RECON and Impact Sciences, Inc., "Biota Report: Newhall Ranch Specific Plan; Santa Clara River Valley, California; Tentative Tract Map 44831" (September 7, 1995; revised July 1996) PART 1 OF 2

Biota Report Newhall Ranch Specific Plan

Santa Clara River Valley, California Tentative Tract Map 44831

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I. PROJECT DESCRIPTION

a. Site Location and Size

The project site is located in an unincorporated portion of the Santa Clara River Valley in northwestern Los Angeles County. The site, approximately 11,963 acres in size, is located one-half mile west of the Golden State Freeway (I-5) and largely southwest of the junction of I-5 and State Route 126 (SR-126). Both the Santa Clara River and SR-126 traverse the northern portion of the project site. The regional location map (Figure BIO-1, Regional Location) and the site vicinity map (Figure BIO-2, Vicinity Map) illustrate the project site in its regional and local contexts, respectively.

b. Proposed Project

(1) Land Use Plan Summary

The applicant is currently requesting approval of the Newhall Ranch Specific Plan (and associated actions) which would permit the project site to be developed with the following:

- 24,680 dwelling units (plus up to 538 Second Units in the Estate Residential designation¹),
- 598 acres of Mixed-Use development, including 4,493 of the 24,680 dwelling units indicated above,
- 91 acres of Commercial uses,
- 256 acres of Business Park uses,
- 37 acres of Visitor-Serving uses,
- 1,089 acres of Open Area, including
 - 274 acres of Community Parks, and
 - 815 acres in other Open Area,
- 4,763 acres in Special Management Areas (permanent open area),
- 12 neighborhood parks,
- a 15-acre lake,
- a public trail system,
- a golf course,

Chapter 3.0 of the proposed Newhall Ranch Specific Plan specifies that Second Units are permitted by right in Estate Residential land use designation areas, and in Low Residential land use designation areas only through a one for one conversion of a single family detached dwelling unit. A Second Unit is defined as an additional dwelling unit located on the same lot as a single family detached residence which may contain its own kitchen facilities and may be rented, but not sold. Throughout this entire environmental impact report and in order to analyze a worst-case environmental condition, the proposed Specific Plan is analyzed as if it would actually result in the construction of 24,680 standard dwelling units plus the 538 Second Units (or a total of 25,218 total dwelling units).





FIGURE BIO-1 REGIONAL LOCATION





FIGURE BIO-2 VICINITY MAP

- two fire stations,
- one library,
- the reservation of five elementary school sites, one junior high school site, and one high school site,
- a two-acre electrical substation,
- a 7.7-million gallon per day Water Reclamation Plant within a new sanitation district, and
- other associated community facilities, such as roads and bridges.

The Land Use Plan is organized into the five villages of Riverwood, Oak Valley, Potrero Valley, Long Canyon, and The Mesas (Figure BIO-3, Land Use Plan and Figure BIO-4 Village Plan). The physical boundaries of each of these villages are defined by natural landmarks and topographical features. Each village would contain a focal point or activity core, differing in size and amenities according to the population and market served, with the largest villages to be anchored by a mixed-use center or core containing retail, office, residential, recreational, and public uses.

(2) Resources Management Plan

The size, topography, and other characteristics of the project site, made it possible, and desirable, to set aside a large portion of the site as Open Area in order to preserve biological resources. To facilitate this, a Resource Management Plan (RMP) was prepared as part of the Specific Plan for the project to manage important biological and other features of the site and to effectively incorporate them into the overall Specific Plan design. Resources and issues addressed within the Resource Management Plan include:

- the Santa Clara River SMA corridor (813 acres),
- the High Country SMA, a large block of relatively undisturbed habitats on higher elevations of the Santa Susana Mountains (3,950 acres),
- the Salt Creek drainage corridor, which serves as a major wildlife corridor,
- Open Area (1,089 acres),
- cultural resources, such as the Asistencia historical site,
- oak trees, and
- wildfire fuel modification for fire protection.

In addition, if necessary for Specific Plan impact mitigation, restoration and/or enhancement could occur in other portions of the site. These locations are identified in the Resources Management Plan contained in the Specific Plan.









Elements of the Resource Management Plan and the Recreation/Open Area Plan discussed below are presented on Figure BIO-5, Recreation/Open Area Plan.

(3) Recreation/Open Area Plan

The Recreation/Open Area Plan is consistent with the Los Angeles County <u>General Plan</u> and <u>Santa</u> <u>Clarita Valley</u> <u>Area Plan</u> goals and objectives, and delineates approximately 6,175 acres for parks, recreation, and Open Area. Land resources devoted to parks and Open Area for passive and active recreational uses, as well as preservation, make up approximately 52 percent of the Specific Plan area.

The Parks and Recreation/Open Area Plan delineates three community parks, twelve neighborhood parks, a network of trails and pathways, a golf course, and a community lake, as well as Open Area. The parks and Open Area are designed to provide for active and passive recreation, as well as for the preservation of environmentally sensitive resource areas.

(4) Conceptual Grading Plan

The Conceptual Grading Plan (Figure BIO-6, Conceptual Grading Plan), which identifies areas of proposed grading activities, would preserve major ridgelines and steep slope areas, and would balance cut and fill amounts on site. Within the development areas, site contours would be reconfigured to reduce slopes for efficient utilization and development of the property.

The Plan incorporates the Hillside Design Guidelines established by the Los Angeles County Department of Regional Planning (December 1987).

Project grading would require the movement of approximately 95 million cubic yards of earth. The grading would be balanced on site and would entail mass grading for development areas, final grading for development pads, remedial grading (depending upon future site-specific soils and geological investigations²), and custom grading.

Mass grading would consist of rough grading operations that would provide for the major roads and infrastructure, and for developable sites for the various land uses within the project. For each individual development project, a detailed final grading plan in accordance with Los Angeles County regulations would be submitted to the County for review and approval concurrently with the submittal of final site plans, construction-level subdivision maps, and other construction-level infrastructure

² Geotechnical conditions requiring remediation may include slope instability, settlement, and seismic conditions.









improvement plans. Slope stabilization measures, such as buttresses, may be included as part of remedial grading operations, depending upon the findings of detailed geotechnical studies that would be submitted along with future grading permit applications. Finally, custom grading would utilize limited grading techniques tailored to achieve specific estate home site design objectives, and would occur within parts of the estate residential planning areas of the villages and in limited areas of the High Country Special Management Area.

c. Permits Requested

The 1992 Land Use Policy map of the County of Los Angeles <u>General Plan</u> designates the Specific Plan site as Major Commercial, Non-Urban, Open Area, and Significant Ecological Area. The Land Use Policy Map of the <u>Santa Clarita Valley Area Plan</u> designates the Specific Plan site as Non-Urban 1 (0.5 and 0.05 dwelling units/acre), Non-Urban 2 (1.0 dwelling units/acre), Commercial, Industry, Floodway/Flood Plain, Floodway/Flood Plain/Significant Ecological Area, Hillside Management, and Hillside Management/Significant Ecological Area. The existing zoning of the Specific Plan site is Heavy Agricultural (A-2), with a 2.0 acre minimum lot size north of SR-126 (A-2-2), and a minimum lot size of 5.0 acres south of SR-126 (A-2-5). Therefore, the Specific Plan would require not only approval of the Newhall Ranch Specific Plan, but approval of a General Plan Amendment (including an amendment to the existing SEA boundaries), a Zone Change (to Specific Plan), and amendments to the County's <u>Master Plan of Highways</u>, <u>Master Plan of Trails</u>, and to the County's demographic projections for the <u>Santa Clarita Valley Area Plan</u>. Table BIO-1 (Requested Planning Designation Changes) summarizes the changes requested for implementation of the proposed project.

In addition to the General Plan and zoning changes necessary for approval of the Specific Plan, the project applicant is also asking for the following entitlements from the County:

- Amendments to the County General Plan and Santa Clarita Valley Area Plan, including:
 - Amendments to Land Use and other Policy Maps,
 - Amendment to the County <u>Master Plan of Highways</u> to delete Pico Canyon Road as a Major Highway, add other highways, and change the designations of certain highways,
 - Amendment of demographic projections for the Specific Plan area,
 - Amendment to the Master Plan of Trails to permit realignment of the Pico Canyon Trail,
 - Amendment to the Scenic Highways Map to delete SR-126 as a First Priority Route for Further Study and replace with Specific Plan provisions;
- Approval of a Significant Ecological Area Conditional Use Permit for the Specific Plan, land uses and permitted uses within the SEAs, proposed changes in SEA boundaries, and the large parcel map (VTPM 24500);
- Adoption of the Newhall Ranch Specific Plan as zoning;
- A large lot (40 acre minimum lot size) parcel map;
- a Development Agreement; and
- Construction of a new Water Reclamation Plant.

	Existing Designation	Proposed Designation
County General Plan	- Major Commercial	
	- Non-urban	
	- Open Area	
	- Significant Ecological Area	- Specific Plan
Santa Clarita Valley Area Plan	5 5	1
2	- Non-urban 1 (0.5 DU/acre)	
	- Non-urban 1 (0.05 DU/acre)	
	-Non-urban 2 (1.0 DU/acre)	
	- Commercial	- Specific Plan
	- Industry	- F
	- Hillside Management (HM)	
	- HM/Significant Ecological Areas (SEA)	
	- Floodway/Flood Plain (W)	
	- W/SEA	
County Zoning Ordinance	- Heavy Agricultural $(A-2-2)^{1}$	- Specific Plan
county zoning ordinance	- Heavy Agricultural (A-2-5)	- Specific I lan
	- meavy Agricultural (A-2-5)	

Table BIO-1 Requested Planning Designation Changes

Source: Draft Newhall Ranch Specific Plan (July 1996).

¹With a 2.0 acre minimum lot size north of SR-126 (A-2-2), and a minimum lot size of 5.0 acres south of SR-126 (A-2-5).

[The above list is as complete as possible at the time of this writing. If/when additional entitlement requests are identified, they will be added.]

In order to grant such approvals, the County of Los Angeles, acting as the Lead Agency, must certify that an EIR has adequately described the potential impacts of the proposed Specific Plan.

The project would require approval by the County of various tract maps, parcel maps, conditional use permits, and oak tree permits necessary to implement the Specific Plan. These will be obtained in phases over buildout of the Specific Plan. Additional permits or approvals would also be required from the various Responsible Agencies identified in Table BIO-2 (Future Responsible Agency Actions).

The EIR being prepared by the County is analyzing a Specific Plan and not a Tentative Tract Map. As is normal for Specific Plan EIRs, the EIR is intended to be programmatic in nature and does not analyze the more micro-scale impacts the Plan might generate. Rather it focuses on the macro-scale impacts of the Plan. The micro-scale impacts would be analyzed in future years as part of the environmental review processes (including possible Negative Declarations and project-level EIRs) of individual tract map applications that will be submitted over the buildout of the Specific Plan.

	Responsible Agency	Action Required
٠	U.S. Army Corps of Engineers	Section 404 permit of the Federal Clean Water Act
•	U.S. Fish and Wildlife Service	Section 7 and/or Section 10 consultations as required by the Federal Endangered Species Act
•	California Department of Fish and Game	Section 1601/1603 permit of the State Fish and Game Code
•	California Department of Transportation	Encroachment Permit
٠	Regional Water Quality Control Board	National Pollutant Discharge Elimination System permit and Section 401 permit of the Federal Clean Water Act
٠	South Coast Air Quality Management District	Various rules permits for air emissions regulation found in the Air Quality Management Plan
٠	Local Agency Formation Commission	Approval of new County sanitation district and school district boundary reorganization
-		

Table BIO-2 Future Responsible Agency Actions¹

¹This table is not intended to provide the complete and final listing of future actions required to implement the project. This is an attempt to identify those actions which are known at this time to be required in the future

d. Summary of Significant Impacts

Impacts on the biological environment are discussed and described in Section III of this report. In summary, the project would have unavoidable and significant project-specific impacts on several sensitive upland habitat types (including coastal sage scrub and oak woodlands), and the sensitive wildlife associated with upland habitats on the site (including San Diego coast horned lizard, California horned lizard, coastal western whiptail, southern California rufous-crowned sparrow, San Diego desert woodrat and San Diego black-tailed jackrabbit, and others). Also, due to the conversion of approximately 5,132 acres of habitat that is in a largely natural condition to a suburban and urban condition and the reduction in open land available for wildlife movement between the River and upland areas, the project would substantially diminish habitat for fish, wildlife and plants, and would significantly impact the movement of resident wildlife species. Consequently, the project's individual and cumulative impacts on the site's and the regional biotic environment are considered significant impacts that cannot be mitigated. Mitigation is proposed or required that would reduce other biological impacts to levels that are not significant.

II. SETTING

a. Color Aerial Photograph of the Site

A color aerial photograph of the site is provided in a pocket at the end of this report (identified as Appendix A).

b. Color Site Photographs

Color photographs of the site which are considered representative of the site's existing condition are incorporated as Appendix B (Color Site Photographs) and are located in a pocket at the end of this report.

c. USGS Topographic Maps

United States Geological Survey (USGS) topographic maps of the site are incorporated as Appendix C (USGS Topographic Maps) and are provided in a pocket at the end of this report. Site boundaries occur on three separate topographic maps that include Val Verde, East Simi Valley, and Newhall.

d. Drainage Patterns

(1) Santa Clara River Watershed

The project site is located within the Santa Clara River basin and its watershed. That portion of the Santa Clara River watershed situated upstream, or generally east of the site, is approximately 640 square miles in size and drains portions of the Los Padres National Forest from the north, the Angeles National Forest from the northeast and east and the Santa Susana Mountains from the south and southeast. The Newhall Ranch project site incorporates approximately 18.7 square miles of the 640 square mile Santa Clara River watershed (or approximately 3 percent of the total watershed area).

(2) Drainage Areas

Ten drainage areas are located within the project site either wholly or partially, all of which are part of the Santa Clara River watershed. Combined, the ten drainage areas total 20,724 acres, of which 11,963 acres occur within the Newhall Ranch project site and approximately 8,761 acres being off the project site. Drainage areas are located within an area that is generally delineated by SR-126 and lower portions of San Martinez Grande and San Martinez Chiquito Canyons on the north, the Magic Mountain Theme Park to the east, the crest of the Santa Susana Mountains to the south, and the Los Angeles/Ventura County line on the west. Figure BIO-7 (Existing Drainage Areas), illustrates the locations of drainage areas on the site, identifying them as Drainage Areas 1 through 10. Figure BIO-7 also illustrates the locations of blueline streams that are mapped on the site. Each of the Drainage Areas are described in Table BIO-3 (Existing Drainage Areas), in terms of their total acreage, linear feet and acreage within the Newhall Ranch project.

	Existing Drainage Areas	i	<u> </u>
Drainage Area	Tributary Drainage Course	Acreage ¹	Linea: Feet ²
1	Unnamed	1.726	3.000
2	Salt Canyon	4,035	55,670
3	Potrero Ćanvon	3,220	33.330
4	Unnamed	1,305	8,830
5	Unnamed	1.268	12.420
6	Unnamed	1,265	17.040
7	San Martinez Grande Canvon	2,433	5.250
8	San Martinez Chiquito Canvon	4,714	8.330
9	Unnamed	391	8,500
10	Unnamed	967	1.920

Source: Sikand Engineering Associates (April 1995).

¹The acreages are for the entire drainages, portions of which are located off the Newhall Ranch site. Each was calculated by Sikand Engineering Associates. ²The lengths shown are for watercourses within the project boundaries only, and were calculated by Impact Sciences Inc. to the nearest 10 feet.

(3) Watercourses

(a) Santa Clara River

The Santa Clara River, which is the largest river system in southern California that remains in a relatively natural state,³ is the largest watercourse on the project site. It flows through the northern portion of the site from east to west. Many earthen crossings have been in place on the River in the past and are still used today. These crossings provide farmers and ranchers access and water to land south of the River.

³ California Regional Water Quality Control Board, Los Angeles Region, <u>Draft Water Quality Control Plan</u>, (Monterey Park, California: June 13, 1994), p. 1-18.



	NEN	WH. Ranch	ALL	RA	NCH.	
L	E	G	Е	N	D	
LEGEND DRAINAGE BOUNDARY ORAINAGE AREA NUMBER NOT WITHIN PROJECT DRAINAGE AREAS BLUELINE STREAMS						
100 ACRES	400 ACR	English ES Hotric	€ 1000 ⁻ 0 220m	27 80ENCE8		
EXIS AN	TINC ND F	DR	AIN/	FIGU AGE E STI	JRE BIO-7 AREAS REAMS	

(b) Tributary Drainage Courses

Each of the drainages illustrated in Figure BIO-7 has been mapped as blueline streams by the U.S. Geological Survey (USGS). While it is the intent of the USGS to indicate that blueline streams are flowing perennial streams, in arid states such as California and in particular southern California, this is not always the case. As an example from the project site, a blueline stream mapped in upper Potrero Canyon contains water only during and shortly after rainy periods. During non-rainy periods (which is the majority of the time in southern California), this stream contains no water and is an ephemeral stream. The same is true for each of the unimproved drainages found on the project site. The length of each watercourse within the project boundaries is listed in Table BIO-2 by the drainage area in which it is located. With the exception of drainage crossings under SR-126, all of the other watercourses within the project boundaries are unimproved. Regarding the SR-126 drainage crossings, Caltrans is designing a roadway widening project for SR-126 at the time of this writing which includes existing drainage structure modification.

e. Geological Features

The project site is located within the tectonically active Transverse Ranges of southern California and is cut by segments of the potentially active Del Valle and Salt Creek Faults. The very northeastern tip of the site near Castaic Junction is part of the Holser Structural Zone and may include the Holser Fault. Bedrock formations found on the site include the Modelo, Towsley, Pico, Saugus, and Pacoima Formations, as well as Quaternary Terrace Deposits. Surficial deposits include quaternary alluvium, slopewash, soil, and artificial fill. In addition, numerous landslides, ranging from shallow surficial failures to large megalithic landslides, are present on Newhall Ranch.

A topographic map of the Newhall Ranch is provided as Appendix D (Topography and Place Names) and is included in a pocket at the end of this report. This topographic map identifies the various canyons, ridges and other significant landmarks on the Newhall Ranch site. As illustrated, site topography is dominated by east, west, and northwest trending primary ridges with generally north-and south-trending secondary ridges. Site elevations range from approximately 825 feet above mean sea level in the Santa Clara River bottom at the County line to approximately 3,200 feet above mean sea level on the ridgeline of the Santa Susana Mountains along the southern edge of the site. Slope gradients vary from moderate to steep in the hillside areas to very gentle within the Santa Clara River flood plain, major tributary canyons, and on uplifted terrace (mesa) surfaces adjacent to the river. Approximately 46 percent of the project site is comprised of slopes less than 25 percent in gradient.

Distinctive elevated features include Sawtooth Ridge along the northeastern side of Long/Adobe Canyon, Ayers Rock at the northern edge of Potrero Canyon, and various mesas which lie above the river along its southern bank. There are other numerous distinctive ridges within the Santa Susana Mountains, which compose the southernmost portion of the property.

f. Ecological Characteristics of the Project Site

(1) Project Description

(reference Section I b. of this report)

(2) General Description of Habitats and Vegetation Communities Present

Information on biological resources for Newhall Ranch is derived from surveys conducted on the site by RECON in spring and summer of 1995. Supplemental information was also obtained from other biological reports prepared on the Newhall Ranch over the past eight years.

Habitat descriptions used in this report are based largely on the previous surveys with updates based on the 1995 RECON surveys. Floral and faunal lists of observed species on the Newhall Ranch are derived principally from the 1995 RECON surveys with some reference to previous surveys.

A description of all habitat types identified on the Newhall Ranch are provided below following a description of the field surveys performed and an identification of methods used in the field.

(a) A Summary of Biota Surveys Conducted On and Near the Newhall Ranch Site

A number of biological resource surveys have been conducted on and near the Newhall Ranch over the past eight years. Information derived from these surveys is incorporated into this Biota Report in appropriate sections. A brief summary of the type of survey and methodology used for these recent studies is provided below.

Various studies of the biological resources have occurred along the Santa Clara River which focused on the location of sensitive bird and fish species, mapping of habitat types along the river, and upland surveys and habitat mapping of the Ranch. Bird surveys were conducted along the river from 1988 through 1995. Fish surveys associated with the reconstruction of berms and maintenance of river crossings were conducted from 1989 through 1993, while habitat mapping of the riparian corridor of the Santa Clara River on the Ranch was conducted in 1993. General biology surveys and habitat mapping of the upland portions of the Ranch were conducted from 1992 to present.

Bird Surveys -- Bird surveys focused on the directed search for least Bell's vireo (Vireo bellii pusillus) were conducted by Daniel Guthrie from 1988 through 1995 on and near the Newhall Ranch site. These surveys followed U.S. Fish and Wildlife survey protocol for the least Bell's vireo. In addition, a list was compiled of all other bird species observed during the vireo surveys each year, with special notes made on other sensitive birds observed or detected. The results of these surveys are reported under the appropriate sensitive species section later in the report.

Avian surveys conducted by Daniel Guthrie included:

- Spring and early Summer 1988 A survey was conducted in the vicinity of Valencia, California to
 determine the status of the least Bell's vireo in the region. The areas surveyed were the Santa
 Clara River from the mouth of Castaic Creek upstream to Bouquet Canyon Road crossing, Castaic
 Creek from the Santa Clara River to I-5, and a riparian section of San Francisquito Creek about a
 mile from the Santa Clara River (Guthrie 1988).
- Spring and early Summer 1989 A survey was conducted in the vicinity of Valencia, California to
 determine the status of the least Bell's vireo in the region. The areas surveyed were the Santa
 Clara River channel from the mouth of Castaic Creek upstream to Bouquet Canyon Road crossing,
 Castaic Creek from the Santa Clara River to I-5, and a riparian section of San Francisquito Creek
 about a mile from the Santa Clara River (Guthrie 1989).
- Spring and early Summer 1990 A survey was conducted in the vicinity of Valencia, California to
 determine the status of the least Bell's vireo in the region. The areas surveyed were the Santa
 Clara River channel from the mouth of Castaic Creek upstream to Bouquet Canyon Road crossing,
 Castaic Creek from the Santa Clara River to I-5, a riparian section of San Francisquito Creek about
 a mile from the Santa Clara River, South Fork of Santa Clara River (McBean Parkway to Magic
 Mountain), and South Fork of Santa Clara River from SR-126 to Newhall Creek (Guthrie 1990).
- Spring and early Summer 1992 A survey was conducted in the vicinity of Valencia, California to determine the status of the least Bell's vireo in the region. The areas surveyed were the Santa Clara River channel from the mouth of Castaic Creek upstream to Bouquet Canyon Road crossing, Castaic Creek from the Santa Clara River to I-5, and a riparian section of San Francisquito Creek

about a mile from the Santa Clara River (Guthrie 1992a). In addition, bird surveys centered on the least Bell's vireo and other sensitive bird species were conducted at two proposed pipeline crossings of the Santa Clara River. One crossing site was near Las Brisas bridge in Ventura County. The other crossing site surveyed was located just west of Castaic Junction (Guthrie 1992b).

- Spring and early Summer 1993 Surveys for least Bell's vireo and other sensitive bird species were conducted along the section of the Santa Clara River from the confluence with Castaic Creek, west to Las Brisas bridge in Ventura County (Guthrie 1993).
- Spring and Summer 1994 Surveys for the least Bell's vireo along the Santa Clara River from Castaic Creek to near Las Brisas bridge were conducted (Guthrie 1994).
- Spring and Summer 1995 Surveys for least Bell's vireo and other sensitive bird species were conducted along the section of the Santa Clara River from the confluence with Castaic Creek, west to Las Brisas bridge in Ventura County (Guthrie 1995a).
- Spring and early Summer 1995 A survey was conducted in the vicinity of Valencia, California to determine the status of the least Bell's vireo in the region. The areas surveyed were the Santa Clara River channel from the mouth of Castaic Creek upstream to the Bouquet Canyon Road crossing, Castaic Creek from the Santa Clara River to I-5, a riparian section of San Francisquito Creek about a mile from the Santa Clara River, Castaic Creek to its confluence with SR-126, Castaic Creek from SR-126 to I-5, South Fork of Santa Clara River (McBean Parkway to Magic Mountain), and the South Fork of Santa Clara River from SR-126 to Newhall Creek (Guthrie 1995b).

River Surveys – Documentation of fish as well as selected reptiles and amphibians within the Santa Clara River on and near the Newhall Ranch site were conducted from 1989 through 1993. Thomas Haglund and Jonathan Baskin were the primary biologists involved in these surveys. These surveys focused on the detection of the unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*) and other sensitive fish (e.g., Santa Ana sucker [*Catostomus santaanae*], arroyo chub [*Gila orcutti*]), reptiles (e.g., southwestern pond turtle {*Clemmys marmorata pallida*], two-striped garter snake [*Thamnophis hammondii*]), and amphibians (e.g., California toad [*Bufo boreas halophilus*], arroyo toad [*Bufo microscaphis californicus*], California red-legged frog [*Rana aurora draytonii*]) that have the potential to occur in the study areas. All surveys were conducted according to appropriate state and federal survey protocols. Results of these studies are presented under the appropriate sensitive species discussion later in this report. The following studies by Haglund or Baskin included the following:

- 1989 A report was prepared on the occurrence of the unarmored threespine stickleback in portions
 of the Santa Clara River on the Ranch. The study was conducted to determine the degree to which
 the endangered subspecies is represented in the stickleback population within the study area
 (Haglund 1989).
- 1992 Fish surveys were conducted on the Santa Clara River as part of the conditions of a California Department of Fish and Game Streambed Alteration Agreement for the maintenance of river crossings on The Newhall Land and Farming Company holdings. The surveys were conducted at Alfalfa Crossing, Humble Crossing, Salt Creek Crossing, Mayo Crossing and Long Canyon Crossing (Baskin and Haglund 1992).
- 1992 Sensitive aquatic species surveys were conducted at two proposed pipeline crossings of the Santa Clara River. One crossing site was near the Las Brisas bridge in Ventura County, while he other crossing site surveyed was just west of Castaic Junction on Newhall Ranch. Species surveyed for included two-striped garter snake, California red-legged frog, unarmored threespine stickleback, Santa Ana sucker and arroyo chub (Haglund 1992).
- 1993 Fish surveys associated with the construction of a diversion berm on the Santa Clara River near Castaic Junction were conducted to minimize any impacts to these sensitive animals. Fish and amphibian species of concern included California red-legged frog, unarmored threespine stickleback, Santa Ana sucker, and arroyo chub (Baskin and Haglund 1993).
- 1995 Surveys designed to document the presence/absence and distribution of sensitive aquatic species including fish, reptiles and amphibians in the Santa Clara River between the Castaic Creek confluence and Bouquet Canyon Road bridge were conducted during May and June (Haglund and Baskin 1995).

Habitat Mapping on the Santa Clara River – In 1993, RECON biologists mapped the distribution of riparian habitat types along the Santa Clara River corridor for The Newhall Land and Farming Company (RECON 1993). Riparian habitats within the river corridor were mapped on 1'' = 400' scale orthophoto maps in December of 1993. Habitat mapping covered the river corridor from the western extent of The Newhall Land and Farming Company ownership in Ventura County to the confluence of the river with Castaic Creek in Los Angeles County. The entire length of the river was walked, riparian habitats were identified according to descriptions contained in Holland (1986) and their boundaries mapped.

General Biology Surveys and Habitat Mapping of Uplands on the Ranch — A report was prepared for The Newhall Land and Farming Company which provided descriptive information and mapping of the distribution of vegetation types and associated wildlife occurring on the Newhall Ranch site (Dames & Moore 1993; Appendix E). Information on sensitive species and habitats was also presented. Biological resource studies were conducted by Dames & Moore biologists in the spring and summer of 1992. These surveys included vegetation mapping on 1'' = 400' scale base maps, rare plant surveys, two surveys for common and sensitive species with emphasis on birds and sensitive wildlife species, two nights of small mammal trapping, one evening of spotlight surveys and incidental observations of wildlife species during the above surveys. Results of the Dames & Moore surveys are discussed under the appropriate sections of this Biota Report.

Biological Resource Surveys Conducted by RECON in 1995 – The following section describes the results of biota surveys conducted by RECON on the Newhall Ranch project site in 1995. A description of the survey methodologies used as well as a summary of the survey personnel and survey times and dates is included in the discussion. Subsections describe the flora and fauna observed during the current surveys and a description of the habitats present on the property.

Survey Methodology -- Current biological resource surveys conducted by RECON occurred between March 15 and August 3, 1995. Specific dates and times of the surveys are provided in Table BIO-4 (Dates and Times of 1995 Biological Surveys on the Newhall Ranch Property). The following RECON biologists participated in the surveys; botanical surveys: Gerry Scheid, Bobbie Stephenson, Julie Vanderwier; wildlife surveys: Rick Eisenbart, Pete Famolaro, Mark Dodero; butterfly surveys: Jessa Netting, Terri Ayres. Resumes listing the qualifications of each of these personnel is given in Appendix F.

General botanical and wildlife surveys were conducted by walking in representative habitat types found on the various portions of the Newhall Ranch site. An effort was made to visit many different areas on the Ranch to sample the diversity of topography and local micro-environmental conditions. The many dirt roads on the property aided in access to the majority of the site, while long hikes were required to reach the more remote areas of the site. Weather conditions during the surveys ranged from warm days and cool nights in the spring (March - May) to hot days and warm nights in the summer (June - August). Winds were typically low to none in the early morning and breezy in the afternoons.

Plant species identifications were done in the field when possible, but some species were collected, pressed, and identified in the laboratory. All plant species identifications follow the nomenclature used in the Jepson Manual (Hickman 1993). Wildlife species identifications relied on direct observation of animals, often with the aid of binoculars and by indirect means such as the

identification of calls (i.e., birds, amphibians) and observation of animal sign (e.g., tracks, scat, nests, etc.). Manuals used in the identification of wildlife species include: birds (National Geographic 1983), mammals (Burt and Grossenheider 1976), small mammals (Roest 1980; Ryan 1968), reptiles and amphibians (Stebbins 1985; Sweet 1992), animals tracks (Brown 1983, Halfpenny and Biesiot 1986), and butterflies (Emmel and Emmel 1973; Garth and Tilden 1986; Mattoni 1990).

In addition to the general wildlife surveys conducted, three focused surveys were performed; small mammal trapping, an amphibian survey, and butterfly surveys. The methods used for each survey are described below.

Dates and Times of 1995 Biological Surveys on the Newhall Ranch Property				
Date	Time	Survey type/Personnel		
March 28	8:00 am - 5:00 pm	General Botany/Wildlife -Gerry Scheid, Bobbie Stephenson		
March 29	8:00 am - 5:00 pm	General Botany/Wildlife -Gerry Scheid, Bobbie Stephenson		
March 30	8:00 am - 5:00 pm	General Botany/Wildlife -Gerry Scheid, Bobbie Stephenson		
April 10	8:00 am - 5:00 pm	General Botany/Wildlife/Butterfly - Gerry Scheid, Julie		
*	1	Vanderwier, Rick Eisenbart, Pete Famolaro, Jessa Netting, Terri		
		Ayers		
April 11	8:00 am - 5:00 pm	General Botany/Wildlife/Butterfly - Gerry Scheid, Julie		
,	7:30 pm - 9:30 pm	Vanderwier, Rick Eisenbart, Pete Famolaro, Jessa Netting, Terri		
		Ayers; Nighttime amphibian surveys - Gerry Scheid, Rick		
		Eisenbart		
April 12	8:00 am - 5:00 pm	General Botany/Wildlife - Gerry Scheid, Julie Vanderwier, Rick		
-	7:30 pm - 9:30 pm	Eisenbart, Pete Famolaro; Nighttime amphibian surveys - Gerry		
		Scheid, Rick Eisenbart		
April 13	8:00 am - 5:00 pm	General Botany/Wildlife - Gerry Scheid, Julie Vanderwier, Rick		
-	7:30 pm - 9:30 pm	Eisenbart, Pete Famolaro; Nighttime amphibian surveys - Gerry		
_		Scheid, Rick Eisenbart		
April 14	8:00 am - 5:00 pm	General Botany/Wildlife - Gerry Scheid, Julie Vanderwier, Rick		
-		Eisenbart, Pete Famolaro; Nighttime amphibian surveys - Gerry		
	_	Scheid, Rick Eisenbart		
April 29	8:00 am - 3:00 pm	General Botany - Gerry Scheid		
May 16	8:00 am - 5:00 pm	General Botany/Wildlife - Gerry Scheid, Julie Vanderwier		
May 17	8:00 am - 5:00 pm	General Botany/Wildlife/Butterfly - Gerry Scheid, Julie		
		Vanderwier, Jessa Netting, Terri Ayers		
May 18	8:00 am - 5:00 pm	General Botany/Wildlife - Gerry Scheid, Jessa Netting, Terri Ayers		
June 19	4:00 pm - 8:00 pm	Small Mammal Trapping - Gerry Scheid, Rick Eisenbart, Pete		
	6.00	ramolaro, Mark Dodero		
June 20	6:00 am - 8:00 am	Small Mammal Trapping - Gerry Scheid, Rick Elsenbart, Pete		
	8:00 am - 4:00 pm	Pamoiaro, Mark Dodero General Dotany/Wildlife/Dutterily -		
	4:00 pm - 8:00 pm	Gerry Scheid, Rick Eisendari, Pete Famolaro, Mark Dodero, jessa		
X	(00 0.00	Netting		
June 21	6:00 am - 0:00 am	Small Walminal Trapping - Gerry Scheid, Nick Elsenbart, Pete		
	5:00 am - 4:00 pm	Famolaro, Mark Dodero General Dotany) Whather Dutterny -		
	4:00 pm - 8:00 pm	Gerry Scheid, Nick Eisenbart, Pere Pamoiaro, Mark Dodero, Jessa		
L	6.00 am 8-00 am	Netting Small Mammal Teanging Come Caboid Diek Eicenhart Pote		
June ZZ	8.00 am = 12.00 am	Famalara Mark Dadara Conser Batany Wildlife - Corry Scheid		
	8:00 am - 12:00 pm	Piak Eisenhart Pote Esmolaro Mark Dodero		
L.k. 19	400 pm 800 pm	Conseril Reference/Wildlife/Amphibian - Corry Scheid Rick		
July 12	4:00 pm + 8:00 pm	Ficenbart		
T	8:00 mm - 2:00 mm	Ceneral Botany/Wildlife/Amphikian - Cerry Scheid Rick		
July 15	5.00 ant - 200 pm	Fisonbatt		
Assessed 1	8:00 am - 5:00 pm	General Botany/Wildlife/Amphihian - Cerry Scheid Rick		
August I	0.00 am - 0.00 pm	Fisenhart		
August 2	8:00 am - 5:00 pm	General Botany/Wildlife/Amphibian - Gerry Scheid, Rick		
1 JUGUDI Z	olop and place that	Eisenbart		
August 3	8:00 am - 5:00 pm	General Botany/Wildlife/Amphibian - Gerry Scheid, Rick		
	The second se	Eisenbart		

	Table BlO-4		
Dates and Times of 1995	Biological Surveys on	the Newhall Ranch H	Property

• Small Mammal Trapping — Three nights of small mammal trapping were conducted on the project site during the evenings of June 19, 20, and 21. The goal of the trapping effort was to capture as many different species of small mammals as possible. As such, the sensitivity of the traps was not set to exclusively capture any one taxon. However, one of the field personnel conducting the trapping effort has extensive experience trapping in desert areas and has captured mice in the genus *Perognathus*. This trapping effort captured small mammals of a variety of weights, including those in the genus *Peromyscus*. Given the size of the property, it was decided that the trap lines would be moved to a new location each night in order to sample a higher diversity of habitat conditions on the property. Six trap lines were set out each night with each line consisting of between 25 and 30 Sherman live traps baited with oatmeal and bird seed. The traps were set at a particular location during the late afternoon and checked early the next morning. A total of 543 trap nights were accomplished. The locations of the various trap lines and capture data are given in Table BIO-5 (Location, Number of Traps, and Results of 1995 Small Mammal Trapping on the Newhall Ranch Property).

