecture: 1916 – 1942*, William C. Tweed, Historian; Laura E. Soulliere, Architectural Historian; Henry G. Law, Architect
- 1976 *The Mojave-Sonoran Natural Region Study*. Prepared for the National Park Service by Wachter, Bruce G., Bull, William B. and Stephen J. Reynolds. Tucson: University of Arizona, Department of Geosciences.
- 1974 *Geological Resources of the South Pacific Border Region*. Prepared for the National Park Service by John H. Lipps, James R. Correa, and Gary Zumwalt. Davis: University of California.
- 2010 *Santa Monica Mountains National Recreation Area Historic Resources Study and Environmental History*, Prepared by Timothy Babalis, Environmental Historian. On-file at Santa Monica Mountains National Recreation Area.

- 1973 "A Survey of the Natural History of the South Pacific Border Region, California: Biotic Themes" G. Prepared by Ledyard Stebbins and Dean William Taylor, Institute of Ecology, University of California, Davis for the National Park Service. On file at the Pacific West Regional Office, Oakland, California.
- Nelson, Howard J.
1983 *The Los Angeles Metropolis*. Dubuque, Iowa: Kendall/Hunt Publishing Company.
- [NOAA] National Oceanic Atmospheric Administration
2002 "Endangered and Threatened Species: Range Extension for Endangered Steelhead in Southern California." *Federal Register* 67: 21586–21598.
- 1999 309 State Enhancement Grant Assessments and Strategies: Public Access, 1992-1996. Department of Commerce. NOS, OCRM, CPD, 99-04.
- Norris and Webb
1990 *Geology of California*. John Wiley & Sons: New York.
- Noss, Reed, Beier, Paul and Shaw, William
1997 *Evaluation of The Coal Canyon Biological Corridor*. Unpublished Report.
- Nourse, Jonathan A. Oakeshott, Gordon B.
2002 *Middle Miocene reconstruction of the central and eastern San Gabriel Mountains, southern California with implications for evolution of the San Gabriel fault and Los Angeles Basin*. Geological Society of America, Special Paper 365
- 1971 *California's Changing Landscape: A Guide to the Geology of the State*. McGraw-Hill Book Company: New York.
- Orsi, Jared
2004 *Hazardous Metropolis: Flooding and Urban Ecology in Los Angeles*. Berkeley, CA: University of California Press.
- PCR Services Corporation
2006 *Significant Ecological Area Update*. Prepared for the Los Angeles County Department of Regional Planning, November 2000.
- 2000a Biological Resources Assessment of the Proposed Antelope Valley Significant Ecological Area, prepared for Los Angeles County Department of Regional Planning, November 2000.
- 2000b Biological Resources Assessment of the Proposed Puente Hills Significant Ecological Area, prepared for Los Angeles County Department of Regional Planning, November 2000.
- 2000c Biological Resources Assessment of the Proposed San Gabriel Canyon Significant Ecological Area, prepared for Los Angeles County Department of Regional Planning, November 2000.
- 2000d Biological Resources Assessment of the Proposed E. San Gabriel Valley Significant Ecological Area, prepared for Los Angeles County Department of Regional Planning, November 2000.
- Peck, Sedley
1938 "Colorful Old Days on the Upper San Gabriel," *Trails Magazine*. Will H. Thrall, Editor and Business Manager. p. 7, Vol. 5, No. 3, Summer. The Mountain League of Southern California.
- Pomeroy, Elizabeth
2000 *Lost and Found: Historic and Natural Landmarks of the San Gabriel Valley*. Pasadena, CA: Many Books Press
- 2002 *Lost and Found II: More Historic and Natural Landmarks under Southern California Skies*. Pasadena, CA: Many Books Press