	Number of	
Lower Potrono - coastal sage scrub	20	Bruch mouse (1) Door mouse (4)
Middle Potrono - grassland	20	Bruch mouse (1)
Middle Potrere - coastal and a small	30	Brush mouse (1)
Mildale Potrero - coastal sage scrib	20	Drush mouse (1)
Long Canyon - coastal sage scrub	30	pocket mouse (1)
Long Canyon - coastal sage scrub	34	Pacific kangaroo rat (2), Dusky-footed woodrat (1)
Upper Potrero - oak woodland	34	Brush mouse (1)
Lower Lion Canyon - river flood	25	Deer mouse (3), Pacific kangaroo rat (1)
plain/alluvial scrub		.
Upper Lion Canvon - alluvial	30	Pacific kangaroo rat (3)
scrub/chaparral		0 ()
Canyon west of Grape Vine Mesa -	30	None
oak woodland		
Middle Canvon - coastal sage	42	Deer mouse (2), San Diego desert woodrat (2)
scrub/oak woodland		· · · · · · · · · · · · · · · · · · ·
Middle Canvon - coastal sage scrub	30	California pocket mouse (1), Deer mouse (1)
Middle Canyon - coastal sage scrub	26	Deer mouse (8), Brush mouse (5), Pacific kangaroo rat (2)
Salt Creek Canvoo - mule fat scrub	29	None
Salt Creek Canyon - great basin scrub	30	Pacific kangaroo rat (2)
High Country - mixed chaparral/oak	30	California pocket mouse (1)
woodland		
High Country - mixed chaparral	25	Brush mouse (2), Pacific kangaroo tat (1)
High Country - grassland/coastal sage	32	Pacific kangaroo rat (3).
comb		
High Country - mixed chaparral	30	Pacific kangaroo rat (4)

 Table BIO-5

 Location, Number of Traps, and Results of 1995 Small Mammal Trapping on the Newhall Ranch Property

In association with the small mammal trap program, scent stations were placed in the field. Scent stations consisted of an area cleared of annual vegetation and swept level with a broom. They were then baited with fish (e.g., kipper snacks, jack mackerel). The scent stations were checked the following moming and any animal tracks observed were identified. Scent stations were located near trap lines set in Salt Creek Canyon and in the High Country.

- Amphibian Survey Amphibian surveys were conducted on the evenings of April 10, 11, and 12, 1995. Survey methodology followed that used by Sweet (1992) for arroyo toads and included the location of appropriate breeding pools with proper adjacent upland habitat, being in position prior to 30-40 minutes after sunset to hear calls and minimize disturbance to breeding toads, surveying on evenings when air temperature is not below 56 degrees F, surveying on evenings with no wind, surveying on evenings not within 2-3 nights of a full moon, water temperatures above 58 degrees F at edge of breeding pools, and minimizing noise while approaching within 100 yards of a potential breeding pool. Locations of potential breeding pools for various frogs and toads along the Santa Clara River and Castaic Creek were noted during the daylight hours. These locations were then carefully visited at night (as stated above) to detect any toads, frogs, or other night time wildlife associated with wet conditions. Amphibians were identified by direct observation, with the aid of a flashlight, or by call. Some additional observations of amphibians were made by direct observation during daylight hours while conducting the general wildlife surveys on July 12 and 13, and August 1, 2, and 3. Manuals used to identify frogs and toads include Stebbins (1985) and Sweet (1992).
- Butterfly Survey -- Focused butterfly surveys were conducted over a three month period (April 10 and 11; May 17 and 18; June 20 and 21), two days each month, to sample the diversity of this insect type on the Ranch property. Conditions on the days of the surveys and geographical information of where the surveys took place are described in Table BIO-6 (Butterfly Survey Information). Up to six people were employed during the surveys within the various habitats on the project site. Butterflies were captured using sweep nets and identified. Initially, representative individuals of each species that were captured were placed in "kill jars" for later identification. The identification of the butterfly species follows the nomenclature used in Mattoni (1990). After a species had been caught and identified, any additional individuals of that particular species caught were released unharmed. Additional observations of butterflies were conducted during the general wildlife and botanical surveys.

Habitat Mapping – Habitat mapping of the Newhall Ranch property was conducted by Dames & Moore during their 1993 surveys in upland portions of the site (Dames & Moore 1993; Appendix E). The boundaries of the vegetation types were mapped on 1'' = 400' feet scale base maps with the aid of aerial

photographs. Field surveys conducted by RECON in 1995 verified these boundaries and a habitat/vegetation map is provided as Figure BIO-8 (Existing Vegetation/Habitat). Additional habitat mapping was conducted by RECON in 1995 along two proposed off-site road alignments; the extension of Magic Mountain Parkway, and the extension of Valencia Boulevard. Habitats were mapped on 1'' = 200' topographic maps with the aid of a 1993 aerial photograph. A habitat map along these road alignments is provided as Figure BIO-9 (Impact to Off-site Vegetation/Habitat). All habitat information was transferred to digital databases for mapping and planning purposes.

Date	Time of Survey	Weather Conditions	Geography of Search Locations
April 10, 1995	9:30 am - 4:30 pm	cool morning, warm afternoon; early morning overcast, late morning and afternoon sunshine; no wind early; late morning through afternoon light winds	morning - exposed ridges and grasslands; afternoon sheltered canyons and drainages.
April 11, 1995	9:30 am - 4:30 pm	cool morning, warm afternoon; early morning overcast, late morning and afternoon sunshine; light wind early, late morning through afternoon moderate winds	morning - exposed ridges and grasslands, open sage and chaparral; afternoon sheltered canyons and drainages, woodlands.
May 17, 1995	9:00 am - 4:30 pm	warm days; sunshine all day; light breeze morning, windy afternoon.	morning - exposed ridges and grasslands, open sage and chaparral; afternoon sheltered canyons and drainages, woodlands.
May 18, 1995	9:00 am - 4:30 pm	warm days; sunshine all day; light breeze all day	morning - exposed ridges and grasslands, open sage and chaparral; afternoon sheltered canyons and drainages, woodlands.
June 20, 1995	8:00 am - 5:00 pm	Warm mornings, hot afternoons; sunshine all day; light to moderate winds all day	early morning exposed grasslands and ridges; late morning and afternoon brushlands and woodland of canyons/drainages.
June 21, 1995	8:00 am - 5:00 pm	Warm mornings, hot afternoons; sunshine all day; light to moderate winds all days	early morning exposed grasslands and ridges; late morning and afternoon brushlands and woodland of canyons/drainages.

Table BIO-6

(b) Description of Habitats

The majority of the Newhall Ranch property addressed in this Biota Report descends from high country chaparral and oak woodlands of the Santa Susana Mountains down the north-facing coastal sage scrub-covered slopes to the riparian scrubs and woodlands of the Santa Clara River. The northern one-quarter of the site encompasses the south-facing coastal sage scrub-covered slopes of lowland hills and canyons descending towards the Santa Clara River through agricultural areas at the base of the



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hills. A diverse assemblage of habitat types is found on the approximately 11,963-acre property that supports a variety of plant and animal species. The biological and physical character of the site has been affected by agriculture, oil/natural gas operations and by cattle grazing, especially at the lower elevations.

The natural and disturbed plant communities that occur on the Ranch property are described below. Plant communities are listed in **Table BIO-7** (Vegetation Types and Percent Coverage) with the acreage of each community and percent coverage on-site.

Vegetation Community Type	Approximate Acres Present	Approximate Percent Coverage
Coastal Sage Scrub	5,183	43.3%
Chamise Chaparral	7	0.1%
Mixed Chaparral	1,206	10.1%
Great Basin Scrub	81	0.7%
Coast Live Oak Woodland	670	5.6%
Valley Oak Woodland	26	0.2%
Valley Oak Savanna	394	3.3%
Elderberry Scrub	24	0.2%
Non-Native Grassland	1,896	15.8%
Mainland Cherry Forest	18	0.2%
Disturbed Areas	1,523	12.7%
Mule Fat Scrub	222	1.9%
Successional Mule Fat Scrub	275	2.3%
Southern Willow Scrub	9 6	0.8%
Southern Willow Riparian Woodland	126	1.1%
Southern Cottonwood-Willow Riparian Forest	93	0.8%
Arrow Weed Scrub	16	0.1%
Valley Freshwater Marsh and Ponds	5	0.1%
Cottonwood/Oak Woodland	26	0.2%
Alluvial Scrub	39	0.3%
Scalebroom Scrub	20	0.2%
Mesic Meadow	14	0.1%
Total of Rounded Numbers	11.963	98.8%

Table BIO - 7				
Vegetation	Types	and	Percent	Coverage

Upland habitats are predominate on the Newhall Ranch property, where they occur on approximately 11,028 acres, about 92 percent of the property. The descriptions of upland habitats are based on information contained in an existing biological resource report for the Newhall Ranch property (Dames & Moore 1993; Appendix E) supplemented and verified by observations made by RECON during their current 1995 field surveys.

Coastal Sage Scrub (5,183 total acres on site, 43 percent of site coverage) – Coastal sage scrub habitat is characterized by a dominance of drought-deciduous plant species of the coastal hills. On the Newhall Ranch property, the dominant species that occur in this plant community include California sagebrush (*Artemisia californica*), purple sage (*Salvia leucophylla*), common encelia (*Encelia californica*), California buckwheat (*Eriogonum fasciculatum*), and California broom (*Lotus scoparius*).

Coastal sage scrub habitat is distributed in Newhall Ranch on the drier south-facing slopes of the hilly lowlands and on north-facing slopes and canyons of the Santa Susana Mountains. Dames & Moore (1993) identified two subtypes: sparse and dense coastal sage scrub. Sparse coastal sage scrub occurs in areas where the dominant species account for less than 50 percent of the vegetation cover. Open areas between the sparse shrubs are either bare ground or vegetated with small grasses and herbs. Dense coastal sage scrub occurs in areas where the dominant species make up greater than 50 percent of the vegetation cover. Of the total acreage of coastal sage scrub habitat on the Newhall Ranch property, approximately 272 acres are a coastal sage scrub/grassland mix.

Dames & Moore 1993 (Appendix E) reported the following regarding this vegetation type:

"Extensive tracts of sparse coastal sage scub occur in the hills located north of Route 126, the slopes above Potrero, Sait Creek, and Long canyons, and in the vicinity of Magic Mountain Amusement Park.... Sparse coastal sage provides a moderate level of biomass to support bird and terrestrial mammal species. The relatively open characteristics of the vegetation would provide foraging opportunities for raptors which prey on exposed small animals species (e.g., rabbits, mice, kangaroo rats, snakes, lizards, etc.). The sparsity of the vegetation would be less restrictive on the movements of regional wildlife species (e.g., deer, coyote, bobcat) than denser vegetation types.

Extensive tracts of dense coastal sage occur throughout the West Ranch [Newhall Ranch project site] in hilly terrain on north-facing slopes of the Santa Susana Mountains and within several canyons (e.g., Rawhide, Grave, Via, Dead End canyons), and in the vicinity of Magic Mountain. The relatively moister regime of these areas compared to sparse coastal sage areas promotes a more dense growth of scrub vegetation. The denser growth also indicates that the vegetation is at or near a mature stage of development and that these areas have probably not burned in several decades.... Dense coastal sage has more biomass than sparse coastal sage scrub and can potentially support somewhat higher numbers of birds. However, this habitat would probably not be utilized to a great extent by most raptor species because of escape cover for potential prey species. The density of the vegetation and the associated rugged terrain probably limit large mammal movements. Evidence of wildlife movements within areas of dense scrub was mostly apparent on dirt roads and along water courses......"

Wildlife species observed during the 1995 RECON field surveys within coastal sage scrub habitat on the Newhall Ranch included the following:

Reptiles - San Diego horned lizard (Phrynosoma coronatum blainvillei), side-blotched lizard (Uta stansburiana), long-nosed leopard lizard (Gambelia wislizenii wislizenii), coastal western whiptail (Cnemidophorus tigris multiscutatus), San Diego gopher snake (Pituophis melanoleucus annectens), red coachwhip (Masticophis flagellum piceus), chaparral whipsnake (Masticophis lateralis lateralis), southern Pacific rattlesnake (Crotalus virdis helleri)

Birds - White-tailed kite (Elanus leucurus), red-shouldered hawk (Buteo lineatus elegans), red-tailed hawk (Buteo jamaicensis), California quail (Callipepla californica californica), greater roadrunner (Geococcyx californianus), white-throated swift (Aeronautes saxatalis), black-chinned hummingbird (Archilochus alexandri), Anna's hummingbird (Calypte anna), ash-throated flycatcher (Myiarchus cinerascens cinerascens), Cassin's kingbird (Tyrannus vociferans vociferans), western kingbird (Tyrannus verticalis), tree swallow (Tachycineta bicolor), violet-green swallow (Tachycineta thalassina lepida), northern rough-winged swallow (Stelgidopteryx ruficollis), barn swallow (Hirundo rustica erythrogaster), cliff swallow (Hirundo pyrrhonota tachina), scrub jay (Aphelocoma coerulescens obscura), American crow (Corous brachyrhynchos hesperis), common raven (Corous corax clarionensis), rock wren (Salpinetes obsoletus) canvon wren (Catherpes mexicanus consperus), California thrasher (Toxostoma redivivum redivivum), western bluebird (Sialia mexicana occidentalis), hermit thrush (Catharus guttatus), wrentit (Chamaea fasciata henshawi), loggerhead shrike (Lanius ludovicianus), lesser goldfinch (Carduelis psaltria hesperophilus), Lawrence's goldfinch (Carduelis lawrencei), blue grosbeak (Guiraca caerulea salicaria), Lazuli bunting (Passerina amoena), rufous-sided towhee (Pipilo erythrophthalmus megalonyx), California towhee (Pipilo crissalis), southern California rufous-crowned sparrow (Aimophila ruficeps canescens), lark sparrow (Chondestes grammacus strigatus), white-crowned sparrow (Zonotrichia leucophrys)

Mammals - coyote (Canis latrans), mule deer (Odocoileus hemionus), California ground squirrel (Spermophilus beecheyi), California pocket mouse (Chaetodipus californicus dispar), Pacific kangaroo rat (Dipodomys agilis), brush mouse (Peromyscus boylii rowleyi), deer mouse (Peromyscus maniculatus), San Diego desert woodrat (Neotoma lepida intermedia), desert cottontail (Sylvilagus audubonii)

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Butterflies - Western tiger swallowtail (Papilio rutulus rutulus), cabbage white (Pieris rapae), Becker's white (Pieris chloridice beckeri), common white (Pieris protodice), Sara orangetip (Anthocaris sara sara), Harford's sulfur (Colias alexandra harfordii), alfalfa (Colias eurytheme), striated queen (Danaus gilippus strigosus), California ringlet (Coenonympha tullia californica), chalcedon checkerspot (Euphydryas chalcedona chalcedona), Gabb's checkerspot (Melitaea gabbii gabbii), painted lady (Vanessa cardui), west coast lady (Vanessa carye anabella), buckeye (Precis coenia), Lorquin's admiral (Limnitis lorquini lorquini), California sister (Adelpha bredowii california), Behr's metalmark (Apodemia mormo virgulti), California green hairstreak (Callophrys affinis perplexa), Gorgon copper (Lycaena gorgon), pygmy blue (Brephidium exilis), acmon blue (Plebejus acmon acmon), lupine blue (Plebejus lupini monticola), fiery skipper (Hylephila phyleus), funereal duskywing (Erynnis zarucco funeralis), large white skipper (Heliopetes ericetorum)

Chamise Chaparral (7 total acres on site, less than one percent of site coverage) ~ Chamise chaparral is characterized by relatively homogeneous stands of the shrub chamise (*Adenostoma fasciculatum*). It occurs in a few scattered patches in the hilly terrain located north of Potrero Canyon.

Dames & Moore 1993 (Appendix E) reported the following regarding Chamise Chaparral on the Newhall Ranch:

"Although chamise chaparral vegetation may achieve a relatively high density and biomass, chamise is not a highly valuable resource plant for wildlife species. This vegetation provides habitat for a relatively low to moderate diversity of reptiles, birds, and small mammals."

Wildlife species observed during the 1995 RECON field surveys within chamise chaparral habitat on the Newhall Ranch included the following:

Reptiles - San Diego horned lizard, coastal western whiptail, side-blotched lizard, San Diego gopher snake, chaparral whipsnake

Birds - Red-shouldered hawk, California quail, greater roadrunner, white-throated swift, black-chinned hummingbird, Anna's hummingbird, ash-throated flycatcher, Cassin's kingbird, western kingbird, northern rough-winged swallow, barn swallow, cliff swallow, scrub jay, common raven, rock wren, canyon wren, California thrasher, wrentit, blue-gray gnatcatcher (*Polioptila caerulea*), loggerhead shrike, lesser goldfinch, Lawrence's goldfinch, blue grosbeak, rufous-sided towhee, California towhee, southern California rufous-crowned sparrow, lark sparrow

Mammals - Coyote, mountain lion (*Felis concolor*), bobcat (*Felis rufus*), Pacific kangaroo rat, deer mouse, San Diego desert woodrat, desert cottontail

Mixed Chaparral (1,206 total acres on site, 10 percent of site coverage) -- The dominant plant species of mixed chaparral communities are comprised of a variety of shrubs at more or less equal densities. Shrub species present in this habitat type on the Newhall Ranch property include hoaryleaf ceanothus (*Ceanothus crassifolius*), coast blue lilac (*Ceanothus tomentosus*), lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), and chamise. Understory components are poorly developed due to the dense vegetation cover.

Dames & Moore 1993 (Appendix E) reported regarding the mixed chaparral vegetation:

"Mixed chaparral is a dense, woody vegetation type that occurs in the hilly terrain located north and south of Potrero Canyon. Extensive tracts occur to the southeast and southwest of Grape Vine Mesa. The composition of mixed chaparral includes many shrub species that produce berries and seeds that are consumed by birds and mammals. However, most of the mixed chaparral on the West Ranch [Newhall Ranch project site] occurs on areas of rugged terrain; this is likely to restrict mammal densities and movements to the vicinities of arroyos and dirt roads. Raptors are not likely to extensively utilize this habitat for foraging purposes due to the high level of escape cover afforded prey species. The species composition of wildlife that utilizes this habitat would be similar to that of chamise chaparral."

Wildlife species observed during the 1995 RECON field surveys within mixed chaparral habitat on the Newhall Ranch included the following:

Reptiles - San Diego horned lizard, coastal western whiptail, side-blotched lizard, San Diego gopher snake, chaparral whipsnake

Birds - Red-shouldered hawk, California quail, greater roadrunner, white-throated swift, black-chinned hummingbird, Anna's hummingbird, ash-throated flycatcher, Cassin's kingbird, western kingbird, northern rough-winged swallow, barn swallow, cliff swallow, scrub jay, common raven, rock wren, canyon wren, California thrasher, wrentit, blue-gray gnatcatcher, loggerhead shrike, lesser goldfinch, Lawrence's goldfinch, blue grosbeak, rufous-sided towhee, California towhee, southern California rufous-crowned sparrow, lark sparrow

Mammals - Coyote, mountain lion, bobcat, Pacific kangaroo rat, deer mouse, San Diego desert woodrat, desert cottontail

Butterflies - Sara orangetip, striated queen, California ringlet, painted lady, Lorquin's admiral, California sister, Behr's metalmark, California green hairstreak, fiery skipper, large white skipper

Great Basin Scrub (81 total acres on site, nearly 1 percent of site coverage) — Great Basin scrub is characterized by an almost pure stand of big sagebrush (*Artemisia tridentata*). This habitat occurs on Newhall Ranch within the arroyos and on the upper flood plain terraces adjacent to the riparian areas along the Santa Clara River, Salt Creek, and in Long and Lion Canyons. In this region, Great Basin scrub is at the extreme of its distribution.

Dames & Moore 1993 (Appendix E) stated that:

"The fauna of Great Basin scrub habitat is similar to that of sage scrub habitats, but with some species that also utilize riparian zones, particularly birds. In addition to habitat provided, Great Basin scrub in the study area occurs within movement corridors."

Wildlife species observed during the 1995 RECON field surveys within Great Basin scrub habitat on the Newhall Ranch included the following:

Amphibians - Western spadefoot toad (Scaphiopus hammondii)

Reptiles - Coastal western whiptail, side-blotched lizard, southern Pacific rattlesnake

Birds - California quail, ash-throated flycatcher, northern rough-winged swallow, barn swallow, Bewick's wren (*Thryomanes bewickii*), house wren (*Troglodytes aedon parkmanii*), phainopepla (*Phainopepla nitens lepida*), lesser goldfinch, rufous-sided towhee, California towhee, song sparrow (*Melospiza melodia*)

Mammals - Common raccoon (*Procyon lotor*), coyote, mule deer, California ground squirrel, brush mouse, bobcat, desert cottontail

Butterflies - Western tiger swallowtail, cabbage white, Becker's white, California white (*Pieris sisymbrii sisymbrii*), Sara orangetip, Harford's sulfur, California ringlet, chalcedon checkerspot, west coast lady, mourning cloak (*Nymphalis antiopa antiopa*), buckeye, Lorquin's admiral, California sister, Gorgon copper, large white skipper

Oak Woodlands – Three subtypes of oak woodland occur on the Newhall Ranch property. In total, oak woodland communities occur on approximately 1,090 total acres on the site, about 9 percent of site coverage. Each subtype of oak woodland is described below. In addition, a large portion of the community described herein as mainland cherry forest supports oaks and has characteristics of an open oak woodland.

• Coast Live Oak Woodland (670 total acres on site, 6 percent of site coverage): Coast live oak woodlands are typically located in riparian areas on the drier margins of the flood plain where trees of coast live oak (*Quercus agrifolia*) dominate the community. Coast live oak woodlands in the study area occur on the outer, drier portions of the Santa Clara River flood plain, especially on the south side of the river near the foothills and slopes of the surrounding hills. Isolated individuals of coast live oak occur on the upper flood plain and terraces of drier sites. The habitat is also found in canyons of the Santa Susana Mountains and in hilly terrain surrounding Potrero Canyon.

Dames & Moore 1993 (Appendix E) describes coast live oak woodlands as follows:

"Oak woodlands provide valuable resources and habitat for as many as 60 species of mammals and 110 species of birds in California. Acoms are high in caloric value and easily obtained by wildlife species. Oaks provide browse and serve as habitat for insects which are preved upon by insectivorous birds and mammals. The dense foliage provides thermal cover for roosting and nesting birds and escape cover for prey species. Cavities in limbs and trunks are used as nest sites by birds and den sites by small mammals. Understory components contribute to the overall biomass and can increase the overall wildlife habitat value of oak woodlands."

"The oak woodlands on the West Ranch [Newhall Ranch project site] can be considered "edge habitats" because they occur as relatively limited areas within larger blocks of scrub vegetation. Edge habitats are areas where there is a great amount of interfacing between two or more different vegetation types. Such areas are synergistic with regard to the production and availability of resources for wildlife species due to the greater diversity of plant species per unit area. Oak woodlands and their edge areas provide habitat for a relatively high diversity of wildlife species on the West Ranch [Newhall Ranch project site]."

- Valley Oak Woodland (26 total acres on site, less than one percent of site coverage): This habitat type is characterized by open and closed stands of valley oak (*Quercus lobata*). The valley oak woodland may have an understory of coastal sage scrub, chaparral, or riparian habitat, depending on the topographical location of the stand of trees. Valley oak woodland occurs on the site in lower Rawhide Canyon and Via Canyon. The discussion provided above for fauna associated with coast live oak woodlands also pertains to valley oak woodlands, thus habitat values for wildlife and wildlife species diversity are similar for both oak woodland types.
- Valley Oak Savanna (394 total acres on site, 3 percent of site coverage): The valley oak savanna areas of the Ranch property are characterized by widely-spaced valley oak trees within grassland habitat. Savannas form in areas that are frequently disturbed by natural (e.g., fire) or human(e.g., grazing) causes that inhibit the formation of a shrub understory and favor grassland development. This plant community type occurs on extensive areas of Lower Potrero Canyon and along the ridgeline of the Santa Susana Mountains between Bear Flat and Via Pond.

Dames & Moore 1993 (Appendix E) discuss valley oak savanna as follows:

"The wildlife habitat values of valley oak savanna are similar to that described above for oak woodlands except that the former has lower overall biomass due to the presence of a grassland understory. As such, the density and diversity of breeding birds is expected to be lower than that of oak woodland. Foraging opportunities for raptors and terrestrial predators are high in savanna vegetation types because of the open physiognomic characteristics." Wildlife species observed during the 1995 RECON field surveys within oak woodlands/savanna habitat on the Newhall Ranch included the following:

Amphibians - Pacific treefrog (Pseudacris regilla)

Reptiles - Western fence lizard (Sceloporus occidentalis biseriatus), side-blotched lizard

Birds - Mallard (Anas platyrhynchos platyrhynchos), white-tailed kite, red-shouldered hawk, red-tailed hawk, American kestrel (Falco sparverius), mourning dove (Zenaida macroura marginella), common barn owl (Tyto alba pratincola), great horned owl (Bubo virginianus), acom woodpecker (Melanerpes formicivorus bairdi), Nuttall's woodpecker (Picoides nuttallii), downy woodpecker (Picoides pubescens), hairy woodpecker (Picoides villosus), northern flicker (Colaptes auratus), western wood pewee (Contopus sordidulus), ashthroated flycatcher, western kingbird, tree swallow, violet-green swallow, scrub jay, common raven, plain titmouse (Parus inornatus transpositus), bushtit (Psaltriparus minimus minimus), white-breasted nuthatch (Sitta carolinensis aculeata), house wren, northern mockingbird (Mimus polyglottus polyglottus), western bluebird, American robin (Turdus migratorius propinguus), hermit thrush, blue-gray gnatcatcher, phainopepla, Hutton's vireo (Vireo huttoni huttoni), warbling vireo (Vireo gilvus swainsonii), orange-crowned warbler (Vermivora celata), black-throated gray warbler (Dendroica nigrescens), Townsend's warbler (Dendroica townsendi), yellow-rumped warbler (Dendroica coronata), Wilson's warbler (Wilsonia pusilla), lesser goldfinch, Lawrence's goldfinch, house finch (Carpodacus mexicanus frontalis), black-headed grosbeak (Pheuticus melanocephalus maculatus), blue grosbeak, Lazuli bunting, dark-eyed junco (Junco hyemalis), brown-headed cowbird (Molothrus ater), hooded oriole (Icterus cucullatus nelsonii), northern oriole (Icterus galbula), European starling (Sturnus vulgaris)

Mammals - Common raccoon, coyote, common gray fox (Urocyon cinereoargenteus), red fox (Vulpes vulpes), mountain lion, bobcat, black bear (Ursus americanus), mule deer, California ground squirrel, Pacific kangaroo rat, brush mouse, pinon mouse (Peromyscus truei martirensis), deer mouse, dusky-footed woodrat (Neotoma fuscipes macrotis), desert cottontail

Butterflies - Western tiger swallowtail, cabbage white, Becker's white, common white, Sara orangetip, Harford's sulfur, alfalfa, California ringlet, Comstock's fritillary (*Argynnis callippe comstocki*), chalcedon checkerspot, Gabb's checkerspot, painted lady, west coast lady, mourning cloak, buckeye, Lorquin's admiral, California sister, California hairstreak (*Satyrium californicum*), cloudy copper (*Lycaena arota nubila*), pygmy blue, lupine blue, echo blue (*Celastrina argiolus echo*), funereal duskywing, large white skipper

Characteristics of the oak trees occurring within a portion of these communities on the Newhall Ranch property are summarized later in this Biota Report in the sensitive oak woodlands habitat discussion.

Elderberry Scrub (24 total acres on-site, less than one percent of site coverage) – Thickets of blue or Mexican elderberry (*Sambucus mexicana*) characterize this community type. It generally occurs on the Newhall Ranch property in association with riparian and scrub communities north of Potrero Canyon, adjacent to the Santa Clara River. Observed and expected wildlife is similar to those species listed previously for coastal sage scrub and mixed chaparral. Wildlife values of this habitat were reported by Dames & Moore 1993 (Appendix E) as follows:

"Several bird and mammal species use the berries and foliage of Mexican elderberry as resources. Elderberry scrub provides habitat for a fauna that is similar to that found in sage scrubs and mixed chaparral. This habitat provides a moderate cover to about eight to ten feet in height. At ground level, there are scattered openings and a variable amount of bare ground."

Grassland (1,896 total acres on site, 16 percent of site coverage) – The grassland areas of the Newhall Ranch property are dominated by non-native grasses, such as ripgut grass, smooth brome, foxtail chess, and downy brome (Bromus diandrus, B. hordaceous, B. madritensis ssp. rubens, and B. tectorum, respectively); wild oats and slender wild oats (Avena fatua and A. barbata, respectively); hare barley (Hordeum leporinum), and rattail fescue (Vulpia myorus var. hirsuta). Some native and non-native herbaceous species that occur among the grasses are dove weed (Eremocarpus setigerus), common cryptantha (Cryptantha intermedia), purple owl's clover (Castilleja exserta), white-stemmed filaree (Erodium cicutarium), short-pod mustard (Hirschfeldia incana), radish (Rhaphanus sativa), cheeseweed (Malva parviflora), and London rocket (Sisymbrium irio). Grasslands are distributed on Newhall Ranch in Potrero, Salt Creek, and Long Canyons, the crest of the Santa Susana Mountains, near Airport Mesa, on Grape Vine Mesa, and on the eastern portion of the Ranch south of the Magic Mountain Theme Park. On the wildlife values of non-native grasslands, Dames & Moore 1993 (Appendix E) reported the following:

"The potential utilization of grasslands within the corridor for native wildlife species has been somewhat reduced by disturbances associated with cattle grazing and agriculture. Grasslands on the West Ranch [Newhall Ranch project site] are (together with sparse coastal sage scrub) primary foraging areas for raptors and loggerhead shrike. Raptors forage for small mammals which occur in the grasslands at varying densities."

Wildlife species observed during the 1995 RECON field surveys within non-native grassland habitat on the Newhall Ranch included the following:

Amphibians - California toad (Bufo boreas halophilus), Pacific treefrog

Reptiles - Side-blotched lizard, San Diego gopher snake, southern Pacific rattlesnake

Birds - White-tailed kite, northern harrier (*Circus cyaneus*), Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk, red-tailed hawk, California quail, horned lark (*Eremophila alpestris*), tree swallow, violet-green swallow, northern rough-winged swallow, American crow, common raven, loggerhead shrike (*Lanius ludovicianus*), American robin, house finch, western meadowlark (*Sturnella neglecta*), lark sparrow, red-winged blackbird (*Agelaius phoeniceus*), Brewer's blackbird (*Euphagus cyanocephalus*), brown-headed cowbird, European starling

Mammals - Long-tailed weasel (*Mustela frenata*), coyote, mule deer, California ground squirrel, California vole (*Microtus californicus*), desert cottontail, San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)

Butterflies - Cabbage white, Becker's white, alfalfa, California ringlet, Comstock's fritillary, west coast lady, buckeye, western elfin (*Callophrys agustus iroides*), Gorgon copper, acmon blue, lupine blue, funereal duskywing, large white skipper

Mainland Cherry Forest (18 total acres on site, less than one percent of site coverage) — This community type is not well described, but typically is composed of tall stands of hollyleaf cherry (*Prunus ilicifolia* ssp. *ilicifolia*) or Lyon cherry (*Prunus ilicifolia* ssp. *lyonii*) that reach the size of trees (up to 15 meters in height). The plant community is found on rocky, steep, dry, north-facing slopes of coastal mainland in southern California and the California Channel Islands. Lyon cherry is more common on the Channel Islands, while hollyleaf cherry is generally found on the mainland.

Large shrub/small tree specimens of hollyleaf cherry occur along the banks of the drainage and on lower canyon slopes of Long Canyon on the Newhall Ranch. Another stand of hollyleaf cherry occurs in Lion Canyon, especially in the upper portion. Hollyleaf cherry specimens at both locations are intermixed with coast live oak trees present in the canyon. Since the canopy of the hollyleaf cherry plants is not continuous, the vegetation at this site is not a characteristic example of mainland cherry forest. Rather, it is more of an open oak woodland containing a few large specimens of hollyleaf cherry. In addition, mainland cherry forest is present in association with alluvial scrub and Great Basin scrub communities. However, the presence of these large specimens of hollyleaf cherry coupled with the rarity of the community type on the mainland add importance to this vegetation type. Wildlife species expected to use this habitat type are similar to those listed under oak woodlands above.

Disturbed Areas (1,523 total acres on site, percent of site coverage) -- Areas of Newhall Ranch that have been cleared for roads, agricultural activities, fuel breaks, development (i.e., ranch houses, oil company facilities), or that have been extensively grazed are characterized as disturbed habitats. These disturbed areas either lack vegetation or are characterized by a dominance of primarily non-native weeds and grasses. Types of habitats categorized by Dames & Moore (1993) (Appendix E) under this habitat type on the property include ruderal vegetation, agriculture fields, disturbed areas (lack vegetation), and areas of ornamental plantings. On the site, disturbed areas occur in and near the Newhall Potrero Oilfield, Castaic Junction Oilfield, other oilfields scattered in Potrero Canyon, Long Canyon, and near the Magic Mountain Theme Park, and active and fallow agricultural fields adjacent to the Santa Clara River, Potrero Mesa, and Grape Vine Mesa.

Wildlife species observed during the 1995 RECON field surveys within disturbed habitat on the Newhall Ranch included the following:

Reptiles - San Diego horned lizard, side-blotched lizard, coastal western whiptail

Birds - Common barn owl, scrub jay, American crow, common raven, American robin, house finch, savanna sparrow (*Passerculus sandwichensis*), Brewer's blackbird, house sparrow (*Passer domesticus*)

Mammals - Common gray fox, mule deer, California ground squirrel, San Diego black-tailed jackrabbit, desert cottontail

Riparian Habitats and Wetlands – Riparian habitats occur primarily along the Santa Clara River and tributaries, where they cover (in total) approximately 932 acres, about eight percent of the site. The majority of the descriptions of the riparian and wetland habitats are based on information contained in the biological resources report prepared for the Santa Clara River by RECON (1993). Some community descriptions were also taken from the Dames & Moore (1993) report (Appendix E). Information was supplemented with data from the 1995 surveys where it was appropriate.

Mule Fat Scrub (497 total acres on site, 4 percent of site coverage) — Mule fat scrub is typically a mature riparian habitat dominated by mule fat shrubs (*Baccharis salicifolia*). Co-dominant plant species include narrow-leaved willow (*Salix exigua*), giant cane (*Arundo donax*), and some tamarisk (*Tamarix sp.*). This habitat type is found along the Santa Clara River on upper portions of the flood plain and on some levees on the Ranch property. Mule fat scrub also occurs in almost every major and minor drainage on the upland portions of the property.

A subclass of mule fat scrub was used to denote the development of this plant community along the active channel of the Santa Clara River. Successional mule fat scrub denotes a young, successional community dominated by young saplings of predominantly mule fat and narrow-leaved willow. This subclass is found within the low flow (active) channel of the Santa Clara River on sand bars where frequent scouring by floods prevents it from fully developing into mature mule fat scrub. Total acreage for the two subtypes of mule fat scrub on the Newhall Ranch property is approximately 497 acres, about 4 percent of the site. Acreage of mule fat scrub is estimated to be approximately 222 acres, and approximately 275 acres of successional mule fat scrub occur along the river corridor.

Dames & Moore (Appendix E) discuss mule fat scrub wildlife habitat values as follows:

"Mule fat scrub which occurs on the upland portions of the West Ranch [Newhall Ranch project site] functions primarily as edge habitat, and is used principally as foraging habitat by birds. However, mule fat scrub is not very extensive and is considered suitable breeding habitat for a limited number of bird species. Raptors such as Cooper's hawk, and red-shouldered hawk, probably use mule fat scrub, as well as other riparian scrub and riparian woodland types, as foraging habitat. The arroyos and washes with mule fat scrub, including other riparian scrub and riparian woodland types, function as movement corridors for mule deer, coyote, and other mammals."

Wildlife species observed during the 1995 RECON field surveys within mule fat scrub habitat on the Newhall Ranch included the following:

Amphibians - Pacific treefrog, California toad

Reptiles - California horned lizard (Phrynosoma coronatum frontale), San Diego gopher snake, western fence lizard, side-blotched lizard

Birds - American kestrel, Cooper's hawk, red-shouldered hawk, mourning dove, great horned owl, black-chinned hummingbird, Costa's hummingbird (*Calypte costae*), Anna's hummingbird, Nuttall's woodpecker, western wood pewee, Pacific-slope flycatcher (*Empidonax difficilis*), black phoebe (*Sayornis nigricans semiatra*), bushtit, Bewick's wren, house wren, phainopepla, Wilson's warbler, Lazuli bunting, rufous-sided towhee, song sparrow, brown-headed cowbird, and European starling.

Mammals - Virginia opossum (*Didelphis virginiana*), common raccoon, coyote, common gray fox, mule deer, California pocket mouse, brush mouse, pinon mouse, deer mouse, dusky-footed woodrat, desert cottontail

Butterflies - Cabbage white, Becker's white, Sara orangetip, alfalfa, California ringlet, chalcedon checkerspot, Gabb's checkerspot, west coast lady, buckeye, Lorquin's admiral, California green hairstreak, acmon blue, lupine blue, moumful duskywing (*Erynnis tristis*), funereal duskywing

Southern Willow Scrub (96 total acres on site, nearly 1 percent of site coverage) — This riparian habitat community type is dominated by willow shrubs and small trees, such as arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), and narrow-leaved willow. Mule fat shrubs are often co-dominant with the willows. These thickets often lack a well-developed understory. Southern willow scrub is found along the Santa Clara River in areas of the flood plain and along the banks of the low-flow channel where frequent flood disturbance prevents the community from developing into a riparian woodland. The habitat is also found in the drainages within Potrero Canyon and Salt Creek Canyon. Included in the acreage estimates provided above are areas where grazing, clearing, or other factors have opened the willow scrub habitat, allowing either giant cane to invade or a herbaceous layer to develop in the openings.