- Powell, Robert E., United States Geological Survey
 2007a Personal communication with Barbara Butler, National Park Service, Pacific West Region, January 2007.
- 2007b Personal communication with Barbara Butler, National Park Service, Pacific West Region, September 2007.
- 1993 "Balanced palinspastic reconstruction of pre-late Cenozoic paleogeology, southern California: Geologic and kinematic constraints on evolution of the San Andreas fault system" in Powell, R.E., Weldon R.J., and Matti, J.C. eds., *The San Andreas Fault System: Displacement, Palinspastic Reconstruction, and Geologic Evolution*. Boulder, Colorado, Geological Society of America Memoir 178, pp.1-106.
- Puente Hills Landfill Native Habitat Preservation Authority
 2007 *Final Resource Management Plan*. Prepared by LSA Associates, Inc. for the Puente Hills Landfill Native Habitat Preservation Authority. Whittier, CA
- Quinn, Ronald D.
 2009 Personal communication with Barbara Butler, National Park Service, Pacific West Region, November 2009.
- 1990 *The status of walnut forests and woodlands (Juglanscalifornica) in southern California*. In: Schoenherr, Allan A., ed. Endangered plant communities of southern California: Proceedings, 15th annual symposium; 1989 October 28; Fullerton, CA. Special Publication No. 3. Southern California Botanists: Claremont, CA.
- Raab, Mark
 2005 *Land of sunshine: an environmental history of metropolitan Los Angeles*. Deverell, William and Greg Hise (editors). Pittsburgh: University of Pittsburgh Press.
- Richardson, Robert B.
 2009 *Recreation Use in National Forests, Urban Population Growth, and Demographic Change: The Case of the San Gabriel Mountains*. Michigan State University. Prepared for the Sierra Club
- The River Project
 2006 *The State of the Tujunga: An Assessment of the Tujunga/Pacoima Watershed*. Available on the internet at < <http://www.theriverproject.org/tujunga/plan.html>>. Robinson, John W.
- Robinson, W. John
 2007 Personal communication with Jean Boscacci, National Park Service, Pacific West Region, March 2007.
- 1991 *The San Gabriels: The Mountain Country from Soledad Canyon to Lytle Creek*. Big Santa Anita Historical Society: Arcadia, California
- 1985 *The San Dimas Experimental Forest and the Dalton Watershed: 50th Anniversary*. Pacific Southwest Forest and Range Experiment Station: Berkeley, CA.
- 1973 *Mines of the San Gabriels*. Glendale, California La Siesta Press.
- Robinson, W. W.
 1946 *The Forest and the People: The Story of the Angeles National Forest*. Title Insurance and Trust Company: Los Angeles.
- Rowland, Lenore
 1948 *Romance of La Puente Rancho, including excerpts from "La Puente Valley, past and present" by Janet and Dan N. Powell (W.P.A. Writers Project)*. Covina, CA: Neilson Press

- [RWMG] Regional Water Management Group
 2007 *Antelope Valley Integrated Regional Water Management Plan*. Available on the internet at: <http://www.avwaterplan.org/>
- San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy
 2001 *Common Ground, from the Mountains to the Sea*. Available on the internet at: [http://www.rmc.ca.gov/plans/common_ground.html].
- [SCAG] Southern California Association of Governments
 2008, January *Draft 2008 Regional Transportation Plan (RTP) Update, Program Environmental Impact Report*. Available on the internet at: <http://www.scag.ca.gov/RTPpeir2008/draft/index.htm>
- Schiffman
 2005 *Land of sunshine: an environmental history of metropolitan Los Angeles*. Deverell, William and Greg Hise (editors). Pittsburgh: University of Pittsburgh Press.
- Schoenherr, Allan A
 1992 *A Natural History of California*. University of California Press: Berkeley, CA.
- Scott, T.A. and D.S. Cooper
 1999 *Summary of Avian Resources of the Puente- Chino Hills Corridor*. Publisher: Location.
- Sharp, Robert P.
 1975 *Southern California: K/H Geology Field Guide Series*. Kendall/Hunt Publishing Company
- Sister, C., Wilson, J.P., and Wolch, J.
 2008 *Green Visions Plan for 21st Century Southern California*. 17. *Access to Parks and Park Facilities in the Green Visions Plan Region*. University of Southern California GIS Research Laboratory and Center for Sustainable Cities, Los Angeles, California.
- Smith, Cornelius
 1936 "The Old San Gabriel and Some of Those who Made its History," *Trails Magazine*. Will H. Thrall, Editor and Business Manager. p. 7, Vol. 3, No. 3, Summer. The Mountain League of Southern California
- Stanton, Robert J.
 1966, January. *Megafauna of the upper Miocene Castaic Formation, Los Angeles County, California*. *Journal of Paleontology*, v.40, no.1, pp. 21-40.
- Stein, Bruce A, Lynn S. Kutner, and Jonathan S. Adams editors.
 2000 *Precious Heritage: The Status of Biodiversity in the United States*. Oxford University Press: United States.
- Stein, Eric D., Shawna Dark, Travis Longcore, Nicholas Hall, Michael Beland, Robin Grossinger, Jason Casanova, and Martha Sutula.
 2007 *Historical Ecology and Landscape Change of the San Gabriel River and Floodplain*. Southern California Coastal Water Research Project Technical Report #499.
- Steiner, Frederick
 1933 *Americans at Play*. McGraw-Hill Book Company: New York and London.
- Stein, William
 1960 "Recollections of a pioneer oil driller." *The Ventura County Historical Society* 3:1-20.
- Stephenson, John R. and Gena M. Calcarone.
 1999 *Southern California Mountains and Foothill Assessment*. United States Department of Agriculture, Forest Service, GTR: PSW-GTR-172.
- Sugranes, Eugene Joseph
 1909 *The Old San Gabriel Mission: Historical Notes Taken from Old Manuscripts and Records*. San Gabriel, CA.