Willow scrub provides habitat for a variety of small birds and foraging raptors. Nests and perch sites are available in this habitat type for birds and cover for small mammals. Wildlife species observed during the 1995 RECON field surveys within southern willow scrub habitat on the Newhall Ranch included the following:

Amphibians - Pacific treefrog, California toad

Reptiles - California horned lizard, San Diego gopher snake, western fence lizard, sideblotched lizard

Birds - American kestrel, mourning dove, great horned owl, black-chinned hummingbird, Costa's hummingbird, Anna's hummingbird, Nuttall's woodpecker, western wood pewee, Pacific-slope flycatcher, black phoebe, bushtit, Bewick's wren, house wren, phainopepla, Wilson's warbler, Lazuli bunting, rufous-sided towhee, song sparrow, brown-headed cowbird, European starling

Mammals - Virginia opossum, common raccoon, coyote, common gray fox, mule deer, California pocket mouse, brush mouse, pinon mouse, deer mouse, dusky-footed woodrat, desert cottontail

Butterflies - Cabbage white, Becker's white, Sara orangetip, alfalfa, California ringlet, chalcedon checkerspot, Gabb's checkerspot, west coast lady, buckeye, Lorquin's admiral, California green hairstreak, acmon blue, lupine blue, mournful duskywing, funereal duskywing

Southern Willow Riparian Woodland (126 total acres on site, 1 percent of site coverage) -- This woodland community represents a mature riparian habitat where a tall tree layer has developed. The community is dominated by trees of red willow and arroyo willow with occasional individuals of cottonwood (*Populus fremontii* and *P. balsamifera* ssp. *trichocarpa*). A shrub layer of mule fat, narrow-leaved willow, and shrubby arroyo willows occurs in the understory of the trees. Southern willow riparian woodland is found on the property along the upper banks, upper flood plain, and some terraces of the Santa Clara River.

Included in the above acreage total is southern willow riparian woodland areas where the understory has been opened up due to disturbance from grazing or brush clearing. Southern willow riparian woodland areas that have been grazed often have giant cane invading the understory.

Wildlife species observed during the 1995 RECON field surveys within southern willow riparian woodland habitat on the Newhall Ranch included the following:

Amphibians - Pacific treefrog, California toad, African clawed frog (Xenopus laevis)

Reptiles - Western fence lizard, side-blotched lizard, two-striped garter snake (Thamnophis hammondii)

Birds - Great blue heron (Ardea herodias herodias), great egret (Casmerodius albus), snowy egret (Egretta thula thula), green heron (Butorides virescens), black-crowned night heron (Nycticorax nycticorax hoatli), turkey vulture (Cathartes aura), white-tailed kite, Cooper's hawk, red-shouldered hawk, red-tailed hawk, American kestrel, California quail, killdeer (Charadrius vociferus vociferus), spotted sandpiper (Actitus macularia), mourning dove, greater roadrunner, common barn owl, great horned owl, white-throated swift, black-chinned hummingbird, Costa's hummingbird, Anna's hummingbird, acorn woodpecker, Nuttall's woodpecker, downy woodpecker, hairy woodpecker, northern flicker, western wood pewee, Pacific-slope flycatcher, black phoebe, vermilion flycatcher (Pyrocephalus rubinus flammeus), tree swallow, violet-green swallow, northern rough-winged swallow, cliff swallow, scrub jay, American crow, common raven, plain titmouse, white-breasted nuthatch, bushtit, Bewick's wren, northern mockingbird, California thrasher, western bluebird, American robin, wrentit, blue-gray gnatcatcher, American pipit (Anthus rubescens), phainopepla, loggerhead shrike, Hutton's vireo, least Bell's vireo, warbling vireo, orange-crowned warbler, Nashville warbler (Vermivora ruficapilla ridgwayi), yellow warbler (Dendroica petechia), yellow-rumped warbler, common yellowthroat (Geothlypis trichas), Wilson's warbler, yellow-breasted chat (Icteria virens auricollis), lesser goldfinch, Lawrence's goldfinch, purple finch (Carpodacus purpureus californicus), house finch, summer tanager (Piranga rubra rubra), black-headed grosbeak, blue grosbeak, Lazuli bunting, rufous-sided towhee, California towhee, savanna sparrow, song sparrow, white-crowned sparrow, red-winged blackbird, tricolored blackbird (Agelaius tricolor), Brewer's blackbird, brown-headed cowbird, hooded oriole, northern oriole, European starling

Mammals - Virginia opossum, common raccoon, coyote, mule deer, California pocket mouse, deer mouse, dusky-footed woodrat, desert cottontail

Butterflies - Cabbage white, Becker's white, Sara orangetip, alfalfa, California ringlet, chalcedon checkerspot, Gabb's checkerspot, west coast lady, buckeye, Lorquin's admiral, California green hairstreak, acmon blue, lupine blue, mournful duskywing, funereal duskywing

Southern Cottonwood-Willow Riparian Forest (93 total acres on site, nearly 1 percent of site coverage) – This community type is also a mature riparian woodland habitat where a substantial tree layer has developed. Cottonwood trees dominate the forest with large red willow trees as co-dominants. Smaller shrub and tree forms of arroyo willow along with mule fat and arrow weed (*Pluchea sericea*) shrubs are common in the understory. An occasional western sycamore (*Platanus racemosa*) and California bay (*Umbellularia californica*) also occur in this habitat. It is found on the Newhall Ranch along the upper banks, upper flood plain, and some terraces of the Santa Clara River.

Included in the acreage total above is southern cottonwood-willow riparian forest areas where the understory has been opened up due to disturbance from grazing or brush clearing. Giant cane has invaded the understory in some areas.

Wildlife species observed during the 1995 RECON field surveys within southern cottonwood-willow riparian forest habitat on the Newhall Ranch included the following:

Amphibians - Pacific treefrog, California toad, African clawed frog

Reptiles - Western fence lizard, side-blotched lizard, two-striped garter snake

Birds - Great blue heron, great egret, snowy egret, green heron, black-crowned night heron, turkey vulture, white-tailed kite, Cooper's hawk, red-shouldered hawk, red-tailed hawk, American kestrel, California quail, killdeer, spotted sandpiper, mourning dove, greater roadrunner, common barn owl, great horned owl, white-throated swift, black-chinned hummingbird, Costa's hummingbird, Anna's hummingbird, acorn woodpecker, Nuttall's woodpecker, downy woodpecker, hairy woodpecker, northern flicker, western wood pewee, Pacific-slope flycatcher, black phoebe, vermilion flycatcher, southwestern willow flycatcher, tree swallow, violet-green swallow, rough-winged swallow, cliff swallow, scrub jay, American crow, common raven, plain titmouse, white-breasted nuthatch, bushtit, Bewick's wren, northern mockingbird, California thrasher, western bluebird, American robin, wrentit, blue-gray gnatcatcher, American pipit, phainopepla, loggerhead shrike, Hutton's vireo, least Bell's vireo, warbling vireo, orange-crowned warbler, Nashville warbler, yellow warbler, yellowrumped warbler, common yellowthroat, Wilson's warbler, yellow-breasted chat, lesser goldfinch, Lawrence's goldfinch, purple finch, house finch, summer tanager, black-headed grosbeak, blue grosbeak, Lazuli bunting, rufous-sided towhee, California towhee, savanna sparrow, song sparrow, white-crowned sparrow, red-winged blackbird, tricolored blackbird, Brewer's blackbird, brown-headed cowbird, hooded oriole, northern oriole, European starling

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Mammals - Virginia opossum, common raccoon, coyote, mule deer, California pocket mouse, Pacific kangaroo rat (in open areas), deer mouse, dusky-footed woodrat, desert cottontail

Butterflies - Cabbage white, Becker's white, Sara orangetip, alfalfa, California ringlet, chalcedon checkerspot, Gabb's checkerspot, west coast lady, buckeye, Lorquin's admiral, California green hairstreak, acmon blue, lupine blue, mournful duskywing, funereal duskywing

Arrow Weed Scrub (16 total acres on site, less than one percent of site coverage) -- This shrubdominated plant community is characterized by a nearly pure stand of arrow weed shrubs. Big saltbush (*Atriplex lentiformis*) and mule fat shrubs are often co-dominants in more open stands, especially along road cuts. Wet areas where this habitat has developed may also have some freshwater marsh species occurring with the arrow weed. On the Ranch, this plant community is located on the upper Santa Clara River flood plain and terraces at the edges of woodlands, forests, and along the manufactured slopes near SR-126. Wildlife using arrow weed scrub habitat are similar to those described for the mule fat scrub habitat.

Valley Freshwater Marsh and Ponds (5 total acres on site, less than one percent of site coverage) --These two types of vegetation can be very similar, and as such they are considered together in this discussion. Freshwater marsh is a type of wetland habitat that occurs in areas which are inundated or saturated for prolonged periods of time and support plant species adapted to tolerate these wet conditions. These wet areas are typically dominated by broad-leaved cattail (*Typha latifolia*), species of bulrush (*Scirpus* spp.), species of sedge (*Carex* spp.), and species of rush (*Juncus* spp.). Freshwater marsh (approximately 4 acres, or about 0.4 percent) is found on the Ranch in portions of the Santa Clara River channel where water ponds and along small tributary streams/drainages in the woodlands on the flood plain. Freshwater marsh provides habitat for amphibians, aquatic reptiles, and birds, as well as a site for drinking water by wildlife species.

Constructed ponds on the Ranch can also be considered a type of freshwater marsh habitat when the banks of the pond are vegetated, for example, with cattails or bulrushes. The few ponds that occur on the Ranch appear to serve as flood control structures or water holes for cattle. The most prominent ponds on the Ranch are Via Pond in the high country of the Santa Susana Mountains and two large, seasonal ponds in Middle Potrero Canyon. Total acreage for pond habitat on the site is about 0.2 acres.

Wildlife species observed during the 1995 RECON field surveys within valley freshwater marsh and ponds habitat on the Newhall Ranch included the following:

Amphibians - Pacific treefrog, California toad, African clawed frog

Reptiles - Western fence lizard, side-blotched lizard, two-striped garter snake, southwestern pond turtle (*Clemmys marmorata pallida*)

Birds - Mallard, great blue heron, great egret, snowy egret, green heron, black-crowned night heron, cliff swallow, American robin, song sparrow, red-winged blackbird, tricolored blackbird, Brewer's blackbird, brown-headed cowbird

Mammals - Virginia opossum, common raccoon

Cottonwood/Oak Woodland (26 total acres on site, less than one percent of site coverage) — This habitat type is characterized by a mixture of coast live oak and cottonwood trees. The plant community is typically found as an interface between riparian and upland areas and, as such, cottonwood/oak woodland is located on the Ranch property on the higher terraces along the Santa Clara River and at the mouth of a canyon south of Airport Mesa near Magic Mountain. Wildlife species observed in this habitat type are similar to those described for the cottonwood/willow woodland habitat discussed above. Dames & Moore 1993 (Appendix E) described wildlife values for this habitat type as follows:

"Cottonwood/oak woodland provides habitat for a variety of wildlife species because of the oak resource and because it functions as edge habitat. The vertical layering of cover provides a greater diversity of habitats for breeding birds. Among those known or expected to breed in this habitat type are American kestrel, acom woodpecker, other woodpecker species, plain titmouse, and white-breasted nuthatch."

Alluvial Scrub (39 total acres on site, less than one percent of site coverage) – Alluvial scrub habitat is characterized as a mixture of shrubs that colonize alluvial materials within intermittent creeks, arroyos, and the drier terraces within large washes. Alluvial scrub typically occurs adjacent to and intergrades with sage scrub communities on higher ground and riparian communities in the flood plains. These sandy-gravelly flood-deposited soils have a deeper permanent water table and flood infrequently, thus, they support a primarily upland plant association. Plant species observed in this habitat type on the Ranch include big sagebrush, scalebroom (*Lepidospartum squamatum*), blue elderberry, big saltbush (*Atriplex lentiformis*) and squaw bush (*Rhus trilobata*), with some areas having high densities of big sagebrush. The alluvial scrub association on the Ranch is in general

consistent with the description provided in Hanes, et al. (1989), differing slightly in species composition. In their 1989 publication, the authors describe three phases of alluvial scrub vegetation which are directly related to elapsed time since the last scouring flood event: pioneer, intermediate, and mature. Floristically, California buckwheat and scalebroom were the most important components of the alluvial scrub communities examined during the 1989 work, followed by white sage, California broom, and California sagebrush. Big sagebrush was not described as an important component of this community in the 1989 publication. Alluvial scrub is situated within the drier portions of the arroyos and washes located north of Potrero Canyon (i.e., Long Canyon, Lion Canyon, and unnamed washes below Airport Mesa and south of the Magic Mountain Theme Park). Wildlife species using this habitat type are similar to those discussed for Great Basin scrub, arrow weed scrub, and mule fat scrub.

Scalebroom Scrub (20 total acres on site, less than one percent of site coverage) -- Similar to alluvial scrub, scalebroom scrub (*Lepidospartum* scrub) is characterized by homogeneous stands of scalebroom that grow in arroyos and washes. Due to the sparse, nearly pure stands of scalebroom, wildlife use of this community type tends to be low, but similar to the other scrub habitat situated within drainages (i.e., alluvial scrub, Great Basin scrub). Therefore, wildlife species use of this habitat type are similar to those discussed above for Great Basin sage scrub, arrow weed scrub, and mule fat scrub.

Mesic Meadow (14 total acres on site, less than one percent of site coverage) — Mesic meadows form in grassland areas where seeps, springs, or groundwater surfaces. In these areas, soils remain saturated most of the year. Plant species found in mesic meadows can tolerate the moist conditions for prolonged periods. Herbaceous species present include yerba mansa (*Anemopsis californica*), curly dock (*Rumex crispus*), spike rush (*Eleocharis* sp.), annual beard grass (*Polypogon monspeliensis*), rush (*Juncus* sp.), and saltgrass (*Distichlis spicata*). Mesic meadows on the Ranch are located within Potrero Creek, on an unnamed drainage at the east end of Middle Potrero Canyon, and in Via Canyon. This mesic meadow vegetation is similar to a cismontane form of the alkali seep vegetation type described in Holland (1986), with relatively minor differences in vegetation components. Mesic meadows provide habitat for insects, amphibians, and may provide a permanent source of water for wildlife. Wildlife species expected in the mesic meadow habitat would be similar to those described for freshwater marsh habitat.

Flora – A total of 336 plant species were identified on the Newhall Ranch project site. Of this total 247 species (73.5 percent) are considered native to California and 89 species (26.5 percent) are considered introduced to California. The range in topographical and geographical relief on the Ranch supports a wide range of habitat types which, in turn, results in a high plant species diversity. Although large portions of the Newhall Ranch property are disturbed by past and present agricultural activities (e.g., cattle grazing, oil production, agriculture), areas occur on the site that are relatively undisturbed

(especially steep slopes, the upper reaches of some of the canyons, and portions of the high country) where native plant species are dominant. As expected, the majority of the non-native species that occur on the site are found in the grazed grasslands/shrublands and along the edges of the agricultural areas. Ungrazed areas that have not been disturbed by man-caused actions have the highest diversity of native plant species. A complete list of the plant species observed on the site during the 1995 surveys is provided in Appendix G of this Biota Report.

Fauna — As previously described, general wildlife surveys on the Newhall Ranch property were conducted by Dames & Moore in 1992 (Dames & Moore 1993) and RECON in 1995. Other wildlife surveys focused on species specific studies generally along the Santa Clara River and included surveys for the least Bell's vireo (Guthrie 1988 through 1995) and fish populations (Baskin and Haglund 1992, 1993; Haglund 1992; and Haglund and Baskin 1995). The combined results of these surveys indicate that a total of 146 vertebrate wildlife species were observed or detected on the project site, including five fish, five amphibian, 12 reptile, 104 bird, and 20 mammal species. A review of the literature estimates that a total of 234 vertebrate wildlife species would be expected to substantially utilize habitat on the Newhall Ranch (inclusive of those already observed), including 5 fish, 8 amphibians, 21 reptiles, 153 birds and 47 mammals. A compilation of vertebrate wildlife species, including those species observed or detected and those not observed but expected to occur on the Ranch are provided in **Appendix H** of this Biota Report

A total of 33 species of butterfly was identified on the Ranch property. These butterflies were captured on various portions of the Ranch in a variety of habitats. Many were caught and identified while moving up and down drainages and small canyons, or flying over ridges. Some were caught near their preferred food plant. A list of all the butterfly species observed on Newhall Ranch is provided in Table BIO-8 (Butterfly Species Observed).

The number and diversity of wildlife species, particularly birds, were highest in the riparian areas (i.e., woodlands and scrubs) of the Santa Clara River and its tributaries. Numbers and diversity of wildlife species were also relatively high in the oak woodlands/savanna (i.e., live oak woodland, valley oak woodland, valley oak savanna) and the brushland areas (e.g., coastal sage scrub, chaparral) on the site. Abundance and diversity of wildlife decreased in the grassland and disturbed areas. The diversity of butterfly species tended to be highest in the coastal sage scrub and oak woodland habitats, moderate in the alluvial scrub and riparian habitats, and lowest in the grassland and mixed chaparral areas.

Scientific	Common				1. 1. <u>1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1</u>
Name	Name	Month Location		Habitat	Foodnlant
Papilio rutulus rutulus	Western tiger swallowtail	A/M	UPC, ULC, GMC, MC	CSS, O, AS	sycamore, cottonwood,
Pieris rapae	Cabbage white	A/M/J	UPC, ULC, SMM, LC, RC,	CSS, O, G, R, AS	willows, alders mustards
Pieris chloridice beckeri	Becker's white	A/M/J	SCR, OC, RC	CSS, O, G, R, AS	bladderpod
Pieris protodice Pieris sisymbrii sisymbrii	Common white California white	A/M/J M	UPC, VC, RC USC	CSS, O AS	mustards wild mustards
Anthocaris sara	Sara orangetip	A/M/J	UPC, ULC, VC,	CSS, O, AS, MC,	mustards
sara Colias alexandra harfordii	Harford's sulfur	A/M/J	USC, RC UPC, USC	AS, R CSS, O, AS	rattlepod
Colias eurytheme	Alfalfa	A/M/J	UPC, ULC, VC,	O, CSS, G, R	legumes
Danaus gilippus strigosus	Striated queen	3	ULC	CSS, MC	non-local milkweeds
Coenonympha tullia californica	California ringlet	A/M/J	UPC, ULC, SMM, VC, USC, RC, SCR, GC, VC	CSS, O, G, AS, MC, R	native bunch grasses
Argynnis callippe comstocki	Comstock's fritillary	ì	HC	0,G	passion-vine
Euphydryas chacedona	Chalcedon checkerspot	A/M/J	UPC, ULC, SCR, GMC, RC	CSS, O, R, AS	monkey-flower
Melitaea gabbii	Gabb's	A/M/J	ULC, VC, RC,	CSS, O, R	perennial native
gabbii Vanessa cardui	checkerspot Painted lady	A/M	GC UPC, ULC,	CSS, O, M, MC	asters various, especially
Vanessa carye	West coast lady	A/M	SMM, VC, SMG UPC, ULC,	CSS, O, G, R, AS	thistles mallows
anabella Nymphalis	Mourning	A/M	UPC, SMM,	O, AS	willow and poplar
Precis coenía Límnitis lorquini	Buckeye Lorquin's	M/J J	ULC, SCR, RC SCR, RC	CSS, O, G, R, AS CSS, O, R, AS,	Plantago spp. willows
Adelpha bredowii	California	AM/J	UPC, ULC, VC	CSS, O, AS, MC	oaks
californica Apodemia mormo pirpulti	sister Behr's metalmark	А	UPC, ULC	CSS, MC	perennial buckwheats
Satyrium	California	М	USC	0	wild lilac and oak
Callophrys	Western elfin	М	SMM	G	various, especially
allophrys Callophrys affinis perplexa	California green	А	UPC, ULC	CSS, MC, R	deerweed and buckwheat
Lycaena arota	hairstreak Cloudy copper	J	UPC	0	wild gooseberry
nubila Lycaena gorgon	Gorgon copper	M/J	SMM	CSS, G, AS	Eriogonum
Brephidium exilis	Pygmy blue	J	UPC, RC	C\$\$, 0	elongatum saltbushes and relatives
Plebejus acmon	Acmon blue	A/J	ULC, SMM,	CSS, G, R	Lotus and
acmon Plebejus lupini monticola	Lupine blue	A/M/J	ULC, SMM, VC, SCR, LC	CSS, O, G, R, AS	buckwheat
Celastrina	Echo blue	М	UPC	0	various perennials
Hylephila phyleus	Fiery skipper	J	ULC	CSS, MC	grasses

Table BIO-8 Butterfly Species Observed

Butterfly Species Observed					
Scientific Name	Common Name	Month	Location	Habitat	Foodplant
Erynnis tristis tristis	Mournful duskywing	A	SCR	R	live oak
Eryynnis zarucco funeralis	Funereal duskywing	A/J	ULC, SCR, RC LC	CSS, O, G, R	deerweed
Heliopetes ericetorum	Largé white skipper	A/M/J	UPC, ULC, SMM, VC	CSS, O, G, AS, MC, AS	Malacothamnus faciculatus

Table BIO-8 (con't.)

LOCATION UPC = Upper Potrero Canyon ULC = Upper Lyon Canyon SMM = South of Magic Mountain LC = Long Canyon GMC = Grapevine Mesa Canvon VC = Via Cânyon SCR = Santa Clara River SMG = San Martinez Grande Canyon RC = Rawhide Canyon USC = Upper Salt Creek

HABITAT

CSS = Coastal Sage Scrub

O = Oak Woodland (live oak woodland, valley oak woodland, and cottonwood-oak woodland)

G = Grassland

R = Riparian (riparian woodlands and scrubs)

AS = Alluvial Scrub (Great Basin scrub, scalebroom

scrub, alluvial scrub)

MC = Mixed Chaparral

g. Description of Sensitive Species/Habitats

Plant and wildlife species that are classified as endangered or threatened, proposed for listing as endangered or threatened, or are candidate species for listing by federal and/or state resource agencies are considered sensitive. In addition, plants occurring on Lists 1 or 2 of the California Native Plant Society (CNPS) classification and wildlife considered species of special concern, special animals, or fully protected in the state of California are also considered sensitive. Plants that occur on the CNPS List 3 and 4 are included as sensitive species since these species are considered vulnerable and are being monitored. All wetland habitat is considered sensitive by the resource agencies. Other habitat types are classified as sensitive by the CDFG in the Natural Diversity Data Base (NDDB) and are discussed and described below. Maps illustrating the location of sensitive plants, animals, or habitats are provided in Appendix N.

In late February 1996, the U.S. Fish and Wildlife Service (USFWS) published an updated list of plant and animal taxa that it regards as candidates for possible addition to the List of Endangered and Threatened Wildlife and Plants under the Endangered Species Act of 1973, as amended (USFWS, 1996a). These candidate species are those for which USFWS has on file sufficient information on biological vulnerability and threats to support a proposed rule to list, but issuance of such a proposed rule is precluded. In general, the currently designated "candidate" species correspond with the 'Category 1' candidate species previously designated by USFWS. The USFWS no longer includes the former 'Category 2' species as candidates, but does acknowledge these previously designated species as federal "species of concern." In addition, it has been the policy of the CDFG to consider the previously designated Category 2 candidates as either California Species of Special Concern or as Special Animals.

(1) Plant Species

A total of 29 sensitive plant species have a potential for occurrence on the Newhall Ranch property. Only one of the 29 species was observed on the site, Peirson's morning-glory (*Calystegia peirsonii*) (Dames & Moore 1993; Appendix E). The remaining 28 species were considered to have varying probabilities of occurrence on the site based on their habitat requirements, their present and historic range, and the geographical location of the Ranch property. Species of plants that are either federal or state listed, candidates for listing, federal species of concern, or on List 1B, 2, 3 or 4 of the CNPS ranking (Skinner and Pavlik 1994) are discussed and described below. All sensitive plant species are included in Table BIO-9 (Sensitive Plant Species with the Potential for Occurrence on the Newhall Ranch). California Native Plant Society definitions of sensitivity classifications are also provided in this table.

(a) Plant Species Observed

Peirson's Morning-glory (*Calystegia peirsonii*) – This plant is a CNPS List 4 species (plants of limited distribution - a watch list), and is a federal species of concern Taxa on List 4 are not considered to be severely threatened by CNPS, but the CNPS feels the plant's occurrence should be considered during the decision making process. The local USFWS office has supporting information gathered during the past several years which indicate that this plant is more widespread and abundant than previously believed (Rutherford, USFWS, personal communication, 1995).

This prostrate perennial herb occurs in chaparral, chenopod scrub, cismontane woodland, coastal sage scrub, and lower coniferous forest in Los Angeles County. It flowers from May to June. The species is threatened by grazing and habitat loss.

Table BIO-9
Sensitive Plant Species Observed or with the Potential for Occurrence
on Newhall Ranch

	Status:	and the second
	Federal/State*	1997年1月1日) - 1997年1月1日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日
Species	CNPS Listt	Habitat Local Distribution, and Likelihood of Occurrence on the Ranch
Slender-horned spineflower	FE/CE	Chaparral, coastal sage scrub of alluvial fans; Known occurrence in Santa Clara River
Dodecahema (=Centrostegia) leptoceras	1 B	drainage located approximately 10 miles east of site; Low potential.
California Orcutt grass	FE/CE	Vernal pool habitat; Occurs both east and west of the site (within 8 miles); Low
Orcuttia californica	18	potential.
Lyon's pentachaeta	FPE/CE	Chaparral and valley foothill grassland; Highly restricted range; Low potential.
Pentachaeta Iyonii	1B	
Nevin's barberry	FPE/CE	Chaparral, cismontane woodlands, coastal sage scrub, and riparian scrub, sandy or
Berberis (Mahoma) nevinii	1 B	gravelly areas; Two populations in upper San Francisquito Canyon; Moderate
		potential.
Thread-leaved brodiaea	FPT/CE	Coastal sage scrub, chaparral, grasslands, vernal pools, heavy clay soils; Low
Brodiaea filifolia	18	potential.
Santa Susana tarplant	FSC/CR	Chaparral, coastal sage scrub, rocky areas; Santa Susana Mountains, Santa Monica
Hemizonia minthornii	18	Mountains, and Simi Hills; Low potential.
Braunton's milk vetch	FPE/-	Chaparral, coastal sage scrub, grasslands, particularly after burns; Limestone soils;
Astragalus brauntomi	18	Current records from the vicinity of Thousand Oaks and Oak Park, Low potential.
Stender mariposa hty	FSC	Chaparral; Occurs in nearby San Gabriel Mountains; Low potential.
Catocnorius ciavatus var. gracius		
Plummer's mariposa hiy	FSC/-	Chaparral, cismontane woodlands, coastal sage scrub, and valley foothill grassfand;
Cauchornis phimmerae		Granitic substrates; Low potential.
San remando valley spinenower	F5C/-	Coastal sage scrub, sandy places; Historic occurrence in the project area, but now
Unorizanine parryi var. jernanaina	IA ECC/	presumed extinct Low potential.
Dune larkspur	FDC/*	Warnume chaparral and coastal dunes; Occurrence records from vicinity of Conejo Pass;
Delprantum parryi ssp. biochmanue		Low potential.
Biochman's dudleya	r5C/-	Coastal bluft scrub, coastal sage scrub, clayey and serpentine substrates; Coastal
Dualeya biochmannae ssp. biochmannae		mountains, San Luis Obispo County to San Diego County; Low potential.
Many-stemmed dudleya	roc/- 1 P	Chaparral, coastal sage scrub, grasslands, often on rocky outcrops and clay substrates;
Duneya muncuuns Debuerée areanting book		Known location east of Simi Valley, Low potential.
Faimer's grapping nook	roc/-	Chaparral, coastal sage scrub, grassiand, often clay substrate; Historic occurrences near
Ocellated Bly		New Nail, but believed extirpated at this location; Low potential.
Ution humboldii een acallatum	r3C/-	Chaparrai, cismontane woodlands, lower connerous lorest; Low potential.
Short joint boyartail cachus	FSC /	Changes in the provident of the second
Onuntia basilarie var brachvolada	1 R	Chapartal, phyon-jumper woodand, desen communities, san Gaoner Mountains and
Heart-leasted thorn-mint	-/-	Chapter of the construction of the constructio
Acanthomintha oborata con cordata	-,- A	Chapatrai topeningo, Cismonane woouland, Eow poteninal.
California androgaco	-7-	Chaparral cismontone woodland, coastal age servity Low notantial
Androsace Annosace	-/- A	Chapatral, Comonane woodland, Coastat sage scrub; Low potential.
Plummor's baccharis	-7-	Chaparral cismontana woodland, coastal rage seruh, resky Low notantial
Raccharis nlummerae sen nlummerae	-/- A	Chaparrat, Conformane woodland, coastal sage scrub, rocky; Low potential.
parenario praninerae osp. praninerae	7	

Table BIO-9 (cont.) Sensitive Plant Species with the Potential for Occurrence on Newhall Ranch

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	Status:	
	Pederal/State*	
Species	CNPS Listt	Habitat, Local Distribution, and Likelihood of Occurrence on the Ranch
Round-leaved boykinia	-/-	Chaparral (mesic), riparian woodland, moist situations near streams,<2000 meters; Low
Boykinia rolundifolia	4	potential.
Brewer's calandrinia	-/-	Chaparral, coastal sage scrub, disturbed sites, burns; Low potential.
Calandrinia breweri	4	
Catalina mariposa lily	•/-	Chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland;
Calochoritus catalinae	4	Moderate potential.
Peirson's morning-glory	-/-	Sparse coastal sage scrub, chaparral, chenopod scrub, cismontane woodland, lower
Calvstegia veirsonii	4	montane conifer forest: Known occurrences in Santa Clara River drainage; Observed.
Prostrate spineflower	-/-	Chaparral, coastal sage scrub, valley and foothill grassland, gabbroic clay, granitic;
Chorizanthe procumbens	4	Low potential.
Small-flowered morning-glory	-/-	Coastal sage scrub, valley and foothill grassland, clay, serpentine seeps; Low potential.
Convolvulus simulans	4	
Santa Barbara bedstraw	-/-	Cismontane woodland; Low potential.
Galium cliftonsmithii	4	
Southwestern spiny rush	-/-	Coastal dunes (mesic), meadows (alkaline seeps), coastal salt marsh, moist saline places,
Juncus acutus ssp. leopoldii	4	generally <300 meters; Moderate potential.
Small-flowered microseris	-/-	Cismonfane woodland, coastal sage scrub, valley and foothill grassland, clay; Low
Microseris douglasii var. platyca	rpha 4	potential.
California spineflower	· -/-	Chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland,
Mucronea californica	4	sandy; Low potential.
Slender nemacladus	-/-	Cismontane woodland, valley and foothill grassland; Low potential.
Nemacladus gracilis	4	
Pringle's (adobe) yămpah	-/-	Chaparral, cismontane woodland, coastal sage scrub, grassy slopes, serpentine
Perideridia pringlei	4	outcrops; Low potential.
· —		

Table BIO-9 (cont.) Sensitive Plant Species with the Potential for Occurrence on Newhall Ranch

*Status Codes:

- FE Listed as an endangered species by the U.S. Fish and Wildlife Service (USFWS). =
- FPE Ξ Currently proposed for listing as an endangered species by USFWS; Review in process.
- FPT =
- Currently proposed for listing as a threatened species by USFWS; Review in process. Federal species of concern; These species represent the pool of species of concern from which future candidates may be chosen. FSC =
- A State of California endangered species as listed by the California Department of Fish and Game (CDFG); Data indicate the species is in serious danger of becoming extinct throughout all or a significant portion of its range. CE =
- A State of California rare species as listed by CDFG; Data suggest that although not presently threatened with extinction, the species occurs in such CR = small numbers throughout its range that it may become endangered if conditions worsen. † California Native Plant Society (CNPS) List:

- CNPS designation for plant presumed extinct in California. 1A **
- CNPS designation for plants that are considered rare, threatened, or endangered in California and elsewhere. 1B æ
- 2 CNPS designation for plants that are considered rare, threatened, or endangered in California, but more common elsewhere. Ħ
- CNPS designation for plants that are of limited distribution and are being monitored for change in status (a watch list). 4 =

Peirson's morning-glory intergrades on the project site with a much more common and widespread species, chapartal morning-glory (Calystegia macrostegia ssp. cyclostegia; C. m. ssp. intermedia). These two subspecies of chaparral morning-glory are abundant on the site sprawling over shrubs in the coastal sage scrub and chaparral habitats, however, Dames & Moore 1993 (Appendix E) did not report the presence of chaparral morning-glory. The identification of Pierson's morning-glory can be difficult due to its similarities to other species of morning-glory. In addition, the reported distribution of Peirson's morning-glory is on rocky slopes at 1,000 - 1,500 m (approximately 3,000 - 4,500 feet) elevation in the northern San Gabriel Mountains and adjacent Mojave Desert (Hickman 1993). The majority of the Newhall Ranch site is below this elevation and west of these geographic locations. However, records reported to the California Natural Diversity Data Base (CNDDB 1995; Appendix M) in 1982 reported the species in San Francisquito Canyon at an elevation of 1,800 feet and in Bitter Canyon at 1,300 feet elevation. These elevations are within those of the Newhall Ranch property, especially the southern half of the site. In 1993, Dames & Moore (Appendix E) reported that Peirson's morning-glory was found on the Newhall Ranch property in sparse coastal sage scrub on steep slopes near Salt Creek Holding, West Fork of Salt Creek near the Ventura County line, Middle Potrero, Adobe Canyon, Red Rock Canyon, Lion Canyon, and Dead End Canyon. The species was relocated in Middle Potrero and Salt Creek canyons during the 1995 RECON surveys, and a new location was documented in a grassland area south of Six Flags Magic Mountain. Only a few individuals were observed at each of these sites in 1995. Approximately five individuals were observed in sparse coastal sage scrub in Middle Canyon, eight individuals in sparse coastal sage scrub in Salt Creek Canyon, and three individuals in the grassland south of Six Flags Magic Mountain.

Given the difficulty in identification of the species due to similarities to other morning-glory species, the abundant presence of other subspecies of chaparral morning-glory, and the fact that the site is west of the known range for this species, Peirson's morning-glory is considered to be uncommon on the site, occurring as small, scattered and localized populations. Based on the observations of Pierson's morning-glory made during the 1995 RECON surveys, it was estimated that the species occurs on approximately one percent of the sparse coastal sage scrub areas on the Ranch property (the grassland area near Six Flags Magic Mountain is developing into sparse coastal sage scrub). Thus, only about 29 acres of the 2,927 acres of sparse coastal sage scrub area likely to be occupied by this species.

(b) Sensitive Plants Not Observed, But Those That Have Potential for Occurrence

The following discussion of sensitive plants that have the potential for occurrence on the Newhall Ranch ranks the likelihood of occurrence based on background information for the species (e.g., distribution, habitat, elevation, known occurrences, etc.), observations of habitat made during previous biological surveys conducted by Dames & Moore and by RECON, and observations made in the field during the 1995 RECON field surveys (e.g., disturbance level, presence of appropriate habitat and substrate, etc.). A high likelihood of occurrence indicates that conditions on the site are extremely favorable for this species to occur, even though it was not observed. A moderate likelihood for occurrence indicates that although the site is within the range of the species and appears to have proper habitat, local conditions of the habitats (i.e., disturbance level) or lack of proper substrate conditions on the site could preclude the occurrence of this species. A low likelihood of occurrence indicates that the site is lacking with respect to appropriate habitats, proper substrates, the site is marginal in relation to the range of the species, or the species is conspicuous and would have been observed if present (i.e., large perennials, shrubs, or a plant with showy flowers).

Slender-horned Spineflower (*Dodecahema leptoceras*) — This plant is a federal and state listed endangered species (reference Table BIO-9). It is also considered a List 1B species by CNPS. It is a prostrate annual herb with small white to pink flowers which appear from April through June. It is found in sandy alluvium in coastal sage scrub and chaparral. Historically, this species ranged from Los Angeles through San Bernardino and Riverside counties. Many former occurrences have been lost to urbanization and the remaining localities are currently threatened by development, flood control, offroad vehicle activity, and a proposed reservoir. This species has been recorded in the Santa Clara River drainage approximately 10 miles east of Newhall Ranch. Slender-horned spineflower was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Because of its rarity and range, the likelihood of occurrence for this plant species on the Newhall Ranch site is considered to be low.