- Swift, C. C., T. R. Haglund, M. Ruiz, and R. N. Fisher.
1993 "The status and distribution of the freshwater fishes of southern California." *Bulletin of the Southern California Academy of Science* 92(3):101-167.
- Teague, Charles Collins
1944 *Fifty years a rancher: the recollections of half a century devoted to the citrus and walnut industries of California and to furthering the cooperative movement in agriculture*. Los Angeles: Printed by Anderson & Ritchie: Ward Ritchie Press.
- Thomas, David Hurst, editor
1989 *Columbian Consequences*. Washington and London: Smithsonian Institution Press
- Thorne, R.F.
1988. "Montane and subalpine forests of the Transverse and Peninsular Ranges." In: Barbour, M. Gand J. Major, eds. *Terrestrial vegetation of California (new expanded edition)*. Sacramento, CA: California Native Plant Society; 537-557.
- Thrall, Will H.
1937 "Mount Wilson – The Observatory and The Toll Road Company," *Trails Magazine*. Will H. Thrall, Editor and Business Manager.vol. 4, summer 1937, no. 3, pp. 8-9 The Mountain League of Southern California
1935 "The Days of Gold," *Trails Magazine*. Will H. Thrall, Editor and Business Manager.p. 16, Vol. 2, No. 3.Summer.The Mountain League of Southern California
1934 "Angeles Forest – Our Greatest Mountain Playground," *Trails Magazine*. Will H. Thrall, Editor and Business Manager. p. 12, Vol. 1, No. 3, Summer. The Mountain League of Southern California
- The Trust for Public Land
2005 *Healthy Parks, Healthy Communities: Park Inequities and Health Disparities in California Fact Sheet*.
2004 *No Place to Play: A Comparative Analysis of Park Access in Seven Major Cities*. Available on the internet at [http://www.tpl.org/tier3_cd.cfm?content_item_id=14565&folder_id=266]
- U.S. Census Bureau
2005 *American Community Survey*. Available on the internet at: <http://www.census.gov/acs/www/>
2000 *Summary File 1 (SF1), P1*. Total Population: 2000.
- [USFWS] United States Fish and Wildlife Service, United States Department of the Interior
2010 "Endangered and Threatened Wildlife and Plants: Revised Designation of Critical Habitat for California Red-Legged Frog; Final Rule." *Federal Register* 75: 12815– 12959.
2008 "Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for *Berberis nevinii* (*Nevin's barberry*)." *Federal Register* 73: 8411– 8440.
2007 "Revised Designation of Critical Habitat for the Coastal California Gnatcatcher (*Poliioptila californica californica*); Final Rule." *Federal Register* 72: 72009– 72213.
2006a "Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Southern California Distinct Population Segment of the Mountain Yellow-Legged Frog (*Ranamuscosa*)" *Federal Register* 70: 54344– 54386.
2006b "Designation of Critical Habitat for *Astragalus brauntonii* and *Pentachaeta lyonii*." *Federal Register* 71: 66373– 66423.
2005a ETWP; Final Designation of Critical Habitat for the Arroyo Toad (*Bufo californicus*); Final Rule." *Federal Register* 70: 19561– 19633.
2005b Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for the Southern California Distinct Vertebrate Population Segment of the Mountain Yellow-Legged Frog (*Rana muscosa*)." *Federal Register* 70: 54106– 54143.