California Orcutt Grass (Orcuttia californica) – This plant is a federal and state listed endangered species (reference Table BIO-9) which is also considered a List 1B species by CNPS. This grass is found in vernal pool habitats in southern California and northern Baja California, where it is known from fewer than 20 occurrences. The species flowers from April to August after the water in the pools has evaporated. This species is threatened by agriculture, development, non-native plants, grazing, and vehicles. California Orcutt grass has recently been described from Ventura County in Moorpark (Impact Sciences, in house files). In addition, it is also known from within eight miles east of Newhall Ranch. This species was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Given the lack of vernal pools or vernal pool-like conditions on the Newhall Ranch site, the likelihood of occurrence for this plant species on the site is considered to be low.

Lyon's Pentachaeta (*Pentachaeta lyonii*) -- This plant is proposed for federal listing as endangered, is listed by the state of California as endangered, and is considered a List 1B species by CNPS (reference Table BIO-9). This annual herb flowers from March to August and is found in chaparral and valley-

foothill grassland. The species is found in Los Angeles and Ventura counties and is threatened by development and recreational activities. Lyon's pentachaeta was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. The likelihood of occurrence on-site is considered to be low since this species is more typically found in coastal sagebrush and grassland ecotones nearer the coast.

Nevin's Barberry (*Berberis nevinii*) -- This plant is proposed for federal listing as endangered, is listed as endangered by the state of California, and is considered a List 1B species by CNPS (reference Table BIO-9). It is a perennial evergreen shrub with stiff branched stems and spine-tipped leaves. The flowering period for this shrub is from March to April. This species is typically found in sandy and gravelly places in chaparral, cismontane woodlands, coastal sage scrub, and riparian scrub habitats. Its known distribution includes locations in Los Angeles, Riverside, San Bernardino, and San Diego counties. Two populations are known from San Francisquito Canyon (CNDDB 1995; Appendix M). Many historical occurrences have been extirpated and remaining populations are threatened by development and road maintenance. This species was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. The likelihood of occurrence on the site is considered moderate as suitable habitat for this plant occurs along the river.

Thread-leaved Brodiaea (Brodiaea filifolia) - This plant is listed by the state as threatened. It is also proposed for federal listing as threatened, and is considered a List 1B species by CNPS. This spring flowering perennial herb typically grows in heavy clay soils of coastal sage scrub and chaparral vegetation, and also occurs in grasslands and in association with vernal pools. This species was rediscovered in Los Angeles County in the early 1990's. Thread-leaved brodiaea was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Given the lack of substantial areas of clay soils, the likelihood of occurrence of this species on-site is considered low.

Santa Susana Tarplant (Hemizonia minthornii) – This plant is listed by the state of California as rare. It is also a federal species of concern, and is considered a List 1B species by CNPS. This shrubby plant with sticky fragrant leaves, flowers from July to November. It is found in rocky chaparral and coastal sage scrub habitats in both Ventura and Los Angeles County. The species is threatened by development. Twelve records for Santa Susana tarplant occur in the 1995 CNDDB in the immediate vicinity of the Newhall Ranch project site (Appendix M). All of these recorded locations are south of the project site either on the south side of the Santa Susana Mountains, or in the vicinity of the Simi Hills. Although no observations of this plant were noted during past surveys on the site, species specific surveys were conducted for this plant on the Newhall Ranch site on August 1, 2, and 3, 1995 due

to the presence of appropriate habitat. Appropriate habitat in the upper elevations of the Santa Susana Mountains, as well as other potential areas on the site were surveyed for the presence of this species by RECON in 1995. No individuals of Santa Susana tarplant were observed on the Newhall property. Because the plant would have been observed if present on the Newhall Ranch property, the likelihood of occurrence of this species on the Newhall Ranch site is considered to be low.

Braunton's Milk Vetch (*Astragalus brauntonii*) – This plant is proposed for federal listing as endangered and is considered a List 1B species by CNPS. It is a stout perennial herb with densely hairy white leaves. This species which flowers from March to July, can be found on limestone substrates in chaparral, coastal sage scrub, and grasslands habitats, especially after fires or other disturbance. The species is known from fewer than 10 occurrences in Los Angeles, Orange, and Ventura counties. It is threatened by development and alteration of local fire regimes. Braunton's milk vetch was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Given the lack of appropriate substrate (i.e., limestone), the likelihood of occurrence on the site is considered to be low.

Slender Mariposa Lily (*Calochortus clavatus* var. gracilis) – This plant is a federal species of concern, and is considered a List 1B species by CNPS. This bulbiferous perennial herb occurs in chaparral habitats in the nearby San Gabriel Mountains. It flowers in March. The species is threatened by development throughout its range. A variety of slender mariposa lily (*Calochortus clavatus* var. *pallidus*) was observed on the site. However, slender mariposa lily was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Because the plant would have been observed if present on-site, the likelihood of occurrence of this plant on the site is considered to be low.

Plummer's Mariposa Lily (*Calochortus plummerae*) -- This plant is a federal species of concern, and is considered a List 1B species by CNPS. This bulbiferous perennial herb occurs in a variety of habitats with granitic substrates including chaparral, cismontane woodland, coastal sage scrub, and valley-foothill grassland. The species flowers from May to July and its range encompasses the following counties: Los Angeles, Riverside, San Bernardino, and Ventura. This species has been significantly reduced by development and continues to decline. Plummer's mariposa lily was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Because the plant would have been observed if present onsite, the likelihood of occurrence of this plant on the Newhall Ranch site is considered to be low.

San Fernando Valley Spineflower (*Chorizanthe parryi* var. *fernandina*) – This plant is a federal species of concern, and is considered a List 1A species by CNPS, which means it is presumed extinct in California. This small plant was known to flower from April to June and was found in sandy coastal sage scrub habitats. Originally, this species ranged from Los Angeles, through Orange to San Diego counties, but all known occurrences have been heavily urbanized. Given historic records and suitability of habitat present, the greatest chance for re-discovery of the species is considered to be in northwestern Los Angeles County. San Fernando Valley spineflower was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site; however, two other species of *Chorizanthe* do occur on the site. Given the extreme rarity of this species, the likelihood of occurrence of this taxon on the Newhall Ranch site is considered to be low.

Dune Larkspur (*Delphinium parryi* ssp. *blochmaniae*) -- This plant is a federal species of concern, and is considered a List 1B species by CNPS. This perennial herb produces showy spikes of purple flowers from April to May. Typically the species grows in maritime chaparral and coastal dunes. It ranges from San Luis Obispo through Santa Barbara to Ventura counties with the nearest known location being in the vicinity of Conejo Pass. The species is threatened by development. Dune larkspur was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Given the lack of appropriate habitat, the likelihood of occurrence of this taxon on the Newhall Ranch site is considered to be low.

Blochman's Dudleya (Dudleya blochmaniae ssp. blochmaniae) – This plant is a federal species of concern, and is considered a List 1B species by CNPS. This small succulent perennial occurs on coastal bluffs and rock outcrops usually in clay soils. Blochman's dudleya produces small white flowers from April to June. It ranges from central California to northern Baja California. The species is threatened by development throughout its range. Blochman's dudleya was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Given the lack of rock outcrops in clay soils and distance from the coast, the likelihood of occurrence of this taxon on the Newhall site is considered to be low.

Many-stemmed Dudleya (*Dudleya multicaulis*) - This plant is a federal species of concern, and is considered a List 1B species by CNPS. This small succulent perennial herb produces yellow flowers from April to June. This species often grows in clay soils around rock outcrops in chaparral, coastal sage scrub, and valley-foothill grasslands. It ranges through Los Angeles, San Bernardino, Orange, and Riverside counties to northern San Diego County. Known locations near the project site include areas east of Simi Valley. Threats to this species include the loss of habitat from development, road construction,

grazing, and recreation. Many-stemmed dudleya was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Given the lack of significant areas of rock outcrops in clay soils, the likelihood of occurrence of this species on the Newhall Ranch site is considered to be low.

Palmer's Grapplinghook (*Harpagonella palmeri*) – This small plant is a federal species of concern, and is considered a List 2 species by CNPS. A CNPS List 2 species is one that is rare, threatened, or endangered in California but is more common elsewhere. This species ranges from Los Angeles and Riverside counties southward to Baja California and Sonora, Mexico. This herbaceous annual produces small white flowers from March to April. It is found growing on clay soils in chaparral, coastal sage scrub, and valley-foothill grasslands. It has been found within a few miles of the project site. Palmer's grapplinghook was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Given the lack of significant areas of clay soils, the likelihood of occurrence of this species on-site is considered low.

Ocellated Lily (Lilium humboldtii ssp. ocellatum) – This plant is a federal species of concern, and is considered a List 4 species by CNPS. This bulbiferous perennial herb is found in chaparral, cismontane woodland, and lower coniferous forest in southern California. It flowers from April through July. This lily is threatened by development and horticultural collecting. This taxon was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Since the taxon is most commonly found in yellow pine forest and oak canyons and the plant would have been observed if present, the likelihood of occurrence on-site is considered low.

Short-joint Beavertail Cactus (Opuntia basilaris var. brachyclada) – This plant is a federal species of concern, and is considered a List 1B species by CNPS. This stem succulent of the cactus family flowers from April to June. It occurs in the desert slopes of the San Gabriel and San Bernardino Mountains in chaparral, pinyon-juniper woodland, and desert plant communities. Occurrences for this species have been recorded in Quigley Canyon east and north of Newhall (CNDDB 1995; Appendix M). These locations are east of the Newhall Ranch project site. This taxon is threatened by urbanization, mining, horticultural collecting, grazing, and vehicles. Short-jointed beavertail cactus was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. As this taxon is typically found on more desert slopes, the likelihood of occurrence on the Newhall Ranch site is considered low.

Heart-leaved Thom-mint (Acanthomintha obovata ssp. cordata) – This annual herb is endemic to California occurring in chaparral openings, cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland habitats. The species occurs from the central and southern South Coast Ranges to the western and central Transverse Range (San Luis Obispo to Ventura counties), and is considered a List 4 species by CNPS. It produces white with purple tipped flowers from April to July. This species is threatened by off road vehicle use and grazing. Heart-leaved thom-mint was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Given that the main distribution of this taxon is to the north and east of the project site, the likelihood of occurrence of this variety of thom-mint on-site is considered to be low.

California Androsace (Androsace elongata ssp. acuta) – This annual herb is highly localized and often overlooked in its range which is from the San Joaquin Valley south to Baja California, and is considered a List 4 species by CNPS. It occurs in chaparral, cismontane woodland, and coastal scrub habitats. This species produces white flowers from March to June and is considered rare in southern California. California androsace was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Given the rarity of this plant, the fact that the plant is conspicuous and would have been observed if present, and the level of disturbance to the grasslands on the site from cattle grazing, the likelihood of occurrence of this taxon on the Newhall Ranch site is considered low.

Plummer's Baccharis (*Baccharis plummerae* ssp. *plummerae*) – This deciduous shrub blooms August to October. It occurs in chaparral, cismontane woodland, and coastal scrub or rocky habitats of the central coast, outer South Coast Ranges, south coastal areas, and the Western Transverse Ranges, and is considered a List 4 species by CNPS. This taxon was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Since this plant (a shrub) would have been easily observed if present on the site, the likelihood of occurrence of this shrub on the Newhall Ranch is considered low.

Round-leaved Boykinia (*Boykinia rotundifolia*) -- This perennial herb, endemic to California, blooms June to July. It occurs in mesic chaparral and riparian woodland habitats of the outer South Coast Ranges, Transverse Range and Peninsular Range, and is considered a List 4 species by CNPS. Roundleaved boykinia was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Although the plant was not observed, the amount of streambank and riparian woodland habitat present along the Santa Clara River provides sufficient habitat for this species. Therefore, the likelihood of occurrence on-site is considered moderate. Brewer's Calandrinia (*Calandrinia breweri*) – This annual herb is rare yet widely scattered throughout its range (North Coast Ranges, south to Baja California), and is considered a List 4 species by CNPS. It produces red flowers from March to June and occurs in chaparral, and disturbed burned areas of coastal scrub. Brewer's calandrinia was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site, however, a related species, red maids (*Calindrinia ciliata*) was found on the site. Because this plant is conspicuous and would have been easily observed if present, the potential for occurrence of Brewer's calandrinia on the Newhall Ranch is considered low.

Catalina Mariposa Lily (*Calochortus catalinae*) – This bulbiferous perennial herb produces bowlshaped white flowers tinged with lilac and purple spots from February to May. It is endemic to California occurring in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats within the southern central coast areas to the western south coastal areas, and is considered a List 4 species by CNPS. This lily is threatened by development. Catalina mariposa lily was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. However, other species of *Calochortus* were observed. Since the species is conspicuous and would have easily been observed during the 1995 survey period, the potential for occurrence of this species on the Newhall Ranch site is considered low to moderate.

Prostrate Spineflower (*Chorizanthe procumbens*) – This annual herb flowers from April to June. It is widely scattered throughout its range which is from the central and southern south coastal areas, the southern Transverse Range, south to the western Peninsular Range and Baja California, Mexico, and is considered a List 4 species by CNPS. It occurs in chaparral, coastal scrub habitats, and valley and foothill grasslands of gabbroic clay or granitic substrates. This species is threatened by non-native grasses, and much of its habitat has already been lost to development. Although two other species of *Chorizanthe* were found on the site, prostrate spineflower was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Given the lack of appropriate substrates (i.e., gabbroic clay or granitic substrates), the likelihood of occurrence of this species on the Newhall Ranch site is considered low.

Small-flowered Morning-glory (*Convolvulus simulans*) -- This annual herb produces small bell-shaped pink or blue flowers from March to June. It is rare in southern California, but widely distributed throughout the San Joaquin Valley to the north, and is considered a List 4 species by CNPS. This species occurs in coastal scrub habitats, and valley and foothill grasslands on wet clay and serpentine ridges. Small-flowered morning-glory was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Given the more northern distribution of the species and lack of appropriate substrate (i.e., clay and serpentine), the likelihood of occurrence of this species on-site is considered low.

Santa Barbara Bedstraw (Galium cliftonsmithii) – This climbing perennial herb produces clusters of yellow flowers from May to July. It is endemic to California, occurring in cismontane woodland habitats of the outer South Coast Range and Western Transverse Range, and is considered a List 4 species by CNPS. Three other species of Galium were found on the site; however, Santa Barbara bedstraw was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Since the species is conspicuous and would have easily been observed during the 1995 survey period, the potential for occurrence of this species on the Newhall Ranch site is considered low.

Southwestern Spiny Rush (Juncus acutus ssp. leopoldii) -- This perennial rhizomatous herb produces spherical red-brown flowers from May to June. It occurs in meadows of alkaline seeps, mesic coastal dunes, and coastal salt marsh and swamp habitats from the central coastal areas to the south coastal areas and into the Sonoran desert, and is considered a List 4 species by CNPS. This taxon is threatened by urbanization and flood control activities. Southwestern spiny rush was not observed on the Newhall Ranch property during the 1995 RECON field investigation and would have easily been observed during the 1995 survey period, the potential for occurrence of this taxon on the Newhall Ranch site is considered low to moderate.

Small-flowered Microseris (*Microseris douglasii* ssp. *platycarpha*) – This annual herb produces small yellow flowers from March to May. It occurs in cismontane woodland, coastal scrub, valley and foothill grasslands of clay, and often near vernal pools. The species occurs from the central and southern south coastal areas to Baja California, Mexico, and is considered a List 4 species by CNPS. It is threatened by habitat loss of grasslands. Small-flowered microseris was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Given the lack of significant clay soils and vernal pool-like conditions, the likelihood of occurrence of this taxon on-site is considered low.

California Spineflower (*Mucronea californica*) -- This annual herb produces solitary pinkish flowers from March to August. It occurs in chaparral, cismontane woodland, coastal scrub, coastal dunes, and sandy valley and foothill grasslands from western central California to southwestern California, and is considered a List 4 species by CNPS. This species is threatened by aggregate mining, off road vehicles, flood control modification activities, and water percolation projects. California spineflower was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Because this plant is most commonly found closer to the coast, the likelihood of occurrence of this species occurring on the Newhall Ranch site is considered low.

Slender Nemacladus (*Nemacladus gracilis*) – This annual herb produces white flowers with lavender veins from March to May. It occurs on rocky slopes and sandy washes of cismontane woodland, and valley and foothill grasslands of the Tehachapi Mountains, San Joaquin Valley (southwest Merced County), southern outer South Coast Range, western Transverse Range, and western Mojave Desert, and is considered a List 4 species by CNPS. Slender nemacladus was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Because this plant is more likely to be found on the desert side of the above-mentioned mountain ranges to the east of the Ranch, the likelihood of this member of the bellflower family occurring on-site is considered low.

Pringle's Yampah (*Perideridia pringlei*) — This species has no state listing, but has a C3c federal listing which means that this plant is too widespread and/or not threatened (reference Table BIO-9). It is considered a List 4 species by CNPS. This perennial herb is widely distributed throughout its range (Tehachapi Mountains, south Coast Range, and western Transverse Range), flowering from April to July. It occurs in chaparral, cismontane woodland, coastal scrub, and grassy slopes of serpentine outcrops. Pringle's yampah was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. Given the lack of the appropriate substrate (i.e., serpentine outcrops), the likelihood of occurrence of this species on-site is considered low.

(2) Wildlife Species

A number of sensitive wildlife species occur on the Newhall Ranch property. These sensitive animals are listed in Table BIO-10 (Sensitive Wildlife Species Observed or Detected on the Newhall Ranch Property). In addition to those sensitive species that were observed on site, there are several wildlife species that were not directly observed, but have the potential for occurrence on the property based on habitat preference and/or the geographical location of the project in relation to the known range of the animal. Sensitive wildlife species observed and expected to occur on the project site are discussed separately below.

Species	Status	Hähitaf	Location Observed	Noted Abundance
Unarmored threespine stickleback'	FE. CE	SCR	Observed in the Santa Clara River in	Rare
Gasterosteus aculeatus williamsoni	,		1993 at Castaic Junction, and in 1995.	
Arroyo chub ^{5,6}	FSC, CSC	SCR	Observed in 1992, 1993, and 1995 at	Common
Gila orcutti			several areas in the Santa Clara River.	
Santa Ana sucker	FSC, CSC	SCR	Observed in the Santa Clara River in	Uncommon
Catostomus santaanae	F 20 C22	B 080	1992 at Alfalfa and Humble Crossings.	
vyestern spadeloot toad	FSC, CSC	P, GBS	Tadpoles in Potrero Canyon Pond and	Uncommon
scupmopus (= speu) nanimonum			Via Pond (4); Single adult observed in	
Southwastern rand turtle	ESC CSC	SCP	Sait Creek Canyon. Observed in the Santa Clare Birger in	(hadron harrison
Clemmus marmorata nallida	$\Gamma \mathcal{X}, \mathcal{C} \mathcal{X}$	JCI	1007 and 1005	OIROHUROH
California borned lizard* ²	FSC. CSC	RS/AS	One individual noted (4) during 1992	Unommon
Phrynosoma coronatum frontale	FSC. CSC	107110	surveys: Specific identification of these	BIRGHEIRAT
San Diego homed lizard*		CH, DI, CSS	species on-site is debatable; Four horned	
Phrynosoma coronatum blainvillii			lizards were observed or detected by scat	
	-		in various areas of the Ranch in 1995.	
Coastal western whiptail	FSC	DI,CSS,	Observed in several widely scattered	Few noted, believed to be
Chemiaophorus ligris mutiscutatus		CH, GBS	areas with coastal sage scrub and chaparral vegetation	relatively common
Two-striped garter snake ⁴	ESC.*	P.CW	Three observed by Dames & Moore in	Three recorded
Thamnophis hammondii	,	.,	1992: two at Via Pond, one at Salt Creek.	observations, believed to be
			,	relatively common
Great blue heron	+	RC	Observed in the Santa Clara River	Few noted, believed to be
Ardea herodias herodias	(rookery)		corridor.	relatively common
Great egret	*	RC	Observed in the Santa Clara River	Few noted, believed to be
Casmerodius albus	(rookery)	D.C.	corridor	relatively common
Snowy egret	(vaakavu)	ĸĊ	Observed in the Santa Clara Kiver	Few noted, believed to be
Black-crowned night beron	(rookery)	RC	Observed in the Santa Clara River	Linearmon
Nycticorar mucticorar boactli	(rookery)	INC.	corridor	CACOMMON
White-tailed kite4	CFP	CSS.	Individual observed (4) in grassland and	Uncommon
Elanus leucurus		OW/S.G.	riparian areas on-site: A nesting pair in	
		CWRC	woodland north of Santa Clara River	
		-	near the confluence with Castaic Creek.	
Northern harrier	CSC	G	Single northern harrier observed over	Uncommon
Circus cyaneus			grassland near Potrero Canyon Pond.	

 Table BIO-10

 Sensitive Wildlife Species Observed or Detected on Newhall Ranch

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Species	Status	Habitat	Location Observed	Noted Abundance
Cooper's hawk Accipiter cooperii	CSC	CW,G,RC	Single observation near Dead End Canyon and San Jose Flat (4); Observed in 1995 at Long Canyon where it meets Santa Clara River and Potrero Canyon.	Uncommon
Southwestern willow flycatcher ³ Empidonax traillit extimus	FE, CE,	RC	One individual observed along the Santa Clara River in 1993 between Castaic Creek and Ventura County line (3).	Rare
Vermilion flycatcher Pyrocephalus rubinus flammeus	CSC	RC	Single individual observed in 1993 along Santa Clara River (3).	Rare
California horned lark Eremophila alpestris actia	CSC	G	Observed in grasslands near Salt Creek, and in grasslands located outside of project site boundary, due south of Magic Mountain Park	Few noted, believed to be relatively common
Loggerhead shrike Lanius Iudovicianus	CSC	CSS,CH,G, R,OP,RC	Dames & Moore considered this species "relatively common" at edges of grassland and scrub (4); Observed in Santa Susana Mountains, and Potrero and Salt Creek canyons during 1995.	Few noted, believed to be relatively common
Least Bell's vireo ³ Vireo bellii pusillus	FE, CE	RC	One individual observed in 1993 on the Santa Clara River near the Ventura County line (3); Other vireos observed in 1994 and 1995 along Castaic Creek north of the Ranch.	Uncommon
Yellow warbler Dendroica petechia	CSC (nesting)	RC	As many as eight individuals observed in 1993 along the Santa Clara River between Castaic Creek and the Ventura County line (3); Also observed in similar numbers in 1994 and 1995.	Uncommon
Yellow-breasted chat Icteria virens auricollis	CSC (nesting)	RC	Two individuals observed along the Santa Clara River between Castaic Creek and the Ventura County line in 1993 (3); Also observed in 1994 and 1995.	Uncommon
Summer tanager Piranga-rubra-rubra	CSC	RC	Single individual observed along the Santa Clara River in 1993 (3).	Rare
Southern California rufous-crowned sparrow Aimonkila ruficens canescens	FSC, CSC	CSS,CH	Observed in several widely scattered areas of coastal sage scrub and chaparral vegetation on the Ranch	Few noted, believed to be relatively common
Tricolored blackbird	FSC, CSC	G	"Flocks" reported (4) within grassland pear mouth of Pottero Canyon	Locally common
Mountain lion Felis cancolor	CFP	OW/S, CH.DI	A paw print was observed just offsite in Via Pond area of the High Country	Uncemmon
San Diego desert woodrat Neotoma lenida intermedia	FSC, CSC	CSS,CH	Two trapped in hills immediately west of Magic Mountain Park	Few noted, believed to be relatively common
San Diego black-tailed jackrabbit Lepus californicus bennettii	FSC, CSC	DI	Observed at mouth of Potrero Canyon.	Few noted, believed to be common

Table BIO-10 (cont.) Sensitive Wildlife Species Observed or Detected on Newhall Ranch

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Table BIO-10 (cont.) Sensitive Wildlife Species Observed or Detected on Newhall Ranch

- CH Chaparral (includes chamise and mixed chaparral)
- CW = Cottonwood-willow riparian forest
- ČSS DI = Coastal sage scrub
- = Disturbed
- G = Grassland
- GBS = Great Basin scrub
- = Ornamental planting OP
- OW/S = Oak woodland/savanna (includes coast live oak woodland, valley oak woodland, valley oak savanna, and cottonwood/oak woodland)
- Р = Pond
- = Ruderal R
- RC = River corridor (includes woodland and scrubs of the Santa Clara River)
- RS/AS = Riparian scrub/alluvial scrub
- SCR = Santa Clara River, aquatic areas
- Baskin and Haglund 1993 1
- Baskin and Haglund 1992 2
- 3 4 Guthrie 1993
- Dames & Moore 1993
- 5 Haglund 1992
- 6 Haglund and Baskin 1993

- FE = Listed as endangered by the federal government
- CĒ = Listed as endangered by the state of California
- FSC CSC = Federal species of concern
 - = California Department of Fish and Game species of special concern
- CFP = California fully protected species
 - Taxa listed with an asterisk fall into one or more of the following: ¥ Taxa considered endangered or rare under Section 15380(d) of CEQA guidelines
 - Taxa that are biologically rare, very restricted in distribution, or declining throughout their range
 - Population(s) in California that may be peripheral to the major portion of a taxon's range, but which are threatened with extirpation within California
 - Taxa closely associated with a habitat that is declining in California at an alarming rate

(a) Observed or Detected

Three federally listed species have been observed along the reach of the Santa Clara River within the project site. The three animal species are unarmored threespine stickleback (Gasterosteus aculeatus williamsoni), least Bell's vireo (Vireo bellii pusillus), and southwestern willow flycatcher (Empidonax traillii extimus). Wildlife species classified as federal species of concern that have been observed on the Newhall Ranch property include arroyo chub (Gila orcutti), Santa Ana sucker (Catostomus santaanae), western spadefoot toad (Scaphiopus hammondii), southwestern pond turtle (Clemmys marmorata pallida), coastal western whiptail (Cnemidophorus tigris multiscutatus), San Diego horned lizard (Phrynosoma coronatum blainvillii), California horned lizard (Phrynosoma coronatum blainvillii), southern California rufous-crowned sparrow (Aimophila ruficeps canescens), tricolored blackbird (Agelaius tricolor), San Diego black-tailed jackrabbit (Lepus californicus bennettii), and San Diego desert woodrat (Neotoma lepida intermedia). Other sensitive species observed or detected on the site are also discussed below.

Unarmored Threespine Stickleback – Ecology: The unarmored threespine stickleback is listed as an endangered species by both the state of California and the federal government (reference Table BIO-10). This small freshwater fish is usually less than three inches in length and has three sharp spines on the back in front of the dorsal fin (Moyle 1976). It lacks lateral bony plates, which is a weak distinguishing character from another more common subspecies of threespine stickleback found in southern California (*Gasterosteus aculeatus microcephalus*), the latter having lateral plates on the anterior portion of the body. The unarmored threespine stickleback is also distinguished from the other subspecies by shorter, weaker spines and more rounded pectoral and caudal fins. Freshwater sticklebacks are typically olive to dark green above and on sides with an underside that is white to golden. Breeding males often turn red below and have blue along the sides.

The unarmored threespine stickleback is a quiet water fish occurring in weedy pools and backwaters or among emergent plants along the edges of streams where the water stays below 23-24 degrees centigrade. They prefer bottoms of sand or mud. Except during breeding, they tend to form loose schools. This stickleback feeds primarily on bottom organisms or organisms living on aquatic plants (Moyle 1976). They are visual feeders and thus are not found in turbid waters.

The small size and shallow-water habits of sticklebacks make them ideal prey for avian predators (e.g., herons). Larger fish species may also prey on sticklebacks when present.

Breeding usually occurs between April and July as daylight increases and waters begin to warm. The males assume their breeding colors and break away from the schools to set up breeding territories among the aquatic plants. A shallow pit is excavated and piled high with plant debris stuck together with a secretion from the kidney. A small tunnel is created in the plant mass in which the female enters the nest to lay her eggs. The male fertilizes the eggs, chases the female away, and guards the eggs and young. The young fry eventually form schools with other fry of similar size.

Past and Current Distribution: Historically, it is believed that the unarmored threespine stickleback occurred in the Santa Clara River, Los Angeles River, San Gabriel River, and Santa Ana River drainages (Girard 1854; Regan 1909; and Jordan and Hubbs 1925; as cited in Haglund 1989). The once abundant Los Angeles Basin populations appear to have been extirpated by the mid-1940s. The unarmored threespine stickleback is now restricted to the upper Santa Clara River. The USFWS listed the species as endangered in 1970 and critical habitat was proposed in 1980.

Three zones were proposed for critical habitat along the Santa Clara River drainage system: San Francisquito, Soledad Canyon, and Del Valle zones. The San Francisquito zone is located in a canyon bearing the same name for an 8.4-mile stretch of river from the Angeles National Forest boundary to Clearwater Canyon. This area is several miles north and east of the Newhall Ranch property. The Soledad Canyon zone is an 8.5-mile stretch of the Santa Clara River from the community of Lang, east to its confluence with Arrastre Canyon. This zone is also several miles upstream of the Newhall Ranch property. The Del Valle zone is located along a 5.6-mile stretch of the Santa Clara River from its confluence with San Martinez Grande Canyon east to I-5. A portion of this zone is situated on the Santa Clara River on Newhall Ranch property from San Martinez Grande Canyon to its confluence with Castaic Creek.

Survey Results in Critical Habitat Zones: Numerous surveys have been conducted in critical habitat zones to determine the presence or absence of this taxon. These surveys are described below.

Survey for the presence of the unarmored threespine stickleback was conducted on portions of the Santa Clara River within the areas of proposed critical habitat in 1989 by Haglund (1989). Both morphologic and genetic data were used to properly identify this subspecies of stickleback. The results of the study concluded that (1) a small stickleback population occurring in Castaic Creek between SR-126 and the confluence with the Santa Clara River (not on the Newhall Ranch site) may not be permanent since other surveys of the same area report that no sticklebacks were found in this area;

(2) the population of unarmored threespine stickleback in San Francisquito Creek is approximately 10 kilometers upstream of its confluence with the Santa Clara River; and (3) the downstream portion of the Santa Clara River from McBean Parkway through the proposed Del Valle critical habitat area has a population of the unarmored threespine stickleback in its upper reaches.

In May of 1992, five river crossings being maintained on and off the Newhall Ranch property were surveyed for the presence of the unarmored threespine stickleback (Baskin and Haglund 1992). The crossings included the Alfalfa, Humble, Salt Creek, Mayo, and Long Canyon crossing locations. Prior to maintenance work on these crossings, approximately 100 meters downstream and upstream of each crossing was seined and the fish caught identified and detained in holding tubs until the work in the river was complete. No unarmored threespine sticklebacks were found in the 200-meter corridor at any of the five crossings.

Two alternative pipeline crossings of the Santa Clara River on the Newhall Ranch property were surveyed for the presence of sensitive aquatic species on July 25, 1992 (Haglund 1992). A 300-foot-wide corridor of the river centered on each alternative crossing was examined. One potential crossing was located upstream of the confluence of Castaic Creek and the Santa Clara River and occurs within the Del Valle zone of proposed critical habitat for the stickleback. The other potential crossing is located at the Las Brisas bridge downstream of the aforementioned critical habitat area. No unarmored threespine sticklebacks were found at either the Castaic Creek or Las Brisas bridge crossing sites. However, it was noted that habitat for this species occurs at both sites; thus, the potential to support sticklebacks exists.

During February of 1993, a sand bern was constructed by Newhall Land and Farming at both Castaic Junction and Summer Crossing (these locations being on the Newhall Ranch site) in order to divert the Santa Clara River back into the channel it had occupied prior to the high flows of 1993 in accordance with permits approved by the CDFG (Baskin and Haglund 1993). Blocking nets and seines were used to control and remove fish from the area of activity. All fish captured during this operation were returned unharmed back to the river after construction activities were complete. A total of eight unarmored threespine sticklebacks were captured and later released at the Castaic Junction site. No specimens of this species were caught at the Summer Crossing site.

During May, June and July of 1995, surveys for the presence of the unarmored threespine stickleback and other sensitive aquatic vertebrates were conducted on portions of the Santa Clara River, including a river stretch on the Ranch (Haglund and Baskin 1995). The fish survey was conducted June 11, and was accomplished by seining the river from the confluence of Castaic Creek upstream to the Bouquet Canyon Road bridge, at intervals of 100 paces. The results of this study concluded that the unarmored threespine stickleback is continuously distributed in the surveyed portion of the Santa Clara River, including the portion surveyed on the Ranch.

Least Bell's Vireo -- Ecology and Distribution: The least Bell's vireo is a small, olive-gray bird with pale buffy yellow sides, light underparts, an indistinct white eye-ring, and narrow-wing bars. Four subspecies of Bell's vireo exist in North America, but only least Bell's vireo occurs in coastal California. This subspecies breeds in California and northern Baja California, Mexico, and winters in southern Baja California, Mexico.

The least Bell's vireo arrives in southern California in late March to early April to begin breeding activities. The male birds tend to arrive several days before the female birds to set up breeding territories. Nesting territories range from 0.5 to 4.0 acres and are established in riparian habitat, usually in dense willow-dominated thickets. Detailed analyses of nesting habitat indicates that these vireos are found most frequently in riparian vegetation with significant tree cover in conjunction with a well-developed shrub understory. Common understory shrubs and young trees include narrow-leaved willow, mule fat, young arroyo willow, and young Goodding's black willow (*Salix gooddingi*).

Nest site selection is fairly consistent for vireos, with the majority of vireo nests being placed in either black willow, arroyo willow, or mule fat. Which of these plant species is utilized appears to depend upon which one is most abundant at a particular site. The average height of the nest above ground is approximately one meter (RECON 1990). The average clutch size is four eggs.

Least Bell's vireo populations have been expanding within its breeding range over the last five years. Observations of nesting vireos have increased not only along the major rivers where their populations were before, but nesting activities have also increased along some of the major tributaries of these rivers. In addition, least Bell's vireo have been recently (spring 1995) recorded from areas they were previously not known to use for breeding, including in the southern Santa Susana Mountain Range along a small tributary creek to the Arroyo Simi in Ventura County (Impact Sciences, in house files). On going recovery programs involving regulatory protection of riparian habitat, habitat creation and enhancement projects, and brown-headed cowbird trapping programs within major southern California drainages have resulted in a substantial increase in the region's least Bell's vireo population (USFWS, Least Bell's Vireo Working Group, personal communication, 1995).

Both the male and female vireos incubate and care for the young; incubation lasts around 14 days and young birds fledge 10 to 12 days after hatching. Pairs may construct additional nests subsequent to fledging young or abandonment of an unsuccessful nest. Although as many as four clutches can be laid in a season, it is probable that vireos do not produce more than two successful broods a year.

The least Bell's vireo has declined in numbers due to the loss of riparian habitat and increased cowbird parasitism. Riparian habitat has decreased dramatically in California over the past century. It has been estimated that in the Central Valley alone, the principal portion of the historic range of the species, more than 90 percent of the riparian woodland habitat that existed has been cleared for development (Katibah 1984). A similar story could be told about riparian woodlands in other parts of the least Bell's vireos' historic range. In 1980, the least Bell's vireo was listed as an endangered species by the state of California, and it was added to the federal Endangered Species List in 1986. Critical habitat for the species has been designated in the following 10 areas: portions of the Santa Ynez River in Santa Barbara County; portions of the Santa Clara River in Los Angeles and Ventura counties; portions of the Santa Ana River in Riverside and San Bernardino counties; and portions of Coyote Creek, Santa Margarita River, San Luis Rey River, San Diego River, Sweetwater River, Jamul-Dulzura Creeks, and Tijuana River in San Diego County. Only a few sightings have been made in recent times in the reach of the Santa Clara River subject to this report.

Nest parasitism by the brown-headed cowbird has also had a strong negative impact upon vireo populations. Cowbird populations in southern California have increased dramatically in close correspondence to agriculture and livestock activities. Because intense parasitism from cowbirds on vireos is a relatively new phenomenon, beginning in the early twentieth century, least Bell's vireos have not yet adapted physical or behavioral defenses to it. Parasitism intensity is directly related to the proximity of dairies and stables, where cowbird populations are higher, to the riparian habitat. The development of these agricultural activities adjacent to riparian habitat has increased to a level higher than before the start of the twentieth century.

Survey Results for the least Bell's Vireo: Rangewide surveys of least Bell's vireo populations within California were conducted in 1986 and 1987 as background for the Comprehensive Species Management Plan for the vireo (RECON 1990). In 1986, a total of 394 singing males, of which approximately 303 were known to be paired with a female bird, were observed on 32 drainages. In 1987, 433 males, of which 281 were known to be paired, were observed in 23 drainages. Seventy-two percent of all male vireos observed in 1986 occurred within San Diego County. This number increased to 85 percent in 1987.

Outside of San Diego County, the largest subpopulations of least Bell's vireo occurred in the Prado Basin on the Santa Ana River in Riverside and Orange counties (19 pairs in 1986 and 21 pairs in 1987) and the Gibraltar Reservoir area on the Santa Ynez River in Santa Barbara County (57 pairs in 1986 and 20 pairs in 1987). The Santa Clara River had approximately nine pairs in 1986 and only two male birds in 1987.

In 1988, a survey for least Bell's vireo was conducted on the portion of the Santa Clara River east of Castaic Creek to Bouquet Canyon Road, on Castaic Creek from the Santa Clara River to 1-5, and on San Francisquito Creek one to two miles above the Santa Clara River (these locations are not on the Newhall Ranch property). Only one male least Bell's vireo was detected and this bird was a migrant passing through the area (Guthrie 1988). The same area was surveyed for the presence of least Bell's vireo in 1989 and no vireos were observed in the study area (Guthrie 1989). Vireos were observed near the town of Cavin, approximately three miles downstream of Torrey Road outside of the Newhall Ranch property.

Surveys conducted in a slightly larger area than above were conducted in 1990. One pair of least Bell's vireo was observed in young willow habitat near the intersection of SR-126 and I-5 (Guthrie 1990). This observation was made in the same location that vireos had been observed in 1986 (RECON 1990). The USFWS, in response to an oil spill on the Santa Clara River on the Newhall Ranch property, conducted a survey for least Bell's vireo during the spring of 1991. A single male bird was observed during this survey.

A small subpopulation of least Bell's vireo has resided on the Santa Clara River near the town of Piru in Ventura County since at least 1979, when 12 singing males were recorded from this area. This group of birds decreased to four singing males in both 1986 and 1992 (Guthrie 1992). Other subpopulations of least Bell's vireo on the Santa Clara River were observed in both 1991 and 1992 in the following locations: three locations between SR 150 and U.S. 101 (in between Santa Paula and Ventura); near the town of Fillmore (one location); near the town of Piru (one location); and singing males only near both Castaic Junction and McBean Parkway (Guthrie 1992).

A survey of this reach of the Santa Clara River was conducted in 1993 by Dan Guthrie (Guthrie 1993). Three singing males and one pair of vireos were observed near the county line between Los Angeles and Ventura counties to the west of the Turkey Ranch area. Surveys for the least Bell's vireo along the Santa Clara River from Castaic Creek to near Las Brisas bridge were conducted in 1994 (Guthrie 1994). The surveys were conducted according to the USFWS survey protocol. Riparian habitat along the Santa Clara River was covered on foot and bird species were identified with the aid of binoculars and by call. Singing least Bell's vireos were heard and observed near the county line between Los Angeles and Ventura counties. A probable maximum of six singing males of which four had mates were observed at this location.

Surveys for the least Bell's vireo along the Santa Clara River from Castaic Creek into Ventura County were conducted in 1995 by Guthrie (1995). The surveys were conducted according to the USFWS survey protocol. Riparian habitat along the Santa Clara River was covered on foot and bird species were identified with the aid of binoculars and by call.

Three singing birds were observed during the May 1995 survey, one near the Ventura/Los Angeles County line and the other further to the west of the county line. The singing least Bell's vireo observed near the county line was also seen on subsequent visits made in June and July 1995. It was concluded that at least one, and as many as three, breeding pairs were present on this portion of the Santa Clara River. Only one breeding pair would have crossed the county line into Los Angeles County with their territory.

Southwestern Willow Flycatcher – Ecology and Distribution: The southwestern willow flycatcher was listed as endangered in February 1995 by the USFWS (50 CFR Part 17; Vol. 60, No. 38). The bird is a small (approximately 15 centimeters), grayish-green backed species that has a whitish throat, light-olive gray breast, pale yellowish belly, and two wing bars. It is one of four subspecies of willow flycatcher most commonly recognized in North America. This willow flycatcher is migratory and a summer resident in the North American southwest. The breeding range of this species includes southern California, Arizona, New Mexico, extreme southern portions of Nevada and Utah, and western Texas. It likely winters in Mexico, Central America, and northern South America.

The southwestern willow flycatcher occurs in riparian habitats along rivers, streams, or other wetlands where stands of willows, mule fat, arrow weed, tamarisk, or other riparian plants are present, often with an overstory of cottonwood. It is an insectivorous bird that nests in dense stands of trees and shrubs approximately four to seven meters above the ground near surface water. The nest is a small cup of plant material about 4.5 centimeters in diameter and 3.8 centimeters deep.

Southwestern willow flycatchers arrive in the southwest United States to begin setting up breeding territories late in the spring (mid-May). It lays eggs during late May and early June. The young are fledged in early July. Nesting takes around 28 days. Three to four eggs are laid which are incubated by the female bird in about 12 days. The young are fledged approximately 13 days after hatching. Only one brood is produced per year.

The decline in the populations of southwestern willow flycatcher has resulted from the loss or degradation of riparian habitats throughout the range of the species. Habitat loss has resulted from many activities including urban and agricultural development, water diversion and impoundment, channelization, livestock grazing, and hydrological changes resulting from these and other land use changes. Of these factors, overuse of riparian areas by livestock is a major factor in the loss and degradation of habitat. Cattle affect riparian communities through negative effects on plant community structure, decreases in plant species composition, decreases in relative abundance of plant species, reductions in plant density, and reductions in plant diversity.

The invasion of riparian areas by tamarisk also alters the community structure and species composition. Cattle grazing can increase tamarisk invasion by eliminating the palatable broadleaf plants like willow and cottonwood saplings while allowing the unpalatable tamarisk to increase in density. Vegetation clearing and other disturbances of riparian areas also contribute to the spread of tamarisk. Other factors affecting the abundance of southwestern willow flycatcher include the loss of wintering grounds to tropical deforestation and increases in brood parasitism by the brown-headed cowbird. Decreases in the amount of wintering habitat reduce populations by decreasing survivorship of adult birds which can be part of the next breeding season. Parasitism by brown-headed cowbirds has deleterious effects on the number of fledglings produced in a given breeding season.

Survey Results for the Willow Flycatcher: Bird surveys conducted along the Santa Clara River on Newhall Ranch and adjacent lands between 1988 and 1995 have revealed the presence of the southwestern willow flycatcher in the area. A single bird was observed between Castaic Creek and I-5 in 1988 (Guthrie 1988). During surveys conducted in 1990, single individuals of southwestern willow flycatcher were observed at each of the following locations: between Castaic Creek and I-5; between I-5 and McBean Parkway; and along Castaic Creek between I-5 and SR-126 (Guthrie 1990, 1994).

In 1993, a bird survey was conducted along the Santa Clara River from Castaic Creek to the western boundary of the Newhall Ranch land in Ventura County. One individual southwestern willow flycatcher was observed between Castaic Creek and the Ventura County line in the riparian habitat (Guthrie 1993). This bird was considered to be migrating through the area. In 1994, bird surveys were conducted along the Santa Clara River from Castaic Creek to near Las Brisas bridge (Guthrie 1994). Riparian habitat along the Santa Clara River was covered on foot and bird species were identified with the aid of binoculars and by call. One individual southwestern willow flycatcher was observed between Castaic Creek and the Ventura County line in the riparian habitat (Guthrie 1994). This bird was considered to be migrating through the area. No southwestern willow flycatchers were observed along this portion of the Santa Clara River during the intensive riparian bird surveys conducted in 1995 (Guthrie 1995). It appears that although habitat suitable for breeding occurs along this portion of the Santa Clara River, southwestern willow flycatcher populations have not expanded into this portion of their breeding range.

Arroyo Chub -- The arroyo chub is a federal species of concern and a California species of special concern. It is not native to the Santa Clara River drainage. Habitat includes sand- and mud-bottomed flowing pools and runs of headwaters, creeks, and small to medium rivers. It occasionally can be found in intermittent streams (Page and Burr 1991) and grows to 16 inches in length. Arroyo chub were observed in low to moderate numbers in the Santa Clara River on the project site (Haglund and Baskin 1993). However, during the sensitive aquatic species surveys conducted in the summer of 1995 (Haglund and Baskin 1995), arroyo chub were continuously distributed throughout surveyed portions of the Santa Clara River, including on the Ranch. Arroyo chubs were the most abundant fish recorded during the surveys, and in many of the survey areas they were categorized as abundant.

Santa Ana Sucker – The Santa Ana sucker is a federal species of concern and a California species of special concern. It occurs only in the Santa Clara, Los Angeles, San Gabriel, and Santa Ana River systems. It is believed that the population in the Santa Clara River is the result of the species being introduced (Moyle 1976). This sucker species prefers clear, cool, rocky, and gravely streams where it feeds on algae, diatoms, detritus, and small insect larvae. Spawning takes place from early April to early July. One individual of Santa Ana sucker was observed at both the Alfalfa Crossing and Humble Crossing during May of 1992 (Baskin and Haglund 1992). However, during the sensitive aquatic species surveys conducted in the summer of 1995 (Haglund and Baskin 1995), Santa Ana sucker were not located in the portion of the Santa Clara River between Old Road bridge and the confluence of Castaic Creek. This includes the surveyed portion of the river on the Ranch. This study concluded that this fish has a relatively patchy distribution, and the association with gravel and cobble substrate apparently is a limiting factor in their distribution. It is reasonable to assume that this species can be found along the Santa Clara River in low numbers.

Western Spadefoot Toad — The western spadefoot toad is a federal species of concern and a California species of special concern. This species range covers the central portion of northern California, the Great Valley, and coast ranges from San Francisco to Baja California (Stebbins 1985). Local habitat includes washes, flood plains, and alkali flats. It prefers shortgrass plains and areas of open vegetation (chaparral, pine-oak woodland) with sandy or gravelly soil (Stebbins 1985). Where soil conditions are favorable, they can be abundant.

In southem California this species is most commonly found in shallow, temporary pools after winter and spring rains (Sloan 1964). This vernal pool habitat type has been drastically reduced in recent years, and spadefoot toad sightings have been reduced concurrently. The western spadefoot toad is a nocturnal species. It can be found by checking for tadpoles and small masses of eggs attached to rocks or submerged vegetation in vernal pools (Behler and King 1979). On the Newhall Ranch property, tadpoles and toadlets of this species were observed in and near Via Pond and a pond in Middle Potrero Canyon (Dames & Moore 1993; Appendix E). One adult western spadefoot toad was observed in 1995 by RECON in Salt Creek Canyon. During the sensitive aquatic species surveys conducted in the summer of 1995 (Haglund and Baskin 1995), western spadefoot toads were not located in the portion of the Santa Clara River surveyed, including the portion of the river on the Ranch. Based on the above, it appears that this species occurs in low numbers on restricted portions of the site.

Southwestern Pond Turtle – The southwestern pond turtle is a federal species of concern and a California species of special concern. It occurs uncommonly in, and west of, the coastal ranges, from San Francisco Bay to Baja California, and also in the Mojave River. Habitat typically consists of ponds, small lakes, reservoirs, and slow-moving streams, where it may be seen basking on logs or mud banks. It has been reported in brackish and sea water, and is frequently associated with areas having abundant aquatic vegetation. One juvenile southwestern pond turtle was observed near Mayo Crossing on the Newhall Ranch property in May of 1992 (Baskin and Haglund 1992). Turtle trapping efforts were undertaken during the 1995 sensitive aquatic species surveys conducted on portions of the Santa Clara River, including a river stretch on the Ranch (Haglund and Baskin 1995). These trapping surveys were conducted between the confluence of Castaic Creek upstream to Old Road bridge during May 15 through 19. The results of this study concluded that this surveyed portion of the Santa Clara River, including the portion surveyed on the Ranch, supports a population of southwestern pond turtles. It is reasonable to predict that the entire length of the Santa Clara River within the Newhall Ranch property may contain southwestern pond turtles, as well as some of the moist canyons leading away from the river.

Coastal Western Whiptail – The coastal western whiptail is a federal species of concern. The coastal western whiptail occupies the California coastal region from Ventura south to western Baja California, Mexico. It utilizes the open areas among otherwise moderate to dense vegetation. These open areas

allow for quick mobility and active foraging, yet provide protection from many predators. The species also requires loose soil for burrowing. Open coastal sage scrub and mixed chaparral provide suitable habitat. Adult whiptails usually become inactive by early fall, but juveniles remain active into late fall or early winter (Zeiner et al. 1988). This species was observed on-site during the 1995 field investigations conducted by RECON at Airport Mesa, Lion Canyon, Upper Potrero Canyon, and in the High Country of the Santa Susana Mountains. Coastal whiptail was also observed in a variety of locations on the Newhall Ranch property in 1993, most often within areas of coastal sage scrub (Dames & Moore 1993; Appendix E).

San Diego Horned Lizard -- The San Diego horned lizard is a federal species of concern and a California species of special concern. This taxon ranges from coastal southern California to the desert foothills, and into Baja California. It is often associated with coastal sage scrub, especially areas of level to gently sloping ground with well-drained, loose or sandy soil. This animal avoids dense vegetation, preferring 20 to 40 percent bare ground coverage.

Populations along the coast and inland have been severely reduced by loss of habitat; populations in the coast mountain ranges seem stable. Collecting pressure (for pets and for the curio trade) has been especially great for this species. Where it can be found, the San Diego horned lizard can be locally abundant, with densities near 20 adults per acre. They are largely dependent upon ant colonies for the majority of their prey. Adults are active from late March to late August; young are active from August to November or December.

Geographically, the Newhall Ranch site is situated in a zone of overlap between the San Diego horned lizard and the California horned lizard (see below), also a Category 2 candidate species. The California horned lizard ranges from the San Francisco Bay region to Los Angeles. The Newhall Ranch property is more likely within the range of the California horned lizard. Two records for San Diego horned lizard in the vicinity of the project area occur in the CNDDB; one in Soledad Canyon to the west, and the other in the Santa Susana Mountains. Four horned lizards were observed or detected (by scat) on the project site during the 1995 field investigations conducted by RECON. The three horned lizards that were observed directly during this survey were determined to be San Diego horned lizards. However, both subspecies have been reported to occur on the property. Two of the horned lizards were observed in the High Country of the Santa Susana Mountains while the third specimen was observed in Long Canyon.

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California Horned Lizard – The California horned lizard is a federal species of concern and a California species of special concern. The California horned lizard ranges from the San Francisco Bay region to Los Angeles. It forages on the ground in open areas between shrubs and often near ant colonies (Zeiner et al. 1988). This species has been observed on-site in a canyon bottom near Grape Vine Mesa on the Newhall Ranch site (Dames & Moore 1993; Appendix E). This taxon was not directly observed by RECON during the 1995 surveys.

Two-striped Garter Snake – The two-striped garter snake is a federal species of concern and a California special animal. It occurs from Monterey County south to Rio Rosario in Baja California. Highly aquatic, this species is most commonly found in or near permanent water (Stebbins 1985). It can occasionally be found in small and intermittent streams with rocky beds. Tree frogs are the primary prey item of this species. This species was observed in 1993 at Via Pond and within Salt Creek in Rawhide Canyon (Dames & Moore 1993; Appendix E). It has a high potential to occur near freshwater marsh and riparian habitats throughout the Ranch.

Snake trapping efforts were undertaken during the 1995 sensitive aquatic species surveys conducted on portions of the Santa Clara River, including a river stretch on the Ranch (Haglund and Baskin 1995). These trapping surveys were conducted between the confluence of Castaic Creek upstream to Old Road bridge during May 15 through 19. However, no two-striped garter snakes were captured during this effort.

Southern California Rufous-crowned Sparrow – This bird is a federal species of concern and a California species of special concern. It prefers coastal sage scrub, grassland, and open pine-oak woodland habitats. Southern California rufous-crowned sparrows nest on the ground. Habitat loss is the major threat to this species. This taxon was commonly observed in the coastal sage scrub and chaparral habitats on the Newhall Ranch site, including observations made at Salt Creek Canyon, Via Canyon, Airport Mesa, areas to the south of Six Flags Magic Mountain, Chiquito Canyon, and Off Haul Canyon.

Tricolored Blackbird – The tricolored blackbird is a federal species of concern and a California species of special concern. These birds are found in coastal California and Oregon, congregating in agricultural and disturbed areas outside of the breeding season. They breed in dense colonies in wet meadows dominated by cattails, willows, mule fat, and tamarisk, and can be locally common. Declines in

tricolored blackbird populations are attributable to the elimination of wetlands and freshwater marsh habitats. A flock of about 20 tricolored blackbirds were observed in Middle Potrero Canyon and a flock of 50 birds were seen on the Newhall Ranch property north of Mayo Crossing (Dames & Moore 1993; **Appendix E**). This species was not seen by RECON during the 1995 surveys, but is likely to be using the site based on past observations and the presence of suitable habitat.

San Diego Black-tailed Jackrabbit – The San Diego black-tailed jackrabbit is a federal species of concern and a California species of special concern. This rabbit occurs in open grassland and areas of sparse shrublands. Loss of habitat is the major threat to this taxon. San Diego black-tailed jackrabbits were observed during the 1995 RECON field surveys in Upper Potrero Canyon, and the taxon is assumed to be common on the site due to the presence of extensive areas of suitable habitat.

San Diego Desert Woodrat – The San Diego desert woodrai is a federal species of concern and a California species of special concern. Its range extends through coastal areas from San Luis Obispo well into Baja California, inland to the San Bernardino Mountains and Julian (Hall 1981). There is a discontinuous distribution in the area of Porterville, California. The middens of this species are usually easy to observe when the species is present. A trapping program conducted by Dames & Moore (1993; Appendix E) found this woodrat at three locations on the Newhall Ranch property: Lion Canyon, Bee Flat, and Salt Creek Canyon. Two individuals of this species were trapped in coastal sage scrub habitat in the area to the immediate west of Six Flags Magic Mountain by RECON in 1995.

White-tailed Kite -- The white-tailed kite is a California fully protected species. It ranges over coastal California eastward to parts of the Caribbean gulf coast. Locally, it nests in riparian woodlands, particularly those comprised of live oaks and western sycamores, and forages over open areas and grasslands where they feed primarily on small rodents. Loss of nesting and foraging habitats to agriculture and urbanization have reduced population numbers. This species was observed flying overhead between San Jose Flat and Dead End Canyon (Dames & Moore 1993; Appendix E).

Northern Harrier – The northern harrier is a California species of special concern. It is distributed throughout North America (Robbins et al. 1983), in prairie, slough, wet meadow, and marsh habitats (Ehrlich et al. 1988). Like an owl, the harrier uses its round, sound-reflecting facial ruff to locate prey by sound. It can be seen flying within seven feet of the ground as it hunts over grassland, agricultural fields, and coastal and freshwater marshes (Ehrlich et al. 1988). Harriers build flimsy nests on the ground or in thick low-growing vegetation. As with many species, urbanization and agricultural development have led to population declines. A single northern harrier was observed in Middle Potrero Canyon during the 1995 RECON field surveys.

Cooper's Hawk -- The Cooper's hawk is a California species of special concern. It is a common migrant and rare summer resident in southern California. It breeds in oak woodland habitats and southern cottonwood-willow riparian woodland. Food items include small mammals, reptiles, and amphibians. Human disturbance, urban, and agricultural development are thought to be leading to loss of the hawk's riparian woodland breeding habitat. One occurrence in the vicinity of the project site on the Santa Clara River has been reported to the CNDDB. One Cooper's hawk was observed near San Jose Flat and Dead End Canyon that was apparently nesting along the Santa Clara River (Dames & Moore 1993, Appendix E). During the 1995 RECON field investigations, individuals of this species were observed in Long, Lion, and Chiquito canyons and in the high country of the Santa Susana Mountains.

Vermilion Flycatcher -- The vermilion flycatcher is a California species of special concern. Common near streams in the southwest U.S., this species is rarely observed in riparian areas of southern California. Guthrie (1993) observed one individual along the Santa Clara River. Due to its rarity over it's geographic range, this species is assumed to be rare on-site.

Horned Lark – The horned lark is a California species of special concern. It occurs in large fields, grasslands, and other open areas. The horned lark builds its nest on the ground. Loss of habitat is the major threat to the species. This species was observed on the site during 1995 field investigation conducted by RECON in grassland habitat in Salt Creek Canyon and to the south of Six Flags Magic Mountain. Given that large amounts of suitable habitat are present on-site, horned larks are assumed to be common on the site.

Loggerhead Shrike -- The loggerhead shrike is a California species of special concern. It ranges over most of the continental U.S. and Mexico and is a resident species in southern California. It inhabits grasslands, agriculture, chaparral, and desert scrub; it is absent only from the mountainous zones. Population declines due to urbanization have been noted. Loggerhead shrikes feed on small reptiles and insects which they often impale on sticks or thorns before eating. This species was observed on the property in Potrero Canyon and near Bee Flat (Dames & Moore 1993; Appendix E). During the 1995 field surveys conducted by RECON, this species was commonly observed in Potrero and Salt Creek canyons and in the Santa Susana Mountain high country.

Yellow Warbler – The yellow warbler is a California species of special concern found over much of the North American continent. They require riparian woodland for breeding, but utilize a wide variety of trees during migration. In addition to loss of riparian habitat, this bird has experienced declines due to brood parasitism by brown-headed cowbirds. In 1995 Guthrie observed up to twenty pairs of yellow warbler nesting in riparian habitat along the Santa Clara River (Guthrie 1995).

Yellow-breasted Chat – The yellow-breasted chat is a California species of special concern. It can be found throughout most of the continental U.S. and Mexico. It is present in southern California during the spring and summer. Dense riparian woodlands in the coastal lowlands are its only breeding sites. Destruction of riparian woodlands by human activities and development have caused population declines. It is possible that cowbird parasitism may also have contributed to the decline of the species. In 1995 Guthrie observed approximately 20 pairs of this species nesting in riparian habitat along the Santa Clara River (Guthrie 1995).

Summer Tanager – The summer tanager is a California species of special concern. Tanagers typically use and nest in riparian woodlands containing willows and cottonwoods. They migrate to winter grounds south of the border in Mexico and are summer residents in the southern half of the United States. One individual was observed during a survey of the Santa Clara River conducted in 1993 (Guthrie 1993). This species is assumed to be uncommon in the area.

Mountain Lion – The mountain lion is a California fully protected species. The species ranges through most of western North America. They prefer rocky, rugged terrain with dense cover, but are adaptable to various habitat types. The mountain lion has a home range of from 15-35 square miles (Russell 1978). It roams widely, except when cubs are small. Mountain lions can have litters during any month. Their primary food source is deer. Tracks of a mountain lion were observed on the Newhall Ranch property in oak woodland and coastal sage scrub habitat in a small, unnamed drainage west of Lion Canyon (Dames & Moore 1993; Appendix E). During the 1995 field investigations conducted by RECON, mountain lion tracks also were observed in the vicinity of Via Pond in the High Country of the Santa Susana Mountains.

(b) Butterflies

Eight sensitive butterfly species which are considered to be declining in Los Angeles County and elsewhere due to loss of habitat from land development were observed on the Newhall Ranch site. These species are listed in Table BIO-11 (Sensitive Butterfly Species Observed (*) or with the **Potential for Occurrence at Newhall Ranch**). Each of these sensitive species is discussed individually below. Sensitivity designations for butterflies are based on designations by Mattoni (1990).

Becker's White (*Pieris chloridice beckeri*) – This taxon is found throughout the desert regions and in cismontane southern California from San Diego county into Santa Barbara and San Luis Obispo counties. Becker's white goes through multiple life cycles year round. It occurs in cismontane areas with

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Scientific Name	Common Name	Food Plant / Habitat / Nectar Plant	Flight Period ¹	Probability of Occurrence
Papilio indra peragamus Pieris chloridice beckeri Pieris sisymbrii sisybrii Colias alexandra harfordii Argynnis callippe comstocki Melitaea gabbii gabbii Melitaea leanira wrightii Liminitis lorquini lorquini Satyrum sylvnum desertorum Lycaena arota nubila Lycaena agorgon Lycaena helloides Glaucopsyche piasus sagittigera Copaedes aurantica Hesperia comma leussleri Hesperia colombia Pholisora catullus	Edward's swallowtail Becker's white* California white* Harford's sulfur* Comstock's fritillary* Gabb's checkerspot* Wright's leanira checkerspot Lorquin's admiral* Southern sylvan hairstreak Cloudy copper* Gorgon copper* Gorgon copper* Purplish copper Coastal arrowhead blue Hewitson's skipper Leussler's skipper Columbia skipper Common Scotywing	Tauschia, Lomatium (over 2,000 feet) Bladderpod Wild mustards Astragalus Native violets Perennial native asters Indian paintbrush Willows Willow / riparian Wild gooseberry Eriogonum elongatum (only found near) Docks, Polygonum Lupinus excubitus Grasses Grasses Grasses Pigweeds, amaranths	S (March-June) M (February-October) S (February-May) D (March-September) S (May-June) S (March-April) S (March-May) D (April-September) S (May-July) S (May-July) S (May-July) M (April- October) S (March-May) M (April-September) S (May-August) D (Mar-May, Aug-Oct) D (April-September)	Low Observed Observed Observed Doserved Low Observed Low Observed Low Doserved Low Low Low Low Low Low Very Low (believed extirpated)

 Table BIO-11

 Sensitive Butterfly Species Observed (*) or with the Potential for Occurrence at Newhall Ranch

¹Number of broods per flight period: S = single D = double M = multiple

chaparral. The preferred food plant is bladderpod (*Isomeris arborea*), but it will use mustard (*Brassica* sp.), all of which occurs on the site. Becker's white butterflies were observed by RECON during their 1995 field investigations on the Newhall Ranch property at Rawhide Canyon, on the Santa Clara River at the mouth of Middle Canyon, and in the area to the south of Six Flags Magic Mountain.

California White (*Pieris sisymbrii sisymbrii*) – This butterfly is uncommon in the Coast Range hills, but occurs in mountains up to 9,000 feet elevation and in the Mojave Desert and dry coastal hills of southern California. In Los Angeles County, this taxon typically occurs in localized populations in areas of chaparral habitat. It has a single brood with flight times from February to May. The food plants for this taxon are in the mustards (*Brassica* spp.). California white butterflies were found in low numbers in Upper Salt Creek Canyon near the mouth of Rawhide Canyon by RECON during their 1995 field investigations.

Harford's Sulfur (*Colias alexandra harfordii*) - This butterfly occurs in coastal ranges and valleys and the Transverse Ranges as far north as Santa Barbara and Kern counties. Flight periods are in two broods; March through May, and June through August. The adults are attracted to blossoms of mint and thistle on dry hillsides with coastal sage or chaparral habitat. The larval food plant is species within the genus *Astragalus*. This species is fairly widespread, but is typically found only in undisturbed areas. Harford's sulfur butterflies were observed by RECON during their 1995 field investigations in Salt Creek Canyon near the confluence with Grave and Rawhide canyons, and in Upper Potrero Canyon.

Comstock's Fritillary (*Argynnis callippe comstocki*) – This fritillary occurs in the Coast Ranges from Monterey County, south to San Diego County. It can be found in chaparral and oak woodland/savanna habitats where its food plant is native violets such as *Viola pedunculata*. In Los Angeles County, Comstock's fritillary is found in localized populations. A single brood is produced with flight times during May and June. This taxon was observed by RECON during their 1995 field investigations in low to moderate numbers on the Newhall Ranch property in oak woodland/savanna habitats in the upper elevations of the Santa Susana Mountains.

Gabb's Checkerspot (*Melitaea gabbii gabbii*) – This butterfly occurs in the foothills and canyons of the coastal mountains of central and southern California, from San Luis Obispo to Baja California, Mexico. Localized colonies of this taxon occur in chaparral or coastal sage scrub habitat in Los Angeles County. A single brood is produced with flight times during March through June. The food plant for this taxon

includes several genera of native plants in the sunflower family such as *Lessingia* (= *Corethogyne*), *Heterotheca*, and *Isocoma* (= *Haplopappus*). Gabb's checkerspot was observed in moderate numbers on Newhall Ranch by RECON during their 1995 field investigations at the following locations: upper Lion Canyon, Via Canyon, Rawhide Canyon, and near Grape Vine Mesa.

Lorquin's Admiral (*Liminitis lorquini lorquini*) – This butterfly frequents moist areas along water courses of woodlands and river bottomlands. It prefers riparian habitat that has a good cover of willows (*Salix*), its main food plant. Flight times for this taxon are from April through September since it produces a double brood. In Los Angeles County, Lorquin's admiral is found in localized colonies within a restricted habitat type (riparian habitat). In 1995, RECON observed this taxon in low numbers on the Newhall Ranch property along the Santa Clara River near the mouth of Lion Canyon and in Rawhide Canyon.

Cloudy Copper (Lycaena arota nubila) – The cloudy copper butterfly is local to the Santa Monica Mountains to Mount Wilson of the San Gabriel Mountains of Los Angeles County. It prefers chaparral and oak woodland/savanna habitats with wild gooseberry (*Ribes*), its main food plant. Flight times for this taxon occur during May through July with only a single brood produced. It typically occurs in localized colonies within its range. Cloudy copper butterflies were observed by RECON during their 1995 field investigations in low numbers in oak woodland habitat in Upper Potrero Canyon where abundant wild gooseberry plants were found.

Gorgon Copper (*Lycaena gorgon*) – This copper butterfly species occurs over cismontane southern California from Kern to Orange counties. Localized colonies can be found in chaparral habitat of canyon areas with abundant *Eriogonum elongatum*, the food plant. A single brood is produced with flight times occurring during May and June. This species was observed by RECON during their 1995 field investigations in low numbers in the area to the south of Six Flags Magic Mountain on the Newhall Ranch property.

(c) Animals Not Observed But Those That Have Potential For Occurrence

Sensitive wildlife species that were not observed but have a reasonable potential for occurrence on the Newhall Ranch property are presented in Table BIO-12 (Sensitive Wildlife Species with the Potential for Occurrence on the Ranch Property). These species were considered as possibly occurring on the site because of the geographical location of the property and extent of the range of the particular species, and due to the presence of habitat types that are known to support these species.

Table BIO - 12 Sensitive Wildlife Species with the Potential for Occurrence on the Ranch Property

Species	<u>Status</u>	Location of Potential Occurrence
Arroyo toad	FE, CSC	Moderate potential for this species along Santa
Bujo microscaphus californicus	PT COC	Clara Kiver and Castale Creek.
Rana aurara drautonii	FI, COC	Low potential for this species around ponds.
Silvery legless ligard	FSC CSC	Probable in areas of loose soil within understory of
Anniella nulchra nulchra	100,000	coastal scrub chaparral and open riparian
minicia patenta patenta		habitats on the Ranch.
Coastal rosy boa	FSC	Possible in sandy and rocky areas of grasslands.
Lichanura trivirgata rosafusca		coastal scrub, and chaparral habitats on the Ranch.
San Bernardino ringneck snake	FSC	Possible in sandy and rocky areas of grasslands.
Diadophis punctatus modestus		coastal scrub, and chaparral habitats on the Ranch.
Coast patch-nosed snake	FSC, CSC	Possible in sandy and rocky areas of grasslands,
Salvadora hexalepis virgultea		coastal scrub, and chaparral habitats on the Ranch.
Least bittern	FSC, CSC	Possible in riparian vegetation and aquatic habitat
Ixobrychus exilis	7 00	along the Santa Clara River.
Fulvous whistling-duck	FSC	Possible in riparian vegetation and aquatic habitat
Denarocygna vicolor		along the Santa Clara River.
California condor	ГЕ, СЕ	Possibly forages over the more open areas of the
Gymnogyps californianus	000	Kanch- De seller van die die die versteller die state Courte
Sharp-shinned nawk	LSL	Possibly uses the riparian woodlands of the Santa
Suppress to how here the second secon	ርጥ	Clara Niver. Resaibly for any own the more open areas of the
Buten suminenni		Ranch
Ferruginous hawk	FSC CSC	Possibly forages over the more open areas of the
Buten revalis		Ranch.
Golden eagle	CSC. CFP	Possibly uses grasslands, open chaparral and
Aquila chrysaetos		scrubs, and the riparian areas of the Ranch.
Merlin	CSC	Possibly forages over the more open areas of the
Falco columbarius		Ranch.
Prairie falcon	CSC	Possibly uses grasslands and agricultural fields.
Falco mexicanus		, , , ,
American peregrine falcon	FE, CE	Possibly forages over the more open areas of the
Falco peregrinus anatum		Ranch.
Mountain plover	FC, CSC	Possibly forages on the more open areas of the
Charadrius montanus		Ranch
Western yellow-billed cuckoo	CE	Possible in riparian woodlands of the Santa Clara
Loccyzus americanus occiaentaus		Kiver. Dessible in success de est estimation de sec
Athene aurigularia humunaa	590, C90	Possible in grassiands and agricultural areas.
I and counterful any agen	CSC	Possibly foregoe over the more open areas of the
Asia atus	L.L.	Ranch
Short-eared owl	CSC	Possibly forages over the more open areas of the
Asio flammeus		Ranch.
Coastal California enatcatcher	FT. CSC	Historically found in coastal sage scrub habitat in
Polioptila californica californica	•	Los Angeles County, but now believed to be
1 9 9		extirpated in this area. Low potential for
		occurrence in sage scrub habitat on the Ranch.
Bell's sage sparrow	FSC, CSC	Possible in coastal sage scrub and chaparral
Amphispīza belli belli		habitats on the Ranch.
Fringed myotis	FSC	Possibly forages over river.
Myotis thysanodes	Dao	— — — — —
Yuma myotis	FSC	Possibly forages over river.
Inigons yumanensis Dala Tauraan dia Lin aanad Lat		Received in cause or shandowed buildings
Pale Townsend's Dig-eared bar Disortus, townsendi, mallosano	$\Gamma \mathcal{N}_{r}, \mathcal{N}_{r}$	rossible in caves of abandoned buildings.
Greater western maariff bat	FGC CCC	Possible in rocky stess with crevices on hills and
Fumons nerotis californicus	The second	in the Santa Susana Mountains
Spotted bat	FSC. CSC	Possible in rocky areas with crevices on hills and
Euderma maculata		in the Santa Susana Mountains.
Pallid bat	CSC	Possibly forages over river, possibly roosts in High
Antrozous pallidus		Country.
,		-

Table BIO - 12 continued Sensitive Wildlife Species with the Potential for Occurrence on the Ranch Property

Status	Location of Potential Occurrence
FSC, CSC	Low potential for occurrence in coastal scrub on
,	the Ranch.
FSC	Possible in grassland areas.
	0
CSC	Possible in grassland areas.
	Status FSC, CSC FSC CSC

FT: Listed as a threatened species by the USFWS.

Federal Species of Concern: These species represent the pool of species of concern from which future candidates may be chosen.

CE: A State of California endangered species as listed by the California Department of Fish and Game; Data indicate the species is in serious danger of becoming extinct throughout all or a significant portion of its range. CT: A State of California threatened species as listed by the California Department of Fish and Game; Data indicate

the species may become endangered in the foreseeable future. CFP: A wildlife species that is Fully Protected by law under the California Fish and Game Code.

CSC: A State of California Species of Special Concern; those species that may become listed as rare, threatened, endangered, or fully protected in the near future.

Arroyo Toad – Ecology and Distribution: The arroyo toad (Bufo microscaphus californicus) was listed as an endangered species by the USFWS on January 17, 1995, and is a California species of special concern. This species is restricted to the coastal slopes of southern California and northern Baja California, Mexico, except for one small, isolated population in the Mojave River. Southern California populations are known to occur on the Sisquoc River, Santa Ynez River, and Mono and Indian creeks in Santa Barbara County; Sespe Creek, lower Piru Creek, and Agua Blanca Creek in Ventura County; upper Piru Creek and Big Tujunga Canyon in Los Angeles County; and additional drainages in San Bernardino and San Diego counties (Sweet 1992; Federal Register 1993a). The arroyo toad averages 5 to 8 cm in length, and has a greenish-gray or tan coloration. It is restricted to rivers with shallow, gravelly pools adjacent to sandy terraces. Eggs are deposited in shallow pools with sand or pea gravel substrate overlain with flocculent silt. These pools have minimal current and little or no emergent vegetation. Juveniles and adults forage for insects on sandy terraces with nearly complete coverage of cottonwoods, oaks, and willows (Federal Register 1994). Adults are nocturnal except during the breeding season (March-July).

Because of historical and present agricultural activities along the Santa Clara River (e.g., crop production and grazing), most of the habitat characteristics used by this species have been lost south of the river in Ventura County (USFWS 1993a, 1994a). In Los Angeles County, high terraces vegetated with cottonwoods and willows remain along portions of the Santa Clara River providing habitat for adult toads.

FC: Federal Candidate species

Field Investigation: Recent surveys in the region have been conducted on Sespe Creek and Firu Creek in 1991 (Sweet 1992). The Sespe Creek population of arroyo toads is the largest known within the current range. This creek is located west of the property and enters the Santa Clara River near Fillmore. The Piru Creek population is confined to two areas: from the vicinity of Blue Point Campground upstream to Piru Gorge, and between the headwaters of Pyramid Lake and Bear Gulch upstream from the former. Construction and operation of Santa Felicia Dam and Pyramid Lake has resulted in the survival of arroyo toads only above the headwaters of each impoundment. Piru Creek enters the Santa Clara River several miles west of the western boundary of the Newhall Ranch near the town of Piru.