- 2005c Designation of Critical Habitat for *Brodiaea filifolia* (*thread-leaved brodiaea*); Final Rule." *Federal Register* 70: 73819– 73963.
- 2004 Endangered and Threatened Wildlife and Plants; Final Rule To Designate Critical Habitat for the Santa Ana Sucker (*Catostomus antaanae*). " *Federal Register* 69: 8839– 8861.
- 1998 *Vernal Pools of Southern California Recovery Plan*. Fish and Wildlife Service Region One, Portland, Oregon.
- 1995 "Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*). " *Federal Register* 70: 60885-61009.
- 1994 "Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Least Bell's Vireo." *Federal Register* 59: 4845-4867.
- 1990 *Natural History in the National Park System and on the National Registry of Natural Landmarks*. Natural Resources Report, NPS NR NRTR-90/03. Washington, D.C.: National Park Service.
- 1980 "Proposed Designation of Critical Habitat for Endangered Unarmored Threespine Stickleback." *Federal Register* 45: 76012– 76015.
- [USFS] United States Forest Service, United States Department of Agriculture.
- 2011 *Angeles National Forest website: Special Places*. Available on the internet at: <http://fs.usda.gov/angeles>
- 2010 *Station Fire BAER Revisit*. United States Department of Agriculture, Forest Service. Pacific Southwest Region, Angeles National Forest.
- 2009 *National Visitor Use Monitoring Results: Angeles National Forest*. Last updated 23rd March 2009. National Visitor Use Monitoring Program. Available on the internet at: http://www.fs.fed.us/recreation/programs/nvum/2009/Angeles_FY2006.doc
- 2007 *Recreation Facility Analysis: Five-Year Proposed Program of Work and Programmatic Effects of Implementation*. Available on the internet at: < <http://www.fs.fed.us/recreation/programs/rfa/index.shtml> >
- 2005 *Southern California National Forests Plan: Land Management Plan, Angeles National Forest Strategy*. R5-MB-075 Available on the internet at: <http://www.fs.fed.us/r5/scfpr/projects/lmp/>
- 2003a *Business Plan for the Angeles National Forest*. Pacific Southwest Region. R5-MB-020.
- 2003b *Comprehensive River Management Plan Sespe Creek, Los Padres National Forest*. Pacific Southwest Region, R5-MB-038.
- 2003c *Comprehensive River Management Plan Sisquoc River, Los Padres National Forest*. Pacific Southwest Region, R5-MB-039.
- 2003d *Comprehensive River Management Plan Big Sur River, Los Padres National Forest*. Pacific Southwest Region, R5-MB-027.
- 1999a San Dimas Experimental Forest Facilities Plan; <http://fireimaging.com/sdef/plan/index.html>
- 1986 *Cultural Resource Overview for the Angeles National Forest*, prepared by McIntyre, Michael
- [USGS] United States Geological Survey
- 2006 *Geologic History of the San Andreas Fault System*. Available on the internet at: http://geomaps.wr.usgs.gov/social/geology/geologic_history/san_andreas_history.html. Accessed, July 2006.
- University of California, Berkeley
- 2008 "Climate Change Could Severely Impact California's Unique Native Plants." *ScienceDaily*. Retrieved January 11, 2008, from <http://www.sciencedaily.com/releases/2008/06/080625073809.htm>

- UCLA (University of California, Los Angeles) Landscape Architecture Program
2006 *Saving the San Gabriel River*. Los Angeles, CA.
- Vance, Darrell (USFS, Angeles National Forest)
2007 Personal communication with Jean Boscacci, National Park Service, Pacific West Region.
- Vandergast, Amy G., Andrew J. Bohonak, Stacie A. Hathaway, Joshua Boysb, and Robert N. Fisher
2008 "Are hotspots of evolutionary potential adequately protected in southern California?" *Biological Conservation*. Vol 141, pp. 1648 – 1664
- Vandergast, Amy G., Andrew J. Bohonak, David B. Weissman, and Robert N. Fisher
2007 "Understanding the genetic effects of recent habitat fragmentation in the context of evolutionary history: phylogeography and landscape genetics of a southern California endemic Jerusalem cricket (Orthoptera: Stenopelmatidae: Stenopelmatius)." *Molecular Ecology*. Vol. 16, pp.977-992.
- Weber, Msgr. Francis J., editor
1979 *The Pride of the Missions*. Hong Kong: Libra Press Limited.
- Weigand, Peter W.
1982. *Middle Cenozoic Volcanism of the Western Transverse Ranges in Fife, D.L., and Minch, J.A., eds., Geology and mineral wealth of the California Transverse Ranges*. Santa Ana, Calif., South Coast Geological Society Annual Symposium and Guidebook, no. 10.
- Weiler, Stephan
2005, December "A Park by Any Other Name: National Park Designation as a National Experiment in Signaling." *The Federal Reserve Bank of Kansas City Economic Research Department, Research Working Paper*. RWP 05-09.
- Welles, Annette
1972 *The Los Angeles Guidebook*. Sherbourne Press.
- Wells, A.W., J.S. Diana, and C.C. Swift
1975 *Survey of the freshwater fishes and their habitats in the coastal drainages of southern California*. Final Report, Calif. Fish and Game, Inland Fisheries Branch, Sacramento.
- Western Oil and Gas Association
1965 *Highlights of California's Petroleum History*. Los Angeles: The Association.
- Whitley, David S., Ph.D.
2002 *National Register nomination form: Rock Art Sites of the Transverse Range Province, Southern California*. Prepared for the U.S. Forest Service, Angeles National Forest
- Wilson, Rick I. and Wayne Haydon
1998 *Seismic Hazard Zone Report for the Mint Canyon Quadrangle: Earthquake-Induced Landslide Zones in the Mint Canyon 7.5-Minute Quadrangle, Los Angeles County, California*. California Department of Conservation Division of Mines and Geology. Available on the internet at: ftp://ftp.consrv.ca.gov/pub/dmg/shezp/eval_rpts/mintc_eval.pdf
- Wilson, Rick I. and Janis L. Hernandez
2003 *Seismic Hazard Zone Report for the Acton Quadrangle: Earthquake-Induced Landslide Zones in the Acton 7.5-Minute Quadrangle, Los Angeles County, California*. California Department of Conservation Division of Mines and Geology. Available on the internet at: http://gmw.consrv.ca.gov/shmp/download/evalrpt/act_eval.pdfWoodburne, M.O.
1975 *Cenozoic stratigraphy of the Transverse Ranges and adjacent areas, southern California: Geological Society of America Special Paper 162*, 95 p.
- Workers of Writers Program of the Work Projects Administration
1941 *Los Angeles: A Guide to the City and its Environments*. Hasting House Publishers: New York.