Supplemental surveys to detect the presence of arroyo toad on the Newhall Ranch property were conducted by RECON on March 16 and 17, 1994. Habitat that appears appropriate for the arroyo toad occurs at several locations along the Santa Clara River corridor, but not along any of the smaller drainages within the upland portions of site.

Surveys were again conducted on the Newhall Ranch by RECON in mid-April 1995. No calls of arroyo toads were heard during nighttime surveys of potential breeding pools. However, young toads were located at the mouth of Lion Canyon on the Santa Clara River during the June general wildlife survey that appeared to be arroyo toads. Positive identification of these toads was made a few weeks later (July 12 and 13), and it was determined that the young toads in this area were actually California toads (i.e., the local subspecies of western toads). These areas on the Newhall Ranch were checked for toads again in early August (1, 2, and 3, 1995), but only tree frogs were observed. No arroyo toads were recorded during the sensitive aquatic species surveys conducted by Haglund and Baskin (1995). Based on the field investigations, the potential for arroyo toads to occur along the Santa Clara River and Castaic Creek is moderate given the presence of suitable habitat in these areas for breeding. However, the low population number for this species and the restricted nature of known populations suggest that if it were to occur on the site it would occur in extremely low numbers.

California Red-legged Frog -- Effective June 24, 1996, the California red-legged frog (*Rana aurora draytonii*) is a federal listed threatened species. It is also a California species of special concern. This frog formerly occurred from Humboldt County southward to Baja California Norte, including the Sierra Nevada Mountains up to 8,000 feet. It has now been extirpated from the entire Central Valley region and the foothills of the Sierra Nevada. Only five known populations remain south of the Tehachapi Mountains, compared to over 80 historical locality records in southern California (USFWS 1993c; 1996b).

Hayes and Jennings (1988) describe the preferred habitat of this species as intermittent cold water streams, especially those with dense cover of cattails, rushes, and willows providing shade over a large portion of the water's surface. Water of at least 0.7 meter depth must be available.

The red-legged frog was the original source of frog legs during the late 1800s and early 1900s, and this was the initial cause of the red-legged frog's decline. Commercial harvests of 50,000-125,000 frogs per year were recorded between 1880 and 1900 (Jennings 1988). Further declines of the species throughout its range can be attributed to disturbance of riverbed substrates, disturbances to emergent and shoreline vegetation, competition from bullfrogs, and predation by introduced fishes.

Habitat for the red-legged frog along the portion of the Santa Clara River on the Newhall Ranch property is scarce due to the hydro-geomorphological characteristics of the river. The vegetation in the active channel, where low flows are present, is periodically scoured by floods. This reduces the necessary cover around pools needed by the frog. A few small freshwater marsh areas on the flood plain may serve as potential habitat for the species, but these are likely affected by cattle grazing.

Supplemental surveys to detect the presence of red-legged frog were conducted by RECON on March 16 and 17, 1994. Habitat appropriate for the red-legged frog did not appear to be present within any of the proposed development areas. It is unlikely that habitat for this species occurs on other portions of the property based on the reconnaissance of other areas of the site in 1994. The 1995 surveys of the Newhall Ranch conducted by RECON were more thorough and covered more drainages and support the previous preliminary conclusion that there is no suitable habitat for this species on the Newhall Ranch site. In addition, no California red-legged frogs were recorded during the sensitive aquatic species surveys conducted by Haglund and Baskin (1995).

California Condor -- The California condor (*Gymnogyps californianus*) is a state and federal listed endangered species. Most of the remaining California condor individuals are currently in captivity. Since the early 1990's, California condors have been released back into the wild with mixed success. Of the eight birds initially released, one died after ingesting antifreeze, while three others hit power lines. Subsequent birds which have been released have primarily used the Fillmore area, with observations ranging west-northwest to Castaic Lake. Several of these birds have ranged as far north as the town of Taft in the southern San Joaquin Valley. Should the eventual reintroduction of a California condor population into the wild be successful, it will most likely be several years before their "new" ranges are established and documented. However, this population could potentially forage over the Newhall Ranch area.

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Swainson's Hawk – The Swainson's hawk (*Buteo swainsoni*) is a state-listed threatened species which generally occurs in the interior valleys of the region (Garrett and Durn 1981). This hawk requires large, open grasslands for foraging, and typically nests within one mile of riparian habitats using oaks, cottonwoods and western sycamores for nesting trees. Swainson's hawks were once abundant throughout lowland California. However, this hawk's breeding range is now restricted to portions of the Central Valley, Mojave Desert, and Great Basin regions of the state (Bloom 1980). Although the site and vicinity exhibit suitable foraging habitat for this species, Swainson's hawk is not expected to nest on the site or occur on the site regularly due to the site's geographic location.

American Peregrine Falcon -- The American peregrine falcon (*Falco peregrinus anatum*) is a federaland state- listed endangered species which occurs in a variety of areas in southern California. Peregrine falcons occur most frequently along the coast and over other large bodies of water where they prey upon foraging shorebirds. In the arid interior areas, this bird is a rare transient that forages over large areas (Garrett and Durn 1981). Habitat on the site could be used by this species for foraging, but peregrine falcons are not expected to nest on or regularly use the project site.

Coastal California Gnatcatcher -- The coastal California gnatcatcher (*Polioptila californica californica*) is listed as federally threatened and is also a California species of special concern. The coastal California gnatcatcher is a small gray bird with a black tail, which it flicks erratically as it perches, and it has a very distinctive mew-like call. During the breeding season, male gnatcatchers develop a black cap that distinguishes them from the females. This resident species occurs below the 2,000-foot elevation level in the coastal slopes of southern California from the Los Angeles basin south to Baja California, Mexico (Atwood 1980). Peak nesting activity occurs during late March to early April.

The coastal California gnatcatcher is a resident species strongly associated with coastal sage scrub vegetation. Not all types of coastal sage scrub are used or preferred by the species. The birds seem to be most abundant in areas dominated by California sagebrush (RECON 1987; ERCE 1990), with other important plant species observed during studies being California buckwheat, laurel sumac, and lemonadeberry; however, not all of these species occur in all vegetative communities where the coastal California gnatcatcher is found. During other parts of the year, especially during dispersal of young birds after fledging and during the hot summer months, gnatcatchers may be found in other areas besides coastal sage scrub, such as chaparral or riparian habitats.

The Newhall Ranch property encompassed in this study contains a large acreage of coastal sage scrub classified by CDFG as Venturan coastal sage scrub (Holland 1986). Although this sage scrub habitat is within the historic range of the species, significant populations of this species have all been

extirpated from Los Angeles County (USFWS 1993b) and the Ranch property is outside of its known current distribution. In 1995, a coastal California gnatcatcher was recorded from the Moorpark area in Ventura County. In 1996, there have been two pairs of gnatcatchers recorded in this same area, and a nest has been recently discovered (Greaves, personal communication, 1996). In addition, there have been reports of these birds from the Bonnelli Regional Park and west of Cal Poly State University, Pomona campus areas in eastern Los Angeles County. It is not known whether the current breeding range will expand into the Santa Susana Mountains. Several of the RECON personnel conducting the 1995 field surveys on the Newhall Ranch have permits from the USFWS to survey for this species and are qualified to recognize the bird. No individuals of this species were sighted or heard on the property. Based on these observations and the current geographic range of this bird, the likelihood of occurrence of the coastal California gnatcatcher on the Newhall Ranch is low.

Western Yellow-billed Cuckoo – The western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is a California endangered species. A 1977 survey located this species in the Sacramento Valley, Kern River, Owens Valley, Amargosa River, Lower Colorado River, and Santa Ana River. It is restricted to dense riparian woodland during breeding. Loss of habitat has caused population declines in the species. The NDDB has a record of this species only three to four miles to the west of the Newhall Ranch property on the Santa Clara River from 1979. Based on the lack of observation of this species in the local area and current geographic range of the bird, the likelihood of occurrence on the Newhall Ranch site is low.

Mountain Plover – In winter, flocks of the mountain plover (*Charadrius montanus*), a federal Candidate species and California species of special concern, regularly occupy the Carrizo Plain, the western San Joaquin Valley, the Imperial Valley, and the Antelope Valley. Elsewhere in the interior, this species is a rare fall transient and requires large open areas as habitat (Garrett and Durn 1981). Habitat on the Newhall Ranch could be used by this species for foraging. Should mountain plovers occur on the site they would likely occur infrequently.

Silvery Legless Lizard -- The silvery legless lizard (Anniella pulchra pulchra [=A. nigra argentea]) is a federal species of concern and a California species of special concern. This subspecies has a spotty distribution from near Antioch (Contra Costa County) south into Baja California; primarily west of and including the Coast Ranges, San Bernardino and San Gabriel mountains, and Laguna Mountains. It occupies herbaceous layers with loose soil in coastal sage scrub, chaparral, and open riparian habitats. Sand of washes and beach dunes are preferred for burrowing, and logs and leaf litter are used for cover and feeding. Bush lupine (Lupinus longifolius) is a good indicator of appropriate habitat in sandy substrates. However, the presence of this plant is not a reliable indicator of the occurrence of the legless lizard in other habitat types. Primarily nocturnal and fossorial, the silvery legless lizard is susceptible to drying and must be in or near moist soil. The use of pesticides on agricultural fields in the state has been known to adversely affect some populations of this lizard. Due to the presence of extensive areas of coastal sage scrub, chaparral and open riparian habitats (i.e., all suitable habitat for this animal) on the Newhall Ranch, the potential for this taxon to occur on-site is considered high (probable).

Coastal Rosy Boa -- The coastal rosy boa (*Lichanura trivirgata rosafusca*) is the subspecies of this federal species of concern which is known to occur in the Newhall Ranch region. This secretive snake typically occurs in rocky, dry habitats including coastal sage scrub and open chaparral on canyon slopes. This snake is rarely encountered in the wild. Rosy boas have a moderate potential for occurrence on the site.

San Bernardino Ringneck Snake -- The San Bernardino ringneck snake (*Diadophis punctatus modestus*) is a federal species of concern that typically occurs in moist situations in oak woodlands, but also is present in riparian habitats in lower elevations. Ringneck snakes are relatively widespread, but are secretive, spending most of the time hidden in leaf litter. The Newhall Ranch area may be an area of intergradation between two subspecies of ringneck snake. As such, ringneck snakes on the Newhall Ranch site (if present) may not be best assigned to this sensitive taxon.

Coast Patch-nosed Snake – The coast patch-nosed snake (*Salvadora hexalepis virgultea*) is a federal species of concern, and a California species of special concern. The coast patch-nosed snake ranges from the Carrizo Plain (San Luis Obispo County) south to Baja California. It inhabits grasslands, chaparral, coastal sage scrub, and sandy and rocky areas on the lower slopes of mountains. The patched-nosed snake has a single, white, vertebral stripe, and a conspicuously upturned rostral scale. It is a very active, diurnal snake. Again, due to the presence of extensive areas of coastal sage scrub, chaparral and open riparian habitats (i.e., all suitable habitat for this animal) on the Newhall Ranch, the potential for this taxon to occur on-site is considered high.

Least Bittern -- The least bittern (*Ixobrychus exilis*) is a federal species of concern and California species of special concern which typically occurs in dense brush and wetland vegetation, and less commonly occurs in adjacent upland areas. Least bitterns were not observed on or near the site during the intensive riparian bird field surveys. However, suitable wetland habitat exists along the Santa Clara River. This species has a moderate potential for occurrence on the site.

Fulvous Whistling-duck -- The fulvous whistling-duck (*Dendrocygna bicolor*) is a federal species of concern which typically winters in areas from Los Angeles County north. Fulvous whistling-ducks generally occur on ponds, streams, ditches, and other small bodies of water which are heavily bordered by tall vegetation. This type of habitat occurs on the site, especially in association with the Santa Clara River. Although no fulvous whistling-ducks were observed during the intensive riparian bird field surveys, this duck could occur as an uncommon seasonal migrant.

Ferruginous Hawk – The ferruginous hawk (*Buteo regalis*) is a federal species of concern and California species of special concern which is principally a winter visitor in interior valleys. Ferruginous hawks favor grasslands and agricultural regions, and important wintering locations include Fish Lake Valley (Mono County), Owens Valley (Inyo County), the Carrizo Plain (San Luis Obispo County), Antelope Valley and other similar locations. The nearest wintering location of importance is the Santa Maria River Plain in Santa Barbara County (Garrett and Dunn 1981). Although the Newhall Ranch site and vicinity exhibit suitable foraging habitat for this species, it is not expected to nest or regularly occur on the site due to the site's geographic location.

Western Burrowing Owl – The western burrowing owl (*Athene cunicularia hypugea*) is a federal species of concern and a California species of special concern. Burrowing owls range across most of western North America. In coastal southern California, they are found in grasslands, agricultural areas, and coastal dunes. It is believed that burrowing owls may occur wherever there are ground squirrel colonies as the owls use squirrel burrows throughout the year. These animals pair-bond for more than one year (Ehrlich et al. 1988), and exhibit high site fidelity, reusing the same burrow year after year (Rich 1984, Feeney 1992). The female remains inside the burrow during most of the egg laying and incubation period, and is fed by the male throughout brooding. When disturbed within their burrows, burrowing owls mimic the sound of a rattlesnake rattling (Ehrlich et al. 1988). Specific survey protocol and mitigation guidelines have been formulated for this species, but they are considered preliminary (California Burrowing Owl Consortium 1993).

Urbanization has greatly restricted the extent of suitable habitat for this species. Poisoning programs to control squirrels and prairie dogs have also contributed to the species decline (Ehrlich et al. 1988). A recorded occurrence for this species in the CNDDB from the Simi Valley is dated 1990. This species has a moderate potential for occurrence on the site given suitable habitat present in grassland, savanna, open sage scrub, and agricultural fields. However, this bird was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site.

Bell's Sage Sparrow — This bird is a federal species of concern and a California species of special concern. The Bell's sage sparrow (*Amphispiza belli belli*) has a spotty distribution; breeding range is along the coastal slopes from Trinity County south into northwestern Baja California. Locally, it can be found in chaparral habitats, especially chamise chaparral. This race is essentially sedentary. Male sage sparrows show high site tenacity to breeding territory, even when the habitat is altered dramatically (Ehrlich et al. 1988). They feed primarily on spiders, insects, and seeds while breeding, and seeds during the winter (Zeiner et al. 1990).

The development of coastal and foothill zones in southern California has reduced Bell's sage sparrow populations. This species has a moderate potential to occur on the Newhall Ranch site due to the presence of coastal sage scrub and chaparral habitats and the known geographic range of the species. This bird was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site.

Fringed Myotis – The fringed myotis (*Myotis thysanodes*) is a small bat that is considered a federal species of concern. This species typically occurs in oak woodland, pinyon woodland, juniper woodland, and desert scrub habitats. Because it is relatively uncommon in the region, it is considered to have a low potential for occurrence at the Newhall Ranch site.

Yuma Myotis -- The Yuma myotis (*Myotis yumanensis*) is a small bat that is considered a federal species of concern. This species typically roosts and forages in the vicinity of water. This relatively common bat often roosts under bridges. It is considered to have a moderate potential for occurrence on the Newhall Ranch site, where it may forage over the Santa Clara River.

Spotted Bat – The spotted bat (*Euderma maculatum*) is a federal species of concern, and a California Species of Special Concern. This is a medium-sized bat with long, transparent ears and three large white spots on a blackish back. The spotted bat ranges from Western British Columbia to Mexico. It inhabits high cliffs, arid deserts and open pine forests in rough rocky terrain. Females appear to favor Ponderosa Pine Forest during the reproductive season (Findley and Jones 1965, as quoted in State of California 1992). This species emerges very late in the evening to feed (Brown-Berry 1992). This species is considered to have a low potential to occur on the site due to the paucity of appropriate habitat factors.

Pale Townsend's Big-eared Bat -- The pale Townsend's big-eared bat (*Plecotus townsendii pallescens*) is a federal species of concern and a California species of special concern. The range of the pale Townsend's big-eared bat includes most of California except the humid coastal regions of the northern and central coasts. This species roosts in mines, caves, and old buildings, and occupies a wide variety of

habitats including coastal conifer and broad-leaf forests, high elevation forests and meadows, oak woodlands, arid grasslands, and deserts. Habitat must include roosting, maternity and hibernation sites away from human disturbance. A single visit by humans can cause the bats to abandon a roost (Brown-Berry 1992). Due to the presence of suitable habitat on the Newhall Ranch and the geographic range of the animal, this species is considered to have a moderate potential to occur on the site.

Greater Western Mastiff-bat -- The greater western mastiff bat (*Eumops perotis californicus*) is a federal species of concern, and is a California Species of Special Concern. This species is the largest bat in southern California with a two-foot wingspan. It ranges from central California to central Mexico. Habitat includes open shrub/grassland and cultivated fields, as well as chaparral and chaparral/oak interfaces. The species prefers rugged, rocky areas within the above habitat types with suitable crevices and exfoliated rock surfaces for day-roosts. They also roost in buildings. Roosts are at least 15 feet above ground due to this large bat's requirement of a vertical drop of several feet during take-off (Brown-Berry 1992). A component of the echolocation call is audible to the human ear. Urbanization and cultivation of historic foraging areas are likely major factors in this species decline. Due to the presence of suitable habitat on the Newhall Ranch and the geographic range of the animal, this species is considered to have a moderate potential of occurrence on the site.

Los Angeles Little Pocket Mouse – The Los Angeles little pocket mouse (*Perognathus longimembris brevinasus*) is a federal species of concern, and is a California species of special concern. The emergency rule for the pacific pocket mouse (*Perognathus longimembris pacificus*) (USFWS 1994b) mentions several differences between these two subspecies. The *Perognathus longimembris species* group may be in need of taxonomic revision; there is speculation that *Perognathus longimembris brevinasus* may be cospecific with *Perognathus longimembris pacificus* (State of California 1986). Los Angeles little pocket mouse occupies lower elevation grasslands and coastal sage associations; areas of relatively open ground with soils composed of fine sands. It is known from the Los Angeles Basin: from Burbank and San Fernando to San Bernardino and south to Aguanga. Urbanization and cultivation of lands has caused the loss of the majority of this species' historic range.

This small mammal was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. The occurrence of this subspecies in a given project area can only be determined by an extensive small mammal trapping study. Trapping conducted by RECON during the 1995 surveys did not capture any individuals of this species. Based on the results, of this trapping program and other observations conducted on-site, the likelihood of this species to occur on the Newhall Ranch property is considered low.

Southern Grasshopper Mouse – The southern grasshopper mouse (Onychomys torridus ramona) is a federal species of concern and a California species of concern that typically occurs in relatively open areas with a well-developed herbaceous cover. Two subspecies comprise grasshopper mice in the general Newhall Ranch region. This small mammal was not observed on the Newhall Ranch property during the 1995 RECON field investigation and was not observed during any previous field surveys conducted on the site. The occurrence of this subspecies in a given project area can only be determined by an extensive small mammal trapping study. Trapping conducted by RECON during the 1995 surveys did not capture any individuals of this species. Based on the results of this trapping program and other observations conducted on-site, the likelihood of this species to occur on the Newhall Ranch property is considered low.

Sharp-shinned Hawk -- The sharp-shinned hawk (*Accipiter striatus*) is a California species of special concern. It inhabits most of North America, in woodlands, parks, and residential areas. Breeding takes place in mountainous coniferous/deciduous forests, with nests usually within 90 meters of water (Zeiner et al. 1990). The proportion of birds in the sharp-shinned hawk's diet is the greatest of any of the hawks: they only rarely take small mammals, reptiles, etc. (Ehrlich et al. 1988). Breeding occurs April through August. Due to the presence of extensive areas of coastal sage scrub, chaparral, oak woodland, and open riparian habitats (i.e., all suitable habitat for this animal) on the Newhall Ranch, the potential for this taxon to occur on-site is considered moderate.

Golden Eagle -- The golden eagle (*Aquila chrysaetos*) is a California fully protected species. It is found throughout the U.S., Canada, and much of Mexico. Golden eagles forage over large areas of grassland, broken chaparral, or coastal sage scrub where they prey upon rabbits and ground squirrels, and carrion when mammal prey is scarce (Ehrlich et al. 1988). The nesting population is concentrated in the foothill zone and coastal lowlands in southern California.

Several territories in local coastal lowlands have been eliminated by urbanization, agricultural development, and human disturbance. Formerly destroyed by sheep ranchers due to belief that the eagle was responsible for livestock depredation, this eagle is also subject to powerline electrocution, poisoning programs intended for coyotes, etc. (Ehrlich et al. 1988). Although relatively uncommon, the golden eagle has a moderate potential to occur on-site due to the presence of extensive areas of coastal sage scrub, chaparral and open riparian habitats (i.e., all suitable habitat for this bird).

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Merlin – The merlin (*Falco columbarius*) is a California species of special concern that is principally a fall transient and winter visitor in interior valleys (Garrett and Durn 1981). All habitat types on the site could be used by this species. However, no merlins were observed on the project site during the field investigations. Due to the relative rarity of this species in the geographic area, the merlin has a low potential for occurrence on the Newhall Ranch.

Prairie Falcon — The prairie falcon (*Falco mexicanus*), a California species of special concern, ranges over the western U.S. and Mexico. They nest in cliffs or rocky outcroppings always facing open habitat (Ehrlich et al. 1988) for foraging. Open, desert scrub and grasslands are preferred for foraging, and agricultural areas may be utilized in winter months. This species has a weak nest site tenacity. Due to the rarity of this species in the geographic area, this species has a low potential for occurrence on the Newhall Ranch.

Long-eared Owl – The long-eared owl (*Asio otus*), a California species of special concern, is a rare transient and winter visitor in the coastal region, and is more common but highly localized in the desert region. It formerly bred in dense willow thickets in the coastal area (Garrett and Dunn 1981). This bird was considered abundant in the late 1800's in the oaks and willows of the Santa Clara River Valley. It may occur as a rare visitor to the project site, but is not expected to nest. None was observed during the field surveys conducted at the project site.

Short-eared Owl – The short-eared owl (Asio flammeus), a California species of special concern, winters in coastal estuaries and to a lesser extent in agricultural fields and grasslands (Garrett and Durn 1981). The principal habitat of this species is coastal estuaries, which are not found on the Newhall Ranch site. However, some use of the site is possible in that suitable foraging habitat is present in the old agricultural fields. No short eared owls were observed on the project site during the field surveys. This species is considered to have a low potential of occurrence.

Pallid Bat -- The pallid bat (*Antrozous pallidus*) is a California species of special concern which generally inhabits open, lowland areas below 2,000 feet elevation. This medium-sized bat has broad wings, large ears, and is buff colored. These bats commonly roost in rock crevices, caves, and beneath rock slabs. Pallid bats emerge late, and take large-sized prey including ground dwelling insects. These bats likely occur on the Newhall Ranch site.

American Badger -- The American badger (*Taxidea taxus*), a California species of special concern, requires extensive open space areas and loose sandy soils. In the Santa Clarita Valley, badgers are noted most commonly in the adjacent foothills and open plains. Reports of this species are known from the project region (including just east of I-5 in oak woodland). However, no sign of this species was recorded from the Newhall Ranch site during the field surveys. This species is considered to have a moderate potential for occurrence on the site.

Edward's Swallowtail (*Papilio indra pergamus*) -- This species occurs in the central mountain ranges of Los Angeles, San Bernardino, Riverside, and San Diego counties. In Los Angeles County, Edward's swallowtail has been found in the San Gabriel and Santa Ana mountains above 2,000-feet. Here they occur in localized colonies in chaparral habitat. The food plants for the species are plants in the genera *Tauschia* and *Lomatium*. Flight times occur from March through June and a single brood is produced. Due to the lack of the preferred host plant, the potential for occurrence of this species on the site is considered low.

Wright's Leanira Checkerspot (*Melitaea leanira wrightii*) -- This species is found in canyons of Los Angeles, Orange, and western San Bernardino counties. In Los Angeles County, it is restricted to the San Gabriel Mountains to localized colonies in chaparral or oak woodland/savanna habitats. A single brood is produced. Flight times occur March through May. Due to the known geographic range of the species, the potential for occurrence of this species on the Newhall Ranch property is considered low.

Southern Sylvan Hairstreak (*Satyrium sylvinum desertorum*) – This butterfly species occurs on the eastern slope of the Tehachapi Mountains north through Kern, Inyo, and Mono counties. It is restricted to riparian habitats that contain willows, its main food plant. Loss of riparian habitat on the desert sides of the mountains is the main cause for its rarity. Flight periods range from May through July and one brood is produced. Due to the known geographic range of the species, the potential for occurrence of this species on the site is considered to be low.

Purplish Copper (Lycaena helloides) – Purplish copper occurs throughout the western two-thirds of the United States and is found in lowlands and middle elevations of cismontane southern California. Many of the seasonally wet lowland areas in Los Angeles, Orange, Riverside, and San Diego counties have been lost to land development. The food plant for this species include plants in the genera *Rumex* and *Polygonum*. It produces multiple broods during flight periods between April and October. Purplish copper is believed to have been extirpated from Los Angeles County due to habitat loss, therefore, it is not likely to occur on the Newhall Ranch property.

Coastal Arrowhead Blue (*Glaucopsyche piasus sagittigera*) - Once common in the coastal lowland valley regions of Los Angeles County, coastal arrowhead blue is now restricted to the San Gabriel Mountains. Loss of habitat due to development of the Los Angeles area is the main reason for its restricted distribution. The species prefers habitats of coastal sage scrub and chaparral that have the food plant *Lupinus excubitus*. Flight times occur March through May and a single brood is produced. Due to the known geographic range of the species, the potential for occurrence of this species on the site is considered low.

Hewitson's Skipper (*Copaedes aurantica*) -- This butterfly occurs in the canyons and washes of the Colorado and Mojave deserts and adjacent chaparral areas from the Panamint Mountains, Inyo County, south to the Laguna Mountains, San Diego County. In Los Angeles County, the species has been found in localized colonies in coastal sage scrub, oak woodland/savanna, and grassland habitats in the San Gabriel and Santa Ana mountains. The flight period occurs from April to September during which time it produces multiple broods. Due to the known geographic range of the species, the potential for occurrence of this species on the Newhall Ranch property is considered low.

Leussler's Skipper (*Hesperia comma leussleri*) -- This skipper butterfly occurs in the Transverse and Peninsular ranges of southern California, south to Baja California, Mexico. Various grasses make up its food plants. In Los Angeles County, this species ranges through all of the surrounding mountains in oak woodlands/savannas in localized colonies. A single brood is produced during the flight time of May through August. Due to the known geographic range of the species and the presence of suitable habitat on-site, the likelihood of this species occurring on-site is considered moderate.

Columbia Skipper (*Hesperia colombia*) – The Columbia skipper occurs along the Coastal Ranges from southern Oregon to San Diego County in southern California. In Los Angeles County, the species is known from the Santa Susana and San Gabriel mountains in localized colonies where coastal sage scrub and chaparral habitats occur. The main food plant is grasses. A double brood is produced, one during the flight time of March through May, and the other during August through October. Due to the known geographic range of the species and the presence of suitable habitat on-site, the likelihood of this species occurring on-site is considered high.

Common Sootywing (*Pholisora catullus*) -- This is a species which is widely distributed in northern California, but is uncommon in southern California where it is found only where the mountains meet the desert, as at Little Rock, Los Angeles County, and Jacumba, San Diego County. This species is now believed to be extirpated in Los Angeles County. It occurs in habitats of coastal sage scrub and

chaparral in localized colonies. Flight times are from April to September during which a double brood is produced. Food plants for this species include pigweeds and amaranths. Due to the known geographic range of the species, the potential for this species to occur on the Newhall Ranch property is considered low.

(3) Sensitive Habitats

Habitats have been designated as sensitive by the state of California as part of the California Department of Fish and Game Natural Diversity Data Base. A listing of sensitivity designation and the rationale for these designations is provided in Table BIO-13 (California Department of Fish and Game Natural Community Priority Rankings). Several of designated sensitive habitat types were observed on the proposed Newhall Ranch site. This discussion is intended to define and describe the sensitive habitat types that occur on the Newhall Ranch.

(a) California Department of Fish and Game Designated Sensitive Habitats

Most of the vegetation communities present on the site are not formally identified as being sensitive in the California Natural Diversity Data Base. However, Venturan coastal sage scrub, valley oak woodland/savanna, elderberry scrub, mainland cherry forest, southern willow scrub, southern cottonwood-willow riparian forest and valley freshwater marsh and ponds have been designated by the CDFG as being of threatened status. A discussion of these sensitive habitat types is provided below.

Table BIO-13 California Department of Fish and Game Natural Community Priority Rankings

Community Priority Rankings Within the CDFG's Natural Diversity Data Base, rankings are provided for priority of preservation for terrestrial plant communities which are considered sensitive. Rankings are divided into four categories.

Rank

Threat

Less than six element occurrences (EOs), or less than 1,000 individuals, or less than 2,000 acres:

S1.1	Very threatened (the majority of occurrences are threatened, or the majority of individuals are in
S1.2	occurrences which are inreatened). Threatened (the element has some but not the majority of occurrences threatened and/or has occurrences that will
51.3	soon be threatened). No threats known (no obvious or predictable threats exist).

Table BIO-13 continued California Department of Fish and Game Natural Community Priority Rankings

Six to twenty EOs, or 1,000 to 3,000 individuals, or 2,000 to 10,000 acres:

	S2.1 S2.2 S2.3	Very threatened. Threatened. No threats known.		
,	Twenty-one to 100 EOs, or 3,000 to 10,000 individuals, or 10,000 to 50,000 acres:			
	S3.1 S3.2 S3.3	Very threatened. Threatened. No threats known.		
•	Greater than 100 EOs, or greater than 10,000 individ	ter than 100 EOs, or greater than 10,000 individuals, or greater than 50,000 acres:		
	\$4	Apparently secure; clearly lower than an S3 but reasons exist to be concerned, for example, there is some threat or narrow habitat (such as the Sierra Nevada).		
	S5	Demonstrably secure to ineradicable.		

Coastal Sage Scrub -- Coastal sage scrub vegetation is considered sensitive by the CDFG, and is the current focus of the state's Natural Community Conservation Planning (NCCP) process. The CDFG has assigned Venturan coastal sage scrub vegetation a status of S3.1 (i.e., very threatened status in habitats that are relatively common, twenty to 100 element occurrences (EOs). The NCCP effort is currently being conducted through a series of 12 subregional planning units, which were intended to encompass both large acreage and smaller parcels of coastal sage scrub as well as areas which could serve as corridors for interconnection of large blocks of habitat in support of viable preserve systems. The Newhall Ranch area is not located within one of these units. The NCCP process recognizes that a variety of species are characteristic of coastal sage scrub habitat, yet no single wildlife species may be a reliable indicator of the condition of this habitat throughout southern California. Many species only occur in certain subtypes of coastal sage scrub, while other characteristic coastal sage species may also be relatively widely distributed in open chaparral vegetation. The NCCP process further recognizes a suite of species as deserving special consideration for planning purposes, including the San Diego homed lizard. The NCCP process acknowledges that areas within the subregional planning units are not the only areas of coastal sage scrub and associated habitats which have potential conservation value or are useful for planning purposes, and envisions the entire non-urbanized portion of Los Angeles County eventually being incorporated into subregional coastal sage scrub NCCPs. This vegetation type occurs on about 5,183 acres (about 43 percent of the total) of this habitat on the Ranch site. A large majority of the coastal sage scrub vegetation subject to disturbance was assigned to the two lowest Habitat Value ranks.

Valley Oak Woodland/Savanna -- Valley oak woodland/savanna has been greatly reduced throughout its range and provides valuable habitat for many special wildlife species. In response to this condition, the CDFG has assigned this vegetation type a status of S2.1 (i.e., very threatened status in habitats that are not common, six to 20 EOs). Currently, 421 acres (3.5 percent of the total Newhall Ranch land area) of this habitat occurs on the Newhall Ranch site. The majority of this habitat type is located in the upland portions of the site.

Elderberry Scrub – Elderberry scrub is not a common vegetation type and has been greatly reduced throughout its range, particularly in southern California. In response to this condition, the CDFG has assigned this vegetation type a status of S2.1 (i.e., very threatened status in habitats that are not common, six to twenty EOs). Currently, 24 acres (0.2 percent of the total area of the Newhall Ranch) of this habitat occur on the project site.

Mainland Cherry Forest -- Similar to elderberry scrub, mainland cherry forest is a rare vegetation type and has been greatly reduced throughout its range, particularly in southern California. In response to this condition, the CDFG has assigned this vegetation type a status of S1.1 (i.e., a very threatened designation that is assigned to habitat types that are of very limited distribution). Currently, 18 acres (0.15 percent of the total area of the Newhall Ranch) of this habitat occur on the project site. Mainland cherry forest vegetation is generally located in the uplands in association with coast live oak woodlands.

Southern Willow Scrub – Like many willow dominated riparian habitats in California, southern willow scrub has been greatly reduced throughout its range and provides valuable habitat for many special wildlife species, particularly songbirds. In response to this condition, the CDFG has assigned this vegetation type a status of S2.1 (i.e., very threatened status in habitats that are not common, six to twenty EOs). Currently, 96 acres (0.8 percent of the total area of the Newhall Ranch) of this habitat occur on the project site. Southern willow scrub is generally located in the Santa Clara River drainage.

Southern Cottonwood-willow Riparian Forest/Southern Willow Riparian Woodland – Like most riparian habitats in California, southern cottonwood-willow riparian forest/southern willow riparian woodland has been greatly reduced throughout its range and provides valuable habitat for many special wildlife species. In response to this condition, the CDFG has assigned these vegetation types a status of S3.2 (i.e., threatened status in habitats that are relatively common, 20 to 100 EOs). Currently, 219 acres (approximately 1.8 percent of the total area of the Newhall Ranch) of this habitat occur on the project site. Southern cottonwood-willow riparian forest/southern willow riparian woodland is generally located in the Santa Clara River drainage.
Valley Freshwater Marsh and Ponds – Like many wetland habitats in southern California, valley freshwater marsh and ponds habitat has been greatly reduced throughout its range. This habitat provides a water source in arid areas and, as such, is valuable habitat for many special wildlife species. In response to this condition, the CDFG has assigned this vegetation type a status of S2.1 (i.e., very threatened status in habitats that are not common, six to 20 EOs). Currently, 5 acres (less than 0.1 percent of the total area of the Newhall Ranch) of this habitat occur on the project site.

(b) Streambeds, Drainages, and Wetlands

Wetlands are a subset of special aquatic sites that support hydrophytic (water loving) vegetation, have hydric (wet) soils, and possess wetland hydrology (frequent flooding or prolonged ponding). Like riparian habitats, wetland areas have been impacted significantly over the last century due to urban development, agriculture, flood control projects, and changes in the hydrologic characteristics of watersheds. Wetlands support an array of plant species tolerant of prolonged soil saturation and a diverse assemblage of wildlife species. Wetlands are also important for many migratory birds. Due to the sensitivity of this habitat type, land use changes involving wetlands are regulated by the U.S. Army Corps of Engineers (ACOE) and CDFG. Wetlands present on the Newhall Ranch property include valley freshwater marsh, ponds, mesic meadows, and portions of the riparian areas of the Santa Clara River and tributary drainages.

Jurisdictional wetlands and waters of the U.S. (including aquatic habitat) include those wetlands features subject to jurisdiction of the ACOE under Section 404 of the federal Clean Water Act. "Waters of the U.S." are broadly defined in the Code of Federal Regulations (33 CFR 328.3{a}) to include navigable rivers and intermittent streams which are tributary to these watercourses, as well as wetlands, either associated with watercourses or isolated (ACOE 1986). By definition, all aquatic habitat present on the Ranch is contained within the waters of the U.S. or wetlands categories.

The following section discusses areas of the Newhall Ranch property subject to jurisdiction by resource agencies because of the particular biological resources present. Specifically, those areas of the Newhall Ranch that are determined to be jurisdictional waters (including adjacent wetlands) would come under the regulatory authority of the ACOE per Section 404 of the Clean Water Act. In addition, streambeds and other drainages that occur on the Newhall Ranch are subject to regulation by the CDFG under Sections 1600-1603 of the California <u>Fish and Game Code</u>.

The ACOE regulates the deposition of fill into waters of the U.S. including adjacent wetlands. These jurisdictional waters are defined by either the extent of the ordinary high water mark (waters of the U.S.) or by the extent of the area that meets the ACOE definition of a wetland. Fill material placed into jurisdictional waters can be permitted only under the issuance of either a nationwide permit (fill = 1 to 10 acres) or an individual 404 permit (fill = >10 acres) unless the impact is less than 1 acre which then is typically covered under a general nationwide permit.