- Wright, Lauren A. and Bennie W. Troxel
2002 *Levi Noble: Geologist: His Life and Contributions to Understanding the Geology of Death Valley, the Grand Canyon, and the San Andreas Fault*. USGS Open-File Report 02-422. United States Geological Survey, United States Department of the Interior.
- Yerkes, R.F., McCulloh, T.H., Schoellhamer, J.E. and J.G. Vedder.
1965 *Geology of the Eastern Los Angeles Basin, Southern California*. Geological Survey Professional Paper 420-A. United States Government Printing Office: Washington, DC.

Preparers

CORE STUDY TEAM

The core study team was based in the National Park Service's Pacific West Regional Office in Oakland, California. Core study team members were responsible for public involvement and outreach materials, research, writing and analysis related to study area resources, development of the alternatives, environmental compliance, and production of the draft study report.

Jean Boscacci, Outdoor Recreation Planner

Barbara Butler, Landscape Architect

Mamie Choy, Landscape Architect

Martha Crusius, Senior Planner, Project Manager

Brad Phillips, Outdoor Recreation Planner

EXTENDED STUDY TEAM

The extended study team included NPS Pacific West Regional Office staff that provided assistance and expertise for specific aspects of the study.

Jim Donovan, Rivers, Trails, and Conservation Assistance Program, Los Angeles. Participated in alternatives development, technical review of resource significance, public meeting facilitation.

Anne Dove, Rivers, Trails, and Conservation Assistance Program, Los Angeles. Contributed research and writing related to recreational resources, technical review of resource significance, participated in alternatives development, public meeting facilitation.

Peg Henderson, Rivers, Trails, and Conservation Assistance Program, Oakland. Contributed research and writing related to recreational resources and partnership opportunities.

Elaine Jackson-Retondo, Historian, National Register & National Historic Landmarks Program. Technical review of cultural resource significance.

Mark Rudo, Archeologist. Contributed analysis and writing related to archeological chronology and resources, technical review of cultural resource significance.

Robert Rossman, Environmental Compliance Specialist. Primary author of the environmental consequences.

Rose Rumball-Petre, Environmental Compliance Specialist. Technical review of resource significance.

Michael Sawlin, Geologist, National Natural Landmarks Coordinator. Provided guidance on geologic research and potential significance.

CONTRIBUTIONS FROM PARTNER AGENCIES

Agency partners assisted the study process by providing general advice and guidance, resource information, meeting facilitation, technical reviews, mailing lists, meeting sponsorship, etc.

Lower Los Angeles and San Gabriel Rivers and Mountains Conservancy

Jane Beesley, Deputy Executive Officer, Watershed Conservation Authority

Belinda Faustinos, Former Executive Officer

Valorie Shatynski, Deputy Executive Officer

Frank Simpson, Consultant

Luz Torres, Staff Biologist

Marybeth Vergara, Project Manager

U.S. Forest Service:

Marty Dumpis, Recreation, Heritage Resources, Special Uses, and Lands Staff Officer

Mike McIntyre, Los Angeles River District Ranger

Jody Noiron, Former Forest Supervisor

Darrel Vance, Forest Archaeologist/ Heritage Program Manager

L'Tanga Watson, San Gabriel River District Ranger

Sherry Rollman, Public Affairs Officer