The ACOE and the U.S. Environmental Protection Agency (USEPA) jointly conducted a delineation of jurisdictional waters of the U.S., including adjacent wetlands, on the Santa Clara River (from Castaic Creek to Las Brisas bridge in Ventura County) on The Newhall Land and Farming property in August 1993. The total acreage of jurisdictional areas as delineated at that time by the ACOE and USEPA on Newhall Ranch is approximately 407 acres. Subsequent flooding events may have resulted in minor changes to this acreage, as wetlands boundaries may have been slightly altered. The portion of the Santa Clara River east of the confluence with Castaic Creek is the subject of an environmental impact statement currently under preparation by Woodward Clyde Consultants, which will address the impacts associated with the application for a General or series of Section 404 Permits (draft) prepared by John M. Tettemer and Associates, Ltd. The total acreage within the banks of that portion of the River as discussed in the draft General Permit is approximately 210 acres. This jurisdictional area is illustrated on Figure BIO-10 (ACOE Delineation/General Permit Area).

A preliminary assessment of jurisdictional waters was conducted on the upland portion of the Newhall Ranch property in 1994. However, a formal wetland delineation was not conducted. The estimated acreage of jurisdictional waters from this preliminary assessment on Newhall Ranch is approximately 171 acres. It is estimated that an additional 8 acres is present in the off-site land area that would be impacted by the proposed extensions of Valencia Boulevard and Magic Mountain Parkway. This acreage estimate assumes that most of the drainages on the site would be considered jurisdictional waters.

Any alteration to a streambed or substantial drainage that may affect the quality of the state's fish and game resources are also subject to regulation by CDFG. The jurisdictional area of CDFG is similar to that of ACOE, but is generally broader in application. For example, a one-parameter approach to delineating wetlands is used by CDFG, while the ACOE uses a three-parameter approach. Alterations to streambeds and drainages must first be approved by the issuance of a streambed alteration agreement by CDFG. The sequencing process for the agreement is the same as for a ACOE permit: (1) avoidance;





FIGURE BIO-10 ACOE DELINEATION/ GENERAL PERMIT AREA

(2) minimization of unavoidable impacts; and (3) mitigation of unavoidable impacts. A preliminary assessment of the streambeds and drainages subject to regulation by CDFG was made on the upland areas of the Newhall Ranch in 1994 by RECON. Total area of wetlands on Newhall Ranch that fall under the jurisdiction of CDFG is approximately 788 acres.

(c) Significant Ecological Areas

SEA Boundaries -- The SEA boundaries are policy lines, established by Los Angeles County, creating areas designated as having sensitive biological conditions. The mapped boundaries are not necessarily an accurate portrayal of the limits of the biological resources. The Los Angeles County General Plan does permit development within SEAs as long as the development is "highly compatible" with the identified resources.

Figure BIO-11 (Significant Ecological Areas Map) shows the current delineation of SEA 20, which is primarily noted for its oak/woodland conditions, wildlife corridors, and/or drainage areas. The Santa Clara River corridor SEA (SEA 23) is noted for its wetlands and critical habitat for the unarmored threespine stickleback (UTS) fish and the least Bell's vireo bird. A total of approximately 5,237 acres of the 11,963-acre Newhall Ranch are within SEAs 20 and 23 (3,947 acres in SEA 20 and 1,290 acres in SEA 23). The remainder of the Ranch (approximately 6,726 acres) is wholly outside the SEA boundaries.

The portions of the Santa Clara River which are part of Newhall Ranch are primarily west of Castaic Creek. The portion of the River east of Castaic Creek is the subject of the U.S. Army Corps of Engineers section 404 permitting process; the Corps is presently processing an application and Environmental Impact Statement (EIS) for a Permit for this portion of the River.

Santa Clara River SEA (SEA 23) – The Santa Clara River is a regionally significant biological resource. Its value is derived from the inherent value of the wetland habitat and associated species, from its function as a regional wildlife corridor, and because it is a natural River for most of its course. The Ranch as a whole provides wildlife access from the Santa Susana Mountains to the River.

As shown in Table BIO-14 (SEA 23 Habitats), agricultural uses, disturbed lands and non-riparian grasslands represent over one third of the acreage (466 of 1,290 acres) in the Newhall Ranch portion of SEA 23.Several types of riparian communities also occur in SEA 23. Expansive stands of southern cottonwood-willow riparian forest (86 acres) and southern willow riparian woodland (124 acres) occur along the banks of the river and on the flood plain. Willow and mulefat dominated scrubs (81 acres and 428 acres, respectively) occupy more open areas of the flood plain and begin to colonize the active





channel between flood events. Arrow weed scrub (6 acres) is also present. Freshwater marsh areas (3 acres) form along the river in side channels and back water areas where water ponds or is slow moving (Source: Dames & Moore field survey of habitat). It has been estimated that approximately 156 oak trees exist in the portion of SEA 23 located on the Newhall Ranch.

Table BIO-14 SEA 23 Habitats

Habitat Types		Acres
Agricultural/Disturbed/Road		458.52
Alluvial Scrub		0.12
Arrow Weed Scrub		6.18
Cottonwood/Oak Woodland		10.06
Southern Cottonwood-Willow Riparian Forest		85.98
Elderberry Scrub		3.84
Freshwater Marsh		3.27
Non-Native Annual Grassland		7 79
Live Oak Woodland		7 18
Mixed Chanamal		3 75
Mulo Est Somb		156.61
Successional Mula Est Scrub		271.08
Monie Mondery		271.00
Constal Saga Samah		44.02
Coastal Sage Scrub		04.V4 E 30
Coastal Sage Scrub-Grassiand		5.50
Southern Willow Riparian Woodland		123.73
Southern Willow Scrub		81.23
	Subtotal	831.27
	Total	1,289.79

Santa Susana SEA (SEA 20) — The Santa Susana SEA or High Country includes several thousand acres of habitat and forms a regionally significant core reserve for biological resources. Table BIO-15 (SEA 20 Habitats) indicates that SEA 20 is dominated by coastal sage scrub (1,966 acres), live oak woodland and valley oak savanna (520 and 357 acres, respectively), and mixed chaparral (815 acres) habitats. It has been estimated that approximately 13,211 oak trees exist in the portion of SEA 20 located on the Newhall Ranch. The value of the habitats found on the portion of the Ranch located within SEA 20 is enhanced substantially by its continuity and connectivity with the large areas of undeveloped land along the crest of the Santa Susana Mountains, the remainder of the SEA to the east providing opportunities for viable connections with a larger regional open space system.

Habitat Types		Acres
Disturbed/Road		36.45
Alluvial Scrub		9.34
Coastal Sage Scrub		1965.96
Coastal Sage Scrub - Grassland		28.17
Non-Native Annual Grassland		160.20
Great Basin Scrub		26.22
Live Oak Woodland		519.54
Mixed Chaparral		814.57
Mule Fat Scrub		21.25
Pond		0.20
Vailey Oak Savanna		356.91
Valley Oak Woodland		4.81
Southern Willow Scrub		3.06
	Subtotal	3,910.23
	Total	3,946.68

Table BIO-15 SEA 20 Habitats

(d) Oak Woodlands

Oak woodlands have long been a feature of the California landscape and Los Angeles County. This habitat type can range from dense woodland to open savanna, depending on the geographical location and disturbance regime. Large oak trees are often considered part of the California heritage. Loss of oak woodland habitat over the last century to development, grazing, agriculture, and for fuel has reduced the overall acreage of this plant community. Because these trees are slow growing, replacing the habitat once it is disturbed is a long process. Some oak species (not including any present on the Ranch) have been significantly reduced in distribution along with the habitat. Los Angeles County and the CDFG recognize oak resources and woodlands as a sensitive habitat type and the California Native Plant Society considers oak woodlands a rare community type. Types of oak woodlands that occur on the Newhall Ranch property include coast live oak woodland, valley oak woodland, and valley oak savanna. In addition, oak trees are a substantial component of the cottonwood/oak woodland and mainland cherry forest communities.

An Oak tree survey of the site was conducted by Henrickson in 1995. The following information is summarized from the Henrickson report.

Oak trees were evaluated on the northern two-thirds of the Newhall Ranch property, such that all trees within the proposed development areas were recorded. Data gathered during these efforts conform to the Los Angeles County Oak Tree Ordinance (No. 88-0157), and include species identification, general appearance and health evaluation, and size measured in diameter at breast height (DBH) for all oak trees greater than eight inches DBH. Evaluated trees were mapped on 1 inch = 200 ft. scale maps of the Ranch. In this evaluation the minimum size for heritage oaks was reduced to 110 inches DBH from 113 inches DBH to allow for growth during the time prior to actual project development.

A total of 16,314 oak trees (12,388 coast live oaks and 3,926 valley oaks) occur on Newhall Ranch, including 3,314 oak trees (2,888 coast live oaks and 426 valley oaks) within the proposed development area⁴ and 13,000 trees (9,500 coast live oaks and 3,500 valley oaks) within the High Country Special Management Area (SMA). Approximately 156, 13,211, and 2,947 oak trees occur within existing SEA 23, existing SEA 20 and the non-SEA area, respectively, located on the Specific Plan site for a total of 16,314 oak trees. The 3,314 trees in the proposed development area were individually counted, mapped, and graded for health. A total of 232 heritage trees (178 coast live oaks and 54 valley oaks) were identified among the 3,314 trees. Oak trees in the High Country SMA were counted based on aerial photography and field observation. In addition, 6 oak trees (including one heritage oak) were found within the proposed area of disturbance for the off site extensions of Valencia Boulevard and Magic Mountain Parkway. The health and appearance of the oak trees on the Ranch is generally good, with a large percentage of those coast live oak trees and valley oak trees evaluated assigned to grade classes A through C (A indicating excellent trees, B indicating trees of good to very good health but not exceptional size, and C indicating poor to moderately good trees with an equal chance to either decline or continue). A total of 53 trees were assigned to grade class F (dead standing trees), including 46 coast live oaks and seven valley oaks (one classified as a heritage tree).

h. Ecological Characteristics of the Site and Surrounding Area

(1) General Description of Habitats and Vegetation Communities

The habitats on the Newhall Ranch project site are representative, and a continuation, of many of the habitat types found in the surrounding landscape. The site provides high quality examples of the habitats of the Santa Susana Mountains and the Santa Clara River ecosystems. Coastal sage scrub, live oak woodland, mixed chaparral, chamise chaparral, and non-native grassland are the major upland community types occurring on the adjacent lands, both to the north and south of the Santa Clara River.

⁴ For the purposes of the oak tree survey, a generalized area was used to describe the development area which includes portions of the site designated as High Country, Open Area, and River Corridor.

The Santa Clara River, both up stream and downstream of the project site supports a variety of riparian habitats much like those identified on the site (e.g., willow woodlands and scrubs, cottonwood/willow forests, mule fat scrub, freshwater marsh). The quality of these habitats on the surrounding areas is variable. Most areas have been subject to cattle grazing and agriculture, but other areas have remained relatively undisturbed.

From the perspective of regional wildlife movement and connections, portions of the Newhall Ranch occupy an important location (see Figure BIO-12, Regional Wildlife Movement). The portions include the southern portion of the Ranch found in the Santa Susana Mountains, the western end of the San Martinez Grande area, and the Santa Clara River, all of which are potentially key components of a regional conservation system. The primary connectivity of the site is to the larger undeveloped area in the Santa Susana Mountains, including the recently dedicated Santa Clarita Woodlands Park. The eastern end of the Santa Susana Mountains is potentially connected to several other surrounding undeveloped areas, albeit somewhat more tenuously. The Santa Susana's have some potential for wildlife exchange with the Simi Hills and the Santa Monica Mountains to the south (see Figure BIO-12). However, these connections are limited by intervening urban development in Simi Valley, the San Fernando Valley and other communities in Ventura and Los Angeles Counties and existing State Route 118 (SR-118) and the U.S. 101 freeway. The connection to the east between the Santa Susana's and the Angeles National Forest is also problematic because of the presence of Interstate 5 (I-5) and State Route (SR I-14) freeways, and because of urban development in the City of Santa Clarita and unincorporated areas of Los Angeles County to the east and the San Fernando Valley to the southeast. Such barriers act to limit the potential movement of species between the larger ecological units.

Wildlife movement corridors from the project site to the surrounding areas are focused on movement to and from the Santa Clara River. The Santa Clara River is an important riparian corridor that connects the project site with habitat to the east and west. The river and its tributaries serve as connections between the upland habitats to the north and south of the river, as well as upstream and downstream. Large expanses of undeveloped land in the Santa Susana Mountains to the south allow for the movement of wildlife down to the river and back primarily through a series of ridges and canyons (e.g., Salt Creek Canyon, Rawhide Canyon, and to a lesser extent Potrero Canyon). North of the river, wildlife movement from the surrounding hills to the river is somewhat facilitated by existing canyon connections (e.g., San Martinez Grande Canyon and to a lesser degree Chiquito Canyon), although SR-126 poses a barrier to wildlife movement. Proposed Caltrans improvements to SR-126 in Ventura County include the provision of three agricultural undercrossings which may function as wildlife undercrossings. One of these undercrossings is planned to be located across from the confluence of Salt Creek and the river, enhancing the future value of Salt Creek as a wildlife corridor between the areas

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Santa Clara River drainage

Existing conservation areas



Potential conservation areas

Potential movement corridor

FIGURE BIO-12 REGIONAL WILDLIFE MOVEMENT

south and north of the river. Connection to the west along the Santa Susana Mountains and rugged terrain of the lower foothills above the river is still good due to lack of development. Viable upland connections to the east are very restricted by the I-5 freeway, Stephenson Ranch, the Magic Mountain Theme Park, and the continued development of the Santa Clarita Valley.

(2) Existing Land Use

The 11,963-acre Newhall Ranch is an irregularly-shaped site generally located between the Magic Mountain Theme Park on the east and the Los Angeles/Ventura County line on the west. The City of Santa Clarita is located east of the project site just beyond I-5, approximately one mile from the project site. SR-126 and the Santa Clara River transect the project site from east to west; a majority of the project area occurs south of SR-126 and the Santa Clara River. Present (and historical) land uses on the Newhall Ranch include: vacant land with oil and natural gas operations; agriculture primarily along the Santa Clara River corridor, on the mesas overlooking the River and in the wider canyon bottoms; and cattle grazing in Potrero Canyon, along the river, and in other upland and mountainous portions of the Ranch (see Figure BIO-13, Existing Land Use). Newhall Ranch is also periodically used by the movie industry for set locations. Several employee homes, an oil company office, and miscellaneous other structures are also on site. Related to the oil uses on the site, the central and northeastern portions of the property are heavily traversed with dirt and asphalt roads, which provide access to numerous graded oil well pads and pipelines, and storage and transmission facilities.

The Newhall Land & Farming Company presently leases out portions of the project site for on-going oil and natural gas production, as well as for cattle grazing and limited irrigated row crop and dryland agricultural operations. However, the oil and natural gas operations are slowly phasing out due to decreasing production values. There are major Southern California Edison Company (SCE) electrical transmission lines and Southern California Gas Company (SCGC) pipelines within easements traversing the property which would remain in place or be relocated. There are also a variety of electrical distribution lines and smaller natural gas and water lines which are either to remain in place, be relocated, or be removed during development or abandonment of oil and gas operations.

Direct access to the project site is currently provided by SR-126. The I-5/SR-126 interchange is located approximately one half mile east of the site. San Martinez Grande Road and Chiquito Canyon Road, north of SR-126, provide access to the northern portion of the site. South of SR-126, the site is criss-crossed by a network of paved and unpaved roads which were established to serve the oil and gas operation sites, as well as cattle and farming uses.





Land use types surrounding the site locally include: to the north, scattered rural and urban residential uses (the communities of Val Verde and San Martinez Grande), landfill uses (Chiquita Canyon), oil and natural gas production uses, business park uses (Valencia Commerce Center), urban single family homes and low intensity commercial uses (Castaic corridor), and open area; on the east, wastewater treatment plant (WRP 32), a California Highway Patrol station, high intensity commercial/recreational uses (Magic Mountain Theme Park), hotels, restaurants and service stations adjacent to I-5, urban density residential uses (Stevenson Ranch), and open area; on the south, open area; and on the west, citrus orchards, oil and natural gas production uses and vacant open area.

(3) Major Public and Private Open Space (within 10 miles of Newhall Ranch)

Figure BIO-14 (Major Public and Private Open Space) illustrates the distribution of major public and private open space in the vicinity of the site. Provided below is a listing of the same properties depicted in Figure BIO-14.

Public (existing)

- 1. Los Padres National Forest, including the Sespe Condor Sanctuary
- 2. Angeles National Forest
- 3. Santa Clarita Woodlands Park
- 4. Santa Susana Mountain Project
- 5. Porter Ranch Park
- 6. Porter Ridge Park
- 7. O'Melveny Park
- 8. Placerita Canyon State Park
- 9. Happy Camp Canyon Regional Park
- 10. Sage Ranch
- 11. Chatsworth Reservoir Park
- 12. Challenger Park
- 13. Tapo Canyon Regional Park

Public (proposed)

- 14. Remainder of Santa Clarita Woodlands Park
- 15. Rocky Peak Park (Runkle Ranch)
- 16. Ahmanson Open Space Area

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Los Padres National Forest (1) $\overline{2}$ Angeles National Forest $\overline{\mathfrak{3}}$ Santa Clarita Woodlands Park $\overline{4}$ Santa Susana Mountain Project 5678991134591 Porter Ranch Park Porter Ridge Park O'Melveny Park Placerita Canyon State Park Happy Camp Canyon Regional Park Sage Ranch Chatsworth Reservoir Park Challenger Park Tapo Canyon Regional Park Remainder of Santa Clarita Woodlands Park Rocky Peak Park (Runkle Ranch) Ahmanson Open Space Area Newhall Land and Farming Company holdings -Ventura County Dale Poe Development - Stevenson Ranch (18)19 20 21 21 22 23 24 Hathaway Ranch Temescal Ranch - Texaco Big Sky Ranch Strathearn Ranch Ahmanson Ranch UNOCAL - Big Mountain/Santa Susana Mtns.



MAJOR PUBLIC AND PRIVATE OPEN SPACE



Private Holdings

- 17. Newhall Land and Farming Company holdings -Ventura County
- 18. Dale Poe Development Stevenson Ranch
- 19. Hathaway Ranch
- 20. Temescal Ranch-Texaco
- 21. Big Sky Ranch
- 22. Strathearn Ranch
- 23. Ahmanson Ranch
- 24. UNOCAL-Big Mountain/Santa Susana Mountains

(a) Actual or Potential Wildlife Movement and Gene Flow Between Surrounding Open Space and Reserves to the Project Site

Because of the large area encompassed by the site and the large amount of relatively undisturbed habitat remaining around the site, precise assessment of the actual wildlife movements associated with the project site are problematic. Current wildlife use of the area is not restricted to corridors as such, but reflect species specific use of the landscape for life history requirements, as well as for local and larger scale movements. Current constraints on wildlife movement and use of the property and surrounding area are associated with existing land uses, particularly urbanization to the east and north of the site, agriculture along the river, and highways (SR-126 and I-5).

Generally, the pattern of wildlife movement and gene flow in the area, including the Newhall Ranch project site, can be characterized as being within and between the three important local ecotypes or ecological units. These are: the uplands of the Santa Susana Mountains ('High Country'), the Santa Clara River riparian system, and the uplands to the north on into the Los Padres National Forest. Figure BIO-12 above illustrates the estimated pathways between regionally important large ecological units.

From the conservation planning perspective, it is most important to anticipate land connections necessary to maintain the general pattern of connectivity that currently exists. This will require that the open space system within the site provide for adequate connectivity between the uplands on the site and the Santa Susana Mountain uplands south of the site; adequate connectivity upstream and downstream along the Santa Clara River; and not preclude adequate connectivity between the uplands to the north (Los Padres National Forest) and south (Santa Susana Mountains) of the river. To provide adequate connectivity, the landscape connections within each of the ecological units must be broad enough to provide for regular movement of individuals or dispersal of units.

Connections between the river and upland areas and across the river (for example, Salt Creek) serve as more intermittent connections between ecotypes and are more easily characterized as corridors, and as such are not as necessarily broad as connections within ecological units (e.g., Los Padres National Forest, Santa Susana Mountains, etc.). To function adequately for large mammal and small vertebrate movement, the corridors intended to serve this function must provide the necessary habitat characteristics, adequate width so as to not inhibit movement, and continuity between the areas being connected.

(b) Overall Biological Value of the Project Site and its Context with Adjacent Lands

To gain perspective of the general overall biological values of the habitats both on and off the project site, the historical land use of the Newhall Ranch property must be considered. As stated earlier, cattle grazing, agriculture, and oil and gas exploration have been a part of the land use history since the early 1870's and continues to the present time. Many of these historical activities have also occurred on portions of the adjacent lands, especially cattle grazing and agriculture. Therefore, there is a distinct difference in biological values of habitats found in the landscape. Habitats that occur on steep slopes and in the high country of the Santa Susana Mountains have been less affected by the historical land uses. The main riparian corridor of the Santa Clara River, although somewhat affected by historical land use, is relatively intact and supports a high diversity of species, good wildlife use, and overall good biological values. Areas both on the project site and surrounding areas that have been subject to long term cattle grazing, agriculture, or oil/gas exploration activities lack species diversity, have low wildlife use, and consequently low overall biological values.

The Santa Clara River is a regionally significant biological resource. Its value is derived from its status as one of the few remaining undammed river systems in southern California, the inherent value of the riparian habitat and associated species within its flood plain, and from its function as a regional wildlife corridor.

The reach of the Santa Clara River through the Newhall Ranch property has some of the highest quality riparian vegetation associations remaining on the entire river, providing habitat for a great diversity of species. These species include small populations of the federally listed least Bell's vireo, unarmored threespine stickleback, and southwestern willow flycatcher. Other sensitive species dependent upon riparian and aquatic habitats that occur or have the potential to occur in the area include western spadefoot toad, southwestern pond turtle, arroyo toad, two-striped garter snake, white-tailed kite, Cooper's hawk, and a diversity of migratory birds. The quality of the riparian

habitat along this reach of the river is a direct result of upstream runoff from developed areas and the discharge of treated effluent from wastewater treatment plants (Los Angeles County Sanitation District Plant Nos. 26 and 32). Other portions of the river not affected by such runoff and effluent discharges are typically dry during dry months of the year.

The upland areas of the Newhall Ranch property proposed for the open space system, including the High Country of the Santa Susana Mountains, are dominated by coastal sage scrub and mixed chaparral habitat, with scattered oak woodlands in the drainages. Patches of non-native grassland are also dispersed through the area. Coastal sage scrub habitat is the focus of regional planning processes because of the general trend of habitat loss in southern California and the occurrence of the federally threatened coastal California gnatcatcher in areas of Orange, Riverside, and San Diego counties.

Although their range historically included the Santa Clara River vicinity, coastal California gnatcatchers are believed to be extirpated in this area. The recent observation of a coastal California gnatcatcher in the Moorpark area of Ventura County does not likely indicate that this species is reoccupying the Santa Susana Mountains.

A number of sensitive species occur in the habitats within the Santa Susana Mountain High Country proposed for open space including: Peirson's morning-glory, San Diego and California homed lizard, coastal western whiptail, and San Diego woodrat. These habitats support a high diversity and abundance of other plant and wildlife species, including the potential for several other sensitive species such as golden eagle.

(4) Approach to Resource Conservation

As a result of their diversity and overall quality, consideration of the biological resources on the Newhall Ranch property has been incorporated into the early stages of the planning process for the Newhall Ranch Specific Plan to maximize the conservation of important biological features of the site. The habitat types and associated plant and animal species found on the property have become an integral part of the overall project design with respect to both environmental regulatory issues and as a project amenity. A multidisciplinary approach was taken in the design of the open space system that included factors such as biological issues, land use, geology, hydrology, soils, and infrastructure. The result was the formulation of a conservation strategy that allows for the development of the site in a way that minimizes the Specific Plan's effects on important biological resources.

In addition, the conservation strategy also incorporates the design and management of important open space areas in a way that conserves biological values. An important aspect of the approach was an analysis of the conservation value of habitats on the property. This analysis used the conservation principles and a geographical information system (GIS) methodology outlined below. An additional, component of the conservation strategy was the consideration of the larger regional context in the conservation design of biological resources on the site. The Ranch, which extends from the ridgeline of the Santa Susana Mountains across the Santa Clara River to the uplands on the north, offers the potential for significant habitat contributions to a potential Santa Susana Mountains open space area and a key segment of the Santa Clara River system, as well as, regionally important connections between these habitat areas and across the river (see Figure BIO-12).

Conservation theory and practice (Thomas et al. 1990; Noss 1991; USFWS 1993d) includes a number of concepts developed to guide regional conservation planning for sensitive species (e.g., spotted owl, desert tortoise, Stephen's kangaroo rat, and least Bell's vireo), as well as ongoing multiple species planning (i.e., Natural Community Conservation Planning). The biological resource conservation strategy developed for the Newhall Ranch property is based on these current conservation planning concepts. The scale of these conservation concepts ranges from *regional* (including an entire reserve system), to individual *reserves*, to single habitat *patches* within reserves, or combinations of these scales. Although the proposed open space system for the Newhall Ranch property is on the scale of an individual reserve, a combination of the concepts applicable to each of the scales above was used in the overall conservation strategy for the site.

A two step process was used to assess the conservation values of different portions of the property. In addition to the intrinsic value of each habitat patch or polygon mapped on the property, their value was evaluated in the context of the size of the patch and its connectivity and proximity to other natural habitat types. The point of this exercise was to give a more objective basis for evaluating which areas on the Ranch would be of greatest value as part of an open space system and which would contribute least. From the perspective of the planning process for the project, this provided direction as to which areas are least appropriate for development and which are least constrained by biological resources.

The first step in the analysis was to map the habitats on the Ranch. Each habitat type was then assigned a habitat value based on the habitat's sensitivity (CNDDB), regional rarity, diversity of wildlife species, and importance to listed and sensitive species. These factors were used to rate the habitat classes present on the Ranch on a scale from 1 to 10. The composite habitat values from this evaluation were used in the generation of a preliminary habitat values map.

The classification of habitat values for each patch was conducted using GIS analysis. The analysis focused on the value of each habitat patch (or polygon, in GIS terms), its size relative to other patches on the property, its proximity to other native habitat, and its continuity with other patches of native habitat. The four criteria that were used to classify the habitat conservation value of each polygon, *i*, on the property were:

- <u>Habitat value</u> an arbitrary value for each polygon, V_{i_i} between 0 and 5 based on habitat sensitivity and biodiversity value. These values are from the attached table.
- <u>Area</u> based on the area of the polygon relative to the other polygons of the same habitat on the property. The value for this criterion for each polygon, A_i, will be generated relative to the distribution of size classes of polygons for each habitat type. The value of each is calculated as A_i = 5 x (area of the polygon/area of the largest polygon of the same habitat type).
- Proximity based on the proportion of higher value habitats within 500 feet of the polygon. This value, Px_i, will be determined by adding 500-ft to each polygon. The value will be calculated as Px_i = S (area of each polygon within 500 ft x Vi of the polygon)/S(area of all polygons within 500 ft). This value is then assigned to the polygon itself, even though it was calculated from the added area.
- Continuity based on the value of the habitat immediately adjacent to the polygon (i.e., sharing a boundary). This value, Cni, is calculated from all polygons which share a boundary with the polygon. The value for each polygon is calculated as Cni = S (area of each adjacent polygon x Vi of the polygon)/S(area of all adjacent polygons).

The overall habitat value, Si, for each polygon was calculated as:

 $Si = ((2Vi \ x \ Ai) + Pxi + (Cni \ x \ 2)) / 13$

The divisor of 13 was chosen to normalize the resultant Si to a number between 0 and 5 (low to high value) for graphic representational purposes.

The results of the GIS habitat value analysis identified the values of each habitat patch (polygons) on the property from highest to lowest on a map. This was a first approximation of the distribution of habitat values on the property.

The second step in the evaluation involved the focused assessment of the results of the GIS analysis to add the perspective of site specific knowledge of the property and its resources, as well as to correct some computational limitations of the habitat evaluation model. In particular, the model overvalued areas of grassland habitat in Potrero Canyon because of their large area and their proximity and continuity to relatively undisturbed coastal sage scrub and other native habitats. The model also overvalued the coastal sage scrub and mixed chaparral habitats in the lower elevation uplands because it did not factor in the disturbed nature of the habitat. By comparison, the coastal sage scrub, chaparral, and oak woodland habitats in the higher elevation portion of the property (Santa Susana Mountains) were undervalued.

The result of the second step habitat value analysis is shown in Figure BIO-15 (Habitat Value Study). The areas of highest value based on the criteria used were: the coastal sage scrub and oak woodlands at higher elevations on the southern half of the Ranch; the riparian woodlands along the Santa Clara River; and linear patches of riparian habitat in Salt Creek, Chiquito Canyon, San Martinez Grande Canyon, Lower Potrero, and Long Canyon. Areas of coastal sage scrub, oak savanna, and chaparral at lower elevations were rated as having moderate values. The grasslands, agricultural fields, and disturbed areas on both sides of the river have the lowest values from the perspective of biological conservation.

Based on the analysis, to minimize impacts to biological resources on the Ranch, potential development should be focused in more disturbed uplands areas in the central portion of the property to the north and south of the Santa Clara River. Development should be avoided in the high value areas along the Santa Clara River and in the High Country SMA in the southern half of the Ranch. To maximize long term habitat values, these high value areas should be connected by a landscape corridor. The most logical location for this corridor would be at the west edge of the property away from the likely development areas and making use of existing topographic characteristics, as well as, the planned undercrossing of improved SR-126 on the north side of the river. Salt Creek therefore appears to be the most appropriate topographic feature upon which to align this potential connection.

The result of the design effort has produced a strategy that has focused conservation and mitigation efforts on the Newhall Ranch property into three areas:

- 1. The Santa Clara River corridor,
- 2. The large block of relatively undisturbed habitats on higher elevations of the Santa Susana Mountains, and
- 3. The connection between these two areas along the Salt Creek drainage corridor.

The biological resource conservation strategy developed for the Newhall Ranch property includes the specific mitigation actions necessary to resolve regulatory issues and addresses the sequencing recommended by the resource agencies: avoidance, minimization, and mitigation for impacts to key resources. Proposed large, open space areas on the Newhall Ranch property avoid impacts to many of the highly sensitive species, present or potentially occurring on the site, and their habitats. Further





project design with respect to potential significant impacts to biological resources has minimized encroachments into key areas of the property, decreasing the overall mitigation requirements. Indirect impacts to biological resources are minimized through the dedication of large blocks of habitat that decrease the edge-area ratio, and thus, buffer the habitat from noise, lighting, and encroachment by domestic pets, non-native plants, and humans. Specific design criteria have resulted in the placement of more benign land uses between development areas and higher value habitats (e.g., open areas, trail systems, parks, and utility easements/corridors have been situated between development areas and sensitive habitats, and lower density residential uses have been placed between higher density uses and sensitive habitats).

III, PROJECT IMPACTS

a. Significance Threshold Criteria

Appendix G of the California Environmental Quality Act (CEQA) <u>Guidelines</u> defines a significant effect on the biological environment as those changes that "substantially affect a rare or endangered species of animal or plant or the habitat of the species; . . . interfere substantially with the movement of any resident or migratory fish or wildlife species; . . . [or] substantially diminish habitat for fish, wildlife, or plants."

The direct impact of implementation of the Newhall Ranch Specific Plan would be to remove a portion of the natural biological resources that exist on the site and to convert them to a urban condition. Regardless of the magnitude of this change, this information in itself does not provide a conclusion regarding impact significance. To assess the significance of direct and indirect Specific Plan impacts, the following criteria were employed to define impact magnitude (these include the aforementioned significant effects as defined by CEQA).

- Will implementation of the Newhall Ranch Specific Plan substantially diminish habitat for fish, wildlife or plants?
- Will implementation of the Newhall Ranch Specific Plan substantially affect the movement of any resident fish or wildlife species?
- Will implementation of the Newhall Ranch Specific Plan substantially affect endangered, rare or sensitive plant or animal species?
- Will implementation of the Newhall Ranch Specific Plan substantially affect sensitive habitat types?

b. Specific Plan Impacts

(1) Effects on the Diminishment of Habitat for Fish, Wildlife or Plants

The discussion of direct impacts that follows identifies the direct impact of implementation of the Newhall Ranch Specific Plan and the resource value assigned to the individual habitat types. Review of this evaluation indicates that the majority of the proposed development area is situated in areas with low to moderate habitat values. This is summarized by the Table BIO-16 (Vegetation on Newhall Ranch Affected by Specific Plan Implementation), which shows that the vegetative

communities with the highest percentage of area impacted are of relatively low habitat value (e.g., non-native grassland and disturbed areas). Conversely, the areas of least percentage of area impacted are among the highest value habitats (e.g., southern willow riparian woodland, valley oak and coast live oak woodlands, and valley oak savannas).

Vegetation Community Type	Approximate Acres Present	Approximate Acres Disturbed	Approximate Percent Disturbed
Coastal Sage Scrub	5,183	1,820	35%
Chamise Chaparral	´ 7	3	43%
Mixed Chaparral	1,206	199	16%
Great Basin Scrub	81	49	60%
Coast Live Oak Woodland	670	37	5%
Valley Oak Woodland	26	2	8%
Valley Oak Savanna	394	25	6%
Elderberry Scrub	24	14	58%
Non-Native Grassland	1,896	1,480	78%
Mainland Cherry Forest	18	11	61%
Disturbed Areas	1,523	1,317	87%
Mule Fat Scrub	222	63	28%
Successional Mule Fat Scrub	275	6	2%
Southern Willow Scrub	96	15	16%
Southern Willow Riparian Woodland	126	4	3%
Southern Cottonwood-Willow Riparian Forest	93	15	16%
Arrow Weed Scrub	16	11	69%
Valley Freshwater Marsh and Ponds	5	2	40%
Cottonwood/Oak Woodland	26	7	27%
Alluvial Scrub	39	21	54%
Scalebroom Scrub	20	17	85%
Mesic Meadow	14	14	100%
Total of Rounded Numbers	11,963	5,132	43%

Vegetation on Newhall Ranch Affected by Specific Plan Impleme	entation

(a) Direct Impacts

Section 15358 of the CEQA <u>Guidelines</u> defines direct effects (effects being synonymous with impacts) as "Direct or primary effects which are caused by the project and occur at the same time and place." As used in this analysis, direct impacts are considered to be the changes that would occur to the site as a result of Specific Plan implementation. For this analysis, the outer limits of ultimate build-out as defined by the Conceptual Grading Plan for the Specific Plan (EIR Figure 1.0-14) was used to evaluate the magnitude of direct impacts to biological resources. As the Grading Plan is conceptual in nature, a precise determination of impacts cannot be made at this time. This analysis, based on the Conceptual Grading Plan, represents a reasonable worst case analysis of impacts for the proposed Specific Plan. In order for development to occur, the Specific Plan area will have to be subdivided. Subdivisions are governed by the State Subdivision Map Act and will require environmental review. Subdivisions will be evaluated for consistency with the Specific Plan and its related environmental documents. At subsequent levels of planning, there may be opportunities to reduce the level of impacts below those described in this subsection.

The following categories of direct impacts to biological resources are discussed below:

- the direct loss of natural vegetation,
- direct effects on wildlife, and
- the direct loss of jurisdictional wetlands and waters of the U.S.

1. Habitat and Vegetation Communities

The principal direct impact of implementation of the Specific Plan is to convert approximately 5,132 acres of the approximately 11,963-acre Newhall Ranch property (about 43 percent) from a natural to an urban condition. Direct impacts are based on a maximum build-out scenario as proposed in the Specific Plan (these impacts may be reduced as plans are developed at a tract map level of detail). In addition to disturbances within the proposed development area, approximately 169 off-site acres would be subject to disturbance as a result of off-site roadway extension construction. The approximate acreage of each of the vegetation/habitat types present on the Newhall Ranch property, the approximate acreage of each type subject to disturbance as a result of maximum build-out, and the percentage of each type subject to disturbance are provided in Table BIO-16.

The impact to each of the vegetation/habitat types identified on the Newhall Ranch is described below. The rationale associated with habitat values identified below was discussed and described earlier in this subsection in existing conditions.

Coastal Sage Scrub – The loss of approximately 1,820 acres of coastal sage scrub vegetation on the Ranch would result from implementation of the Specific Plan. This total includes 1,709 acres of coastal sage scrub, as well as 111 acres of coastal sage scrub/grassland mix and represents approximately 35 percent of the total 5,183 acres of coastal sage scrub present on the site. About 56 acres of coastal sage scrub vegetation would also be impacted along the off-site roadway extension alignments.

On the Ranch, the various densities of coastal sage scrub vegetation provide habitat for a variety of plant and animal species, including California species of special concern, special animals, and federal plant and wildlife species of concern. Potential impacts to these sensitive plant and animal species are discussed and described later in this subsection. A large majority of the coastal sage scrub vegetation that would be impacted by implementation of the Specific Plan has been subject to a variety of disturbances and was assigned the two lowest Habitat Value ranks (Rank 1 and 2) identified in the Habitat Value Analysis, with the rest assigned the second highest Habitat Value rank (Habitat Rank 3).

Mixed Chaparral -- Implementation of the Specific Plan would result in the direct loss of approximately 202 acres of the 1,213 acres of chaparral vegetation on the Ranch (including 3 acres of chamise chaparral and 199 acres of mixed chaparral). This loss represents about 43 percent of the total 7 acres of chamise chaparral present on site and approximately 16 percent of the total 1,206 acres of mixed chaparral present on the Newhall Ranch. In addition, construction of off-site roads associated with the Specific Plan will impact an additional 98 acres of chamise chaparral, as well as 8 acres of mixed chaparral.

Chaparral is a dominant vegetation type in the region, and it is not considered sensitive in southern California. The chamise chaparral and mixed chaparral vegetation on the Ranch are not known to support rare, threatened, endangered, candidate or proposed plant and wildlife species. However, this habitat type does provide habitat for California species of special concern, special animals, and federal species of concern. Impacts to these sensitive species are discussed and described later in this subsection.

The chamise and mixed chaparral vegetation impacted by implementation of the Specific Plan was assigned entirely to the two lowest Habitat Value ranks, with the large majority of chamise chaparral being assigned to the lowest rank.

Great Basin Scrub -- The direct loss of approximately 49 of the total 81 acres of Great Basin scrub vegetation on the site would result from implementation of the Specific Plan. This loss represents approximately 60 percent of the Great Basin scrub vegetation on the Ranch. Construction of off-site roads would impact 2 additional acres of Great Basin scrub vegetation.

The Great Basin scrub vegetation on the Ranch is not known to support rare, threatened, endangered, proposed or candidate plant and wildlife species; however, it does provide habitat for one California species of special concern and one federal species of concern, and five declining butterflies. Impacts to these sensitive species are discussed and described later in this subsection. The large majority of Great Basin scrub directly impacted by implementation of the Specific Plan was assigned to the two lowest Habitat Value ranks, with a very small amount assigned to the highest Habitat Value rank (Habitat Value Rank 4). However, this vegetation is regionally important because it is at the extreme edge of its distribution.

Oak Communities – The loss of about 64 acres of oak vegetation (consisting of up to 37 acres of the 670 acres of coast live oak woodland present on site, up to 2 acres of the 26 acres of valley oak woodland, and up to 25 acres of the 394 acres of valley oak savanna) could result from implementation of the Specific Plan. This represents a loss of about 5 percent of the total amount of the coast live oak

woodland, 8 percent of the valley oak woodland, and 6 percent of the valley oak savanna areas on the Newhall Ranch. Coast live oak woodland, valley oak woodland, and valley oak savanna vegetation types are considered sensitive by the state of California and provide habitat for sensitive species. Impacts to these sensitive species are discussed and described later in this subsection.

According to the Habitat Value Analysis, approximately two-thirds of the coast live oak woodland to be disturbed were assigned to the highest Habitat Value rank, while about one-third was assigned to the lowest. About three-quarters of the valley oak woodland to be disturbed were assigned to the highest Habitat Value rank, with the remaining one-quarter divided evenly between the two lower ranks. The large majority of the valley oak savanna that would be subject to disturbance was assigned to the highest Habitat Value rank, while the small remainder was divided between the two lowest ranks. However, all oak woodland is considered sensitive.

Implementation of the Specific Plan would result in an impact of up to 648 oak trees or 4 percent of the estimated 16,314 trees which occur on site, consisting of up to 553 coast live oak and up to 95 valley oak on the Ranch. This includes 11 dead coast live oaks and 3 dead valley oaks assigned to Health Category 5 (dead standing). County Ordinance No. 88-0157 does not require an Oak Tree Permit for Category 5 trees. Included in these impacts are up to 109 heritage oak trees (89 heritage coastal live oak and 20 heritage valley oak) as a result of completion of the ultimate project buildout. Along the off-site highway extensions, 6 coast live oak trees, including 1 heritage oak tree, would be impacted. Of the 648 oak trees impacted on site, 54 occur within the existing bounds of SEA 23, 13 occur within the existing bounds of SEA 20, and 581 occur outside the bounds of the SEAs.

Oak trees are considered sensitive by the County of Los Angeles, and County Ordinance No. 88-0157 provides protection for oak trees with a trunk diameter of greater than 8 inches. This ordinance requires a permit for cutting, moving, removal, or encroachment into the 'protected zone' of oak trees, and further requires replacement of lost oak trees. The numbers of oak trees to be impacted as indicated above are based on the Conceptual Grading Plan for the Specific Plan. During the subdivision process, individual grading plans will be prepared for each tract that will provide a more accurate assessment of graded area than the Conceptual Grading Plan. Therefore, the number of trees identified as being impacted represents the maximum amount of loss that is anticipated. It is possible that trees shown to be impacted may be preserved through adjustments to the grading and development plans, provisions for retaining walls and other such techniques.

Elderberry Scrub – The direct loss of approximately 14 acres of the 24 acres of elderberry scrub vegetation present on site as a result of implementation of the Specific Plan is anticipated. This loss represents about 58 percent of all elderberry scrub vegetation present on the Newhall Ranch.

Elderberry scrub vegetation present on the Ranch is not known to support rare, threatened, endangered, proposed or candidate plant and wildlife species. It may provide habitat for several California species of special concern, special animals, and federal wildlife species of concern, similar to those potentially occurring in mixed chaparral or coastal sage scrub. The large majority of the vegetation to be lost was assigned to the two lowest Habitat Value ranks, with a very small amount assigned to Habitat Value Rank 3. Elderberry scrub vegetation is considered sensitive.

Non-native Grassland Vegetation -- Implementation of the Specific Plan would result in the direct loss of approximately 1,480 acres of the 1,896 acres of non-native grassland vegetation present on the Newhall Ranch. This loss represents about 78 percent of the non-native grassland vegetation on the Ranch with an additional 9 acres being impacted along the off-site road alignments.

The non-native grassland vegetation on the Ranch is not known to support rare, threatened, endangered or proposed plant and wildlife species. It does provide habitat for California species of concern and federal species of concern; foraging habitat for sensitive raptors, and three declining butterflies. Impacts to these sensitive species are discussed and described later in this subsection. In addition, the edges of grasslands (where grassland interfaces with other, more densely structured vegetation communities) are used to a large degree by many wildlife species.

Nearly all grassland vegetation present within the proposed development area was assigned to the lowest Habitat Value rank with only a small amount of acreage included in the other three Habitat Value ranks.

Mainland Cherry Forest -- The direct loss of approximately 11 acres of the 18 acres of mainland cherry forest vegetation would occur with implementation of the Specific Plan. This loss represents about 61 percent of the mainland cherry forest on the Newhall Ranch.

On the Ranch, mainland cherry forest vegetation is intermixed with coast live oak vegetation. Mainland cherry forest vegetation on the Ranch is not known to support rare, threatened, endangered, proposed or candidate plant and wildlife species. However, it may provide habitat for several declining butterflies. Impacts to these sensitive species are discussed and described later in this subsection.

According to the Habitat Value Analysis, the large majority of the vegetation to be lost was assigned to the lowest Habitat Value rank, with small amounts being assigned to the second lowest rank and second highest rank. However, all mainland cherry forest vegetation is sensitive. Disturbed Areas -- Approximately 1,317 acres of the 1,523 acres of area categorized as disturbed would be lost as a result of Specific Plan implementation. This loss represents about 87 percent of the disturbed area on the Ranch. Proposed off-site roadways would impact 1 additional acre of this vegetation type.

Disturbed areas on the Newhall Ranch are not known to support rare, threatened, endangered, proposed or candidate plant and wildlife species. Ruderal vegetation contained in the disturbed areas does provide habitat for California species of special concern, federal species of concern, and special animals, and it may also provide foraging habitat for raptors. Impacts to these sensitive species are discussed and described later in this subsection. In general, this non-native vegetation represents marginal quality habitat for wildlife.

The large majority of the disturbed vegetation was assigned to the lowest Habitat Value rank with only small amounts being included in the other three ranks.

Riparian Scrub -- The direct loss of up to 95 acres (or about 16 percent) of the 609 acres of riparian scrub vegetation (consisting of about 69 of the 497 acres of mule fat scrub [in turn consisting of up to about 63 acres of mule fat scrub and up to about 6 acres of successional mule fat scrub], about 15 of the 96 acres of southern willow scrub, and about 11 of the 16 acres of arrow weed scrub present on site) could occur with implementation of the Specific Plan. About 14 percent of the mule fat scrub vegetation present on the Ranch would be disturbed (about 28 percent of the mule fat scrub and about 2 percent of the successional mule fat scrub), about 16 percent of the sensitive southern willow scrub vegetation would be disturbed, while about 69 percent of the sensitive arrow weed scrub vegetation would be disturbed.

On the Ranch, mule fat scrub and southern willow scrub vegetation, and to a lesser degree arrow weed scrub vegetation, provide habitat for many wildlife species, and are an especially important component of the life history of riparian dependent birds (many of which are considered sensitive).

According to the Habitat Value Analysis, about 10 percent of the mule fat scrub to be disturbed was assigned to the highest Habitat Value rank, while approximately 40 percent was assigned to the lowest. The majority of the southern willow scrub vegetation to be disturbed was assigned to the highest Habitat Value rank, while the large majority of the arrow weed scrub vegetation to be disturbed was assigned to the lowest Habitat Value rank. However, all riparian vegetation is considered sensitive.

Riparian Woodland – The direct loss of approximately 18 acres (or about 9 percent) of the 219 acres of riparian woodland vegetation (consisting of less than 4 of the 126 acres of southern willow riparian woodland and less than 15 of the 93 acres of southern cottonwood-willow riparian forest) would occur with implementation of the Specific Plan. About 3 percent of the southern willow riparian woodland vegetation present on the Ranch would be disturbed, while about 16 percent of the southern cottonwood-willow riparian forest vegetation present on the Ranch would be disturbed, while about 16 percent of the southern cottonwood-willow riparian forest vegetation present on the Ranch would be altered as a result of Specific Plan implementation.

Southern willow riparian woodland and southern cottonwood-willow riparian forest vegetation on the Ranch provide occupied or occupiable habitat for endangered, California species of special concern, federal species of concern, and special animals. It may also provide foraging habitat for sensitive raptors, as well as several declining butterflies. Impacts to these sensitive species are discussed and described later in this subsection.

The majority of both the southern willow riparian woodland vegetation and the southern cottonwoodwillow riparian forest vegetation to be disturbed was assigned to the highest Habitat Value rank.

Valley Freshwater Marsh -- The direct loss of about 2 of the 5 acres of valley freshwater marsh vegetation could occur with implementation of the Newhall Ranch Specific Plan. This loss represents about 40 percent of the freshwater marsh vegetation present on the Ranch.

The freshwater marsh vegetation on the Ranch provides occupied or occupiable habitat for the federal candidate species western spadefoot toad, southwestern pond turtle, two-striped garter snake, and tricolored blackbird, as well as for common amphibians, migratory waterfowl, and aquatic insects. Impacts to these sensitive species are discussed and described later in this subsection.

While according to the Habitat Value Analysis, the large majority of the marsh areas to be lost were assigned to the lowest Habitat Value rank (with trace amounts being placed in the highest and second highest ranks), all marsh habitats are considered sensitive and the loss of them significant.

Cottonwood/Oak Woodland Vegetation -- The direct loss of approximately 7 of the 26 acres of cottonwood/oak woodland vegetation on the site would result from Specific Plan implementation. This loss represents about 27 percent of the cottonwood/oak woodland vegetation on the Ranch.

Cottonwood/oak woodland vegetation on the Ranch is not known to support rare, threatened, endangered, proposed or candidate plant and wildlife species. It may provide habitat for several declining butterflies.

According to the Habitat Value Analysis, the large majority of the vegetation to be lost was assigned to the highest Habitat Value rank, with a small amount being placed in the second lowest rank.

Alluvial Scrub Vegetation – About 38 of the 59 acres (about 64 percent) of alluvial scrub vegetation (consisting of about 21 of the 39 acres of alluvial scrub on the Ranch and about 17 of the 20 acres of scalebroom scrub) would be impacted by implementation of the Specific Plan. This represents the loss of approximately 54 percent of the alluvial scrub vegetation on the Ranch and loss of 85 percent of the scalebroom scrub. About 3 acres would also be impacted by off-site roadway alignments.

Alluvial scrub vegetation and scalebroom scrub vegetation on the Ranch are not known to support rare, threatened, endangered, proposed or candidate plant and wildlife species. They may provide habitat for several California species of special concern, special animals, and federal species of concern, and several declining butterflies. Impacts to these sensitive species are discussed and described later in this subsection.

According to the Habitat Value Analysis, the majority of the alluvial scrub vegetation to be lost on the site was assigned to the two lowest Habitat Value ranks, with about one tenth of the disturbance being assigned to the highest rank. Approximately two-thirds of the scalebroom scrub vegetation to be lost was also assigned to the highest Habitat Value rank, with the remaining one-third being assigned the lowest rank. However, alluvial scrub vegetation is regionally important.

Mesic Meadow Vegetation – Implementation of the Specific Plan would result in the direct loss of all 14 acres of mesic meadow vegetation on the Newhall Ranch site.

Mesic meadow vegetation on the Newhall Ranch is not known to support rare, threatened, endangered proposed, or candidate plant and wildlife species. However, it does provide occupied or occupiable habitat for common amphibians, migratory waterfowl, and aquatic insects.

This habitat type would qualify as a wetland based on ACOE and CDFG guidelines. According to the Habitat Value Analysis, all of the mesic meadow vegetation to be lost was assigned to the lowest Habitat Value rank based on the ranking methodology described above. However, all wetlands are considered to be sensitive habitats. Therefore, the loss of 14 acres of this wetland vegetation type is considered significant.

(b) General Wildlife Impacts

Construction activity and operation of the Specific Plan would directly disturb wildlife on and near the Newhall Ranch site. Most species are expected to be displaced to adjacent areas of similar habitat, provided it is available at the onset of construction activity. However, wildlife that emigrate from the site are vulnerable to mortality by predation and unsuccessful competition for food and territory. Within the proposed development area, species of low mobility (particularly burrowing mammals and reptiles) could be lost during site preparation. The effects of the incremental nature of the construction are less severe than if the entire area within the ultimate build-out envelope were to be disturbed at once, because wildlife from smaller disturbance areas may have a greater chance of being absorbed into surrounding areas.

Replacement of existing vegetation with structures and ornamental landscaping would eliminate natural communities on developed portions of the site and result in a reduction in native wildlife species diversity. The replacement of existing habitat with non-native or ornamental landscaping would result in the elimination (through emigration) of the majority of animal species typical of a natural setting. These animals would be replaced with a fauna composed of species tolerant of, or dependent upon, a human presence.

Habitat for fish species on the property, primarily in the Santa Clara River, will not be directly affected by the proposed development (with the exception of temporary impacts from construction of three bridge crossings and bank stabilization). Existing habitat for wildlife and plants will be removed or modified on approximately 43 percent of the Specific Plan area as a result of grading; however, much of the development focuses on habitat disturbed by past or current land uses. For example, over a quarter of the total area to be disturbed as a result of implementation of the Specific Plan has been classified as 'disturbed' during characterization and mapping of the vegetation types on the Ranch, and over another quarter has been classified as non-native grassland, much of which has been degraded by grazing. The remainder of the site would not be impacted (approximately 57 percent).

(c) Conclusion

Based on the amount of habitat lost (5,132 acres), the impact potential of implementation of the Newhall Ranch Specific Plan on the diminishment of habitat for wildlife or plants is considered significant but is not considered significant for fish. The impacts of this project on sensitive plant or wildlife species and habitats is discussed later in this report subsection.

(2) Effects on the Movement of any Resident Fish or Wildlife Species

Fish species on the property primarily make use of the Santa Clara River. The aquatic portion of the River will be left relatively intact. Additionally, the removal of cattle from the River or the use of grazing as a long-term management activity as described in the Resource Management Plan is expected to be of some benefit to fish and other River dependent species through improvements of the water quality on site and downstream. Fish species on the Ranch will not be affected substantially by development within the proposed development area. In addition, because the Specific Plan would not have significant sedimentation or scouring impacts on the Santa Clara River, implementation of the Specific Plan is not expected to affect fish movement anywhere along the River.

Development, both on the site and upstream, will add water to the low flow condition of the Santa Clara River through the property from increased irrigation runoff and discharge from the proposed water reclamation plant. Under normal conditions, no discharges of treated wastewater are expected from the proposed water reclamation plant, and all water would be reclaimed and used to water landscape vegetation on site. However, it is possible that approximately 522 to 1,372 acre-feet of tertiary treated wastewater could be discharged into the River near the County line during wet winter months when demand for reclaimed water would be low. This amount of discharge translates to a flow rate of 3.5 to 6.3 cubic feet per second, which would be a 1.5 to 3.9 percent increase in the average annual flow volume in the River, or approximately 0.002 to 0.004 percent of the Capital Flood volume at the County line. These discharges would not affect water quality or significantly increase flows in the Santa Clara River, nor would they impact the distribution of fish and aquatic species on the site, or the movement of these species through the property.

Implementation of the Newhall Ranch Specific Plan would limit the local movement of wildlife species that currently make use of areas that are proposed for development. Specific effects will occur to those species which use future developed portions of the property as habitat or for dispersal or other longer distance movements, such as for access to the River. Most of the habitats proposed for development on the property are those which have been disturbed by current or past land use activities. The species whose movement will be affected most by the proposed development are those that make use of these habitats, such as: San Diego homed lizard and California homed lizard, coastal western whiptail, San Diego desert woodrat, San Diego black-tailed jackrabbit, and several raptors.

The general trend of wildlife movement currently follows the southeast to northwest trend of ridgelines in the area. On the landscape scale, the primary effect of the proposed development will be to narrow the access for wildlife species between the Santa Susana Mountains and the Santa Clara River. Wildlife movement through the property will be focused toward the west side down Salt Creek and away from Potrero and Long Canyons. Current and future development of the lands to the east and southeast of the Ranch in the City of Santa Clarita and unincorporated areas limit the amount of wildlife habitat available and, therefore, the wildlife that would be expected to continue to make use of the access through the eastern portion of the property. The majority of habitat available is south of the site, in the High Country SMA. Therefore, wildlife will continue to move in between the High Country SMA and the River in a generally north and south direction. Access for wildlife between the River and the High Country SMA would continue to be available along the proposed Salt Creek corridor. Salt Creek Canyon's value as open area or a movement corridor is high due to its relative remoteness, the quality of habitats present, the fact that it is an integral part of the High Country SMAs approximately 3,950 acres, and the fact that a vertical grade separation exists between it and the area proposed for development to the north and northeast.

Wildlife movement along the Santa Clara River through the Specific Plan area will also be affected by adjacent development and several bridges across the River. Current wildlife movement along the River is limited to some degree by development upstream to the east in Santa Clarita. The River is regularly used for movement by species, such as migratory birds, and for dispersal movements by a diversity of species. Riparian habitat in the River Corridor will likely be increased as a result of the proposed development, both in extent and connectivity. Portions of upland habitat adjacent to the River will be maintained along the corridor and periodic canyon connections between the River and the uplands will also be maintained to allow for connectivity. Crossings of the River will be bridge structures, allowing for wildlife movement.

(a) Conclusion

While the Specific Plan preserves the primary and highest quality movement corridor found on the site (the Salt Creek corridor), as well as other periodic canyon connections between the River and the uplands, the impact potential of implementation of the Newhall Ranch Specific Plan on the movement of resident wildlife species is considered significant due to the reduction in open land available for wildlife movement between the River and upland areas. The impact potential of implementation of the Newhall Ranch Specific Plan on the movement of resident fish species is not considered significant.

Note that a portion of the Salt Creek movement corridor occurs within the Specific Plan Area, with the remaining portion of the corridor occurring in Ventura County. Any future project proposed in Ventura County that would fragment this corridor would significantly impact the connection of the High Country SMA and Santa Susana Mountains with the Santa Clara River and the Los Padres and Angeles National Forests located to the north. Therefore, any future action taken in this portion of Ventura Country should strongly consider this important ecological feature.

(3) Effects on endangered, rare or sensitive plant or wildlife species

Endangered, threatened, rare or otherwise sensitive plants and animals that were observed or those that have a reasonable potential for occurrence on the Newhall Ranch site are identified below. This discussion assesses the impact potential (inclusive of both construction and operation impacts) of the Newhall Ranch Specific Plan on these sensitive species, evaluates the magnitude of impact and references mitigation measures that are detailed later in this subsection (most are incorporated in detail in the Newhall Ranch Specific Plan Resource Management Plan [RMP]). The general locations of sensitive plant and wildlife species occurrence on the Ranch, as well as appropriate habitat, are presented in a series of labeled maps included in Appendix N.

(a) Plants

1. Observed On-site

Impact:	Loss of an unknown number of Peirson's morning-glory individuals and habitat
Significance:	Not Significant

Peirson's morning-glory has been assigned to the CNPS List 4 (a watch list), and is a federal species of concern. Taxa on List 4 are not considered to be severely threatened by CNPS, but the CNPS feels the plant's occurrence should be considered during the decision making process. The local USFWS office has supporting information gathered during the past several years which indicate that this plant is more widespread and abundant than previously believed (Rutherford, USFWS, personal communication, 1995).

On the Newhall Ranch, the distribution and abundance of this plant is considered uncommon, occurring in small, scattered, localized areas. A preliminary estimate, based on field observations, places the acreage of sparse coastal sage scrub possibly occupied by this sensitive taxon at approximately 29 acres. However, the exact acreage occupied during any give year will likely fluctuate. Ultimate buildout through implementation of the Specific Plan would remove a portion of this plant's habitat and would result in the elimination of certain of the known individual plants where site development and plant occurrence are coincidental. However, there is no potential to eliminate all habitat for this species on site, nor is there the potential to reduce the population size below self sustaining levels either on site or regionally. Based on the status of the sensitivity designation (i.e., CNPS List 4 {a watch list} and USFWS acknowledgment that this taxon will likely not warrant consideration for possible future listing), the preservation of plants and habitat on site, the relatively wide distribution of this species regionally, and a greater abundance of this plant than was previously believed on a regional basis, this project's anticipated impact on Peirson's morning-glory is not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

2. Federal Proposed Endangered and State-listed Endangered Plants Not Observed but with a Moderate Potential for Occurrence On-site

Impact:Potential loss of Nevin's barberry (if present)Significance:Significant (if present)

Nevin's barberry is an easily detected evergreen shrub that was not recorded on the Newhall Ranch site during the extensive biological field surveys conducted on the Ranch. However, this taxon was assigned a moderate potential for occurrence due to the presence of large areas of potentially occupiable habitat (i.e., riparian scrub, alluvial scrub, chaparral and coastal sage scrub).

Nevin's barberry is currently listed as endangered by the State of California, and has been proposed as a federal endangered species by the USFWS. Nevin's barberry has been assigned to the CNPS List 1B, which is a list identifying plants that are considered by the CNPS to be rare, threatened or endangered in California and elsewhere in their range. Nevin's barberry has been assigned to the CNPS List 1B, which is a list identifying plants that are considered by the CNPS to be rare, threatened or endangered in California and elsewhere in their range. Nevin's barberry has been assigned to the CNPS List 1B, which is a list identifying plants that are considered by the CNPS to be rare, threatened or endangered in California and elsewhere in their range.

Nevin's barberry occurs in a variety of habitat types including riparian scrub and alluvial scrub habitats, as well as chaparral and coastal sage scrub. Regionally, this species is known only from alluvial scrub. Biologists conducting the field investigations of the Newhall Ranch site were knowledgeable of this plant's potential for occurrence. However, no individuals of this plant were observed on the site during the intensive field investigations. Based on the lack of observation of this species on the Newhall Ranch site, it can be concluded that, if this taxon occurs at all, it occurs in very low numbers. Potential for direct loss of this taxon is expected to be very low, and only small portions of habitat in which this plant could occur would be lost (54 percent of the alluvial scrub, 16 percent of the
mixed chaparral, and 35 percent of the coastal sage scrub [68 percent of these vegetation types combined]). It is not expected that this project would impact Nevin's barberry. In the unlikely event that individuals of this species were lost as a result of site development, the impact would be considered significant due to this species' listing as endangered and other sensitivity designations.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

3. CNPS List 4 Sensitive Plants Not Observed but with a Moderate Potential for Occurrence On-site

Potential:Potential loss of round-leaved boykinia (if present)Significance:Not significant

Round-leaved boykinia has been assigned to CNPS List 4. Round-leaved boykinia is a perennial herb that was not recorded from the Newhall Ranch site during the biological surveys conducted on the Newhall Ranch site. However, this taxon was assigned a moderate potential for occurrence due to the presence of areas of potentially occupiable habitat (i.e., riparian woodlands and mesic chaparral).

Round-leaved boykinia would most likely occur in two habitat types, including riparian woodlands and moist canyon bottoms (mesic chaparral). However, the lack of observation of this species on the Newhall Ranch site indicates that, if this taxon occurs at all it does so in very low numbers. Based on: (1) the lack of occurrence of this plant on the Newhall Ranch site; (2) the sensitivity designation of the plant (i.e., a CNPS List 4 species versus a rare, threatened or endangered species); (3) the fact that only small areas (17 percent of riparian and mixed chaparral vegetation combined) in which this plant may occur may be lost (i.e., 19 percent of the site's 932 acres of potential riparian habitats [inclusive of all wetland or Riverine habitats] would be lost and 16 percent of the site's 1,206 acres of mixed chaparral would be lost); and (4) the project mitigation will expand habitat for this species (i.e., riparian habitat), it is not expected that this project would substantially impact round-leaved boykinia. Any impacts to this species (should they actually occur) are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual Catalina mariposa lily
	(if present)
Significance:	Not Significant (if present)

Catalina mariposa lily has not been assigned any formal state or federal rarity designation, but is included on CNPS List 4. This taxon was not recorded on the Newhall Ranch site during the biological field surveys. However, it may occur. Should this plant occur on the site, it would most likely occur in the chaparral, coastal sage scrub, oak woodlands or non-native grasslands.

Field investigations conducted on the site have failed to record the presence of this taxon. It can be concluded that, if this plant occurs on the site at all, it does so in limited areas and the frequency of occurrence is small. Given the results of the field investigations conducted on site over the past years, this taxon has been assigned a moderate probability of occurrence at the Newhall Ranch because this species is readily identifiable and would have been observed during field investigations.

Specific Plan implementation would not substantially impact this plant as it was not observed on site, and relatively small areas of the habitat in which this plant is most likely to occur would be lost. This includes about 202 of the 1,213 acres of chaparral on site, about 1,820 of the 5,183 acres of coastal sage scrub and 1,480 of the 1,896 acres of non-native grassland. Based on the sensitivity designation of this taxon and the information provided above, any impacts to this species (should they actually occur) are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual southwestern spiny rush
-	(if present)
Significance:	Not Significant (if present)

Southwestern spiny rush has not been assigned any formal state or federal rarity designation, but is included on CNPS List 4. This taxon was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the mesic meadow.

This taxon has been assigned a low probability of occurrence at the Newhall Ranch site because this species is readily identifiable and would have been observed during field investigations.

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Implementation of the Specific Plan would not substantially impact this plant as it was not observed on site and the probability of its occurrence is low. Based on the sensitivity designation of this taxon and the information provided above, any impacts to this species (should they actually occur) are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

4. Rare or Endangered Plants Not Observed but with a Low Potential for Occurrence Onsite

Impact:	Potential loss of slender-horned spineflower
-	(if present)
Significance:	Significant (if present)

Slender-horned spine flower is listed by the federal government and State of California as endangered and is designated as a List 1B species by the CNPS. Slender-horned spineflower was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the alluvial scrub vegetation, or in chaparral and the coastal sage scrub of alluvial fans.

It can be concluded that, if this plant occurs on the site at all, it does so in limited areas and the frequency of occurrence is small. Given the results of the field investigations conducted on site over the past years this taxon has been assigned a low probability of occurrence at the Newhall Ranch.

Specific Plan implementation would not substantially affect this plant as it was not observed on site and the probability of occurrence is low. Areas of habitat where this plant has the potential to occur that would be lost on the property include approximately 38 of the 59 acres of alluvial and scalebroom scrub, 1,820 of the 5,183 acres of coastal sage scrub on-site, and approximately 202 of the 1,213 acres of chaparral habitat situated on the Newhall Ranch site. In the unlikely event that individuals of this species were lost as a result of site development, the impact would be considered significant, given its listing status and sensitivity designations. This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:Potential loss of California Orcutt grass (if present)Significance:Significant (if present)

California Orcutt grass is listed by the federal government and State of California as endangered and designated as List 1B species by the CNPS. California Orcutt grass was not recorded on the Newhall Ranch site during the biological field surveys.

Given the results of the field investigations conducted on site over the past years, this taxon has been assigned a low probability of occurrence at the Newhall Ranch site for the following reasons: lack of direct observation and lack of suitable habitat (California Orcutt grass occurs in vernal pools that do not occur on the Newhall Ranch).

Specific Plan implementation would not substantially affect this plant as it was not observed on site and the probability of occurrence is low (known occurrences of this plant are within 8 miles of the site to the west and east). In the unlikely event that individuals of this species were lost as a result of site development, the impact would be considered significant, given their listing status and sensitivity designations.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual thread-leaved brodiaea
_	(if present)
Significance:	Significant (if present)

Thread-leaved brodiaea is listed as endangered by the State of California, is proposed for listing as a threatened species by the federal government, and is included on CNPS List 1B. Thread-leaved brodiaea was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the chaparral, coastal sage scrub, or non-native grasslands.

Given the results of the field investigations conducted on site over the past years this taxon has been assigned a low probability of occurrence at the Newhall Ranch site. Areas of habitat where this plant has the potential to occur that would be lost on the property include approximately 202 of the 1,213 acres of chaparral, about 1,820 of the 5,183 acres of coastal sage scrub on-site, and about 1,480 of the

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1,896 acres of grassland habitat situated on the Newhall Ranch site. No vernal pools occur on the Newhall Ranch. In the unlikely event that individuals of this species were lost as a result of site development, the impact would be considered significant, given its listing status and sensitivity designations.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual Santa Susana tarplant
	(if present)
Significance:	Significant (if present)

Santa Susana tarplant is listed by the State of California as rare, is a federal species of concern, and is designated as a List 1B species by the CNPS. Santa Susana tarplant was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in rocky chaparral or coastal sage scrub.

This taxon has been assigned a low probability of occurrence at the Newhall Ranch site because Santa Susana tarplant is readily identifiable and would have been observed during the field investigations.

Areas of habitat where this plant has the potential to occur that would be lost on the property include approximately 202 of the 1,213 acres of chaparral and about 1,820 of the 5,183 acres of coastal sage scrub. In the unlikely event that individuals of these species were lost as a result of site development, the impact would be considered significant, given their listing status and sensitivity designations.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

5. Federal Proposed Endangered Plant Species Not Observed and with a Low Potential for Occurrence On-site

Impact:	Potential loss of individual Braunton's milk vetch
-	(if present)
Significance:	Significant (if present)

Braunton's milk vetch has been proposed as an endangered species by the federal government and is included on CNPS List 1B. Braunton's milk vetch primarily occurs in coastal sage scrub, chaparral, and grassland habitats, and requires limestone soils that are not common on the site. Field investigations conducted on the site failed to record the presence of this species. This plant has been assigned a low probability of occurrence on the Newhall Ranch site because of rarity (according to Skinner and Pavlik 1994, known from fewer than ten occurrences), and lack of suitable substrate (generally associated with limestone soils that are not common on the site).

Specific Plan implementation would result in the loss of habitat in which this plant is most likely to occur, including about 202 of the 1,213 acres of chaparral on site, about 1,820 of the 5,183 acres of coastal sage scrub, and 1,480 of the 1,896 acres of non-native grassland. Should this plant be present, it does not likely occur in large numbers as no individuals of the plant species have been detected on the site. In the unlikely event that individuals of this species were lost as a result of site development, the impact would be considered significant, given this species proposed listing status and sensitivity designation.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

6. Federal Plant Species of Concern Included on CNPS List 1A, 1B, or 2 Not Observed and with a Low Potential for Occurrence On-site

Impact:	Potential loss of slender mariposa lily
	(if present)
Significance:	Not Significant (if present)

Slender mariposa lily is included on CNPS List 1B (plants considered rare, threatened or endangered), and is a federal species of concern. Slender mariposa lily was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in chaparral.

In addition to the results of the field investigations, these plants have been assigned a low probability of occurrence on the Newhall Ranch site because they are readily identifiable and would have been observed during the field investigations if present.

Specific Plan implementation would result in the loss of habitat in which these plants are most likely to occur, including about 202 of the 1,213 acres of chaparral. Should this taxon be present, it does not likely occur in large numbers as no individuals of the species have been detected on the site.

Based on the information provided above, potential impacts to this plant are not considered likely and, due to the sensitivity designations and the amount of habitat preserved, impacts, should they occur at all, are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual Plummer's mariposa lily
	(if present)
Significance:	Not Significant (if present)

Plummer's mariposa lily is included on CNPS List 1B and is a federal species of concern. Plummer's mariposa lily was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the chaparral and coastal sage scrub habitat.

Specific Plan implementation would result in the loss of habitat in which these plants are most likely to occur, including about 202 of the 1,213 acres of chaparral on site, and about 1,820 of the 5,183 acres of coastal sage scrub. Should this taxon be present, it does not likely occur in large numbers as no individuals of the species have been detected on the site.

Based on the information provided above, potential impacts to this plant are not considered likely and, due to the sensitivity designations and the amount of habitat preserved, impacts, should they occur at all, are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual San Fernando Valley
-	spineflower (if present)
Significance:	Not Significant (if present)

San Fernando Valley spineflower is included on CNPS List 1A (a plant presumed to be extinct), and is a federal species of concern. San Fernando Valley spineflower was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in sandy coastal sage scrub habitat.

In addition to the results of the field investigations, these plants have been assigned a low probability of occurrence on the Newhall Ranch site because the plant is presumed to be extinct in the region.

Implementation of the Specific Plan would result in the loss of habitat in which this plant is most likely to occur, including about 1,820 of the 5,183 acres of coastal sage scrub on site. Should this taxon be present, it does not likely occur in large numbers as no individuals of the species have been detected on the site.

Based on the information provided above, potential impacts to this plant are not considered likely and, due to the sensitivity designations and the amount of habitat preserved, impacts, should they occur at all, are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:Potential loss of individual dune larkspur (if present)Significance:Not Significant (if present)

Dune larkspur is included on CNPS List 1B and is a federal species of concern. Dune larkspur was not recorded on the Newhall Ranch site during the biological field surveys. Should this taxon occur on the site, it would most likely occur in the chaparral habitat.

In addition to the results of the field investigations, these plants have been assigned a low probability of occurrence on the Newhall Ranch site because the taxon is generally associated with maritime chaparral and dune habitat that is not present on site.

Should this plant occur on site, implementation of the Specific Plan would result in the loss of habitat in which these plants are most likely to occur, including about 202 of the 1,213 acres of chaparral. Should this taxon be present, it does not likely occur in large numbers as no individuals of the species have been detected on the site.

Based on the information provided above, potential impacts to this plant are not considered likely and, due to the sensitivity designations and the amount of habitat preserved, impacts, should they occur at all, are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual Blochman's dudleya
	(if present)
Significance:	Not Significant (if present)

Blochman's dudleya is included on CNPS List 1B, and is a federal species of concern. Blochman's dudleya was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the coastal sage scrub habitat.

This plant has been assigned a low probability of occurrence on the Newhall Ranch site because it requires rock outcrops that are not common on the site, and because it is generally associated with coastal bluffs and coastal chaparral.

Implementation of the Specific Plan would result in the loss of habitat in which this plant is most likely to occur, including about 1,820 of the 5,183 acres of coastal sage scrub habitat. Should this taxon be present, it does not likely occur in large numbers as no individuals of the species have been detected on the site.

Based on the information provided above, potential impacts to this plant are not considered likely and, due to the sensitivity designations and the amount of habitat preserved, impacts, should they occur at all, are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual many-stemmed dudleya
	(if present)
Significance:	Not Significant (if present)

Many-stemmed dudleya is included on CNPS List 1B, and is a federal species of concern. Manystemmed dudleya was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in rocky substrate in chaparral and coastal sage scrub habitats.

This plant has been assigned a low probability of occurrence on the Newhall Ranch site because it requires rock outcrops that are not common on the site.

Should this plant occur on site, implementation of the Specific Plan would result in the loss of habitat in which this plant is most likely to occur, including about 202 of the 1,213 acres of chaparral on site and 1,820 of the 5,183 acres of coastal sage scrub habitat. Should this taxon be present, it does not likely occur in large numbers as no individuals of the species have been detected on the site.

Based on the information provided above, potential impacts to this plant are not considered likely and, due to the sensitivity designations and the amount of habitat preserved, impacts, should they occur at all, are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual short-joint beavertail
-	cactus (if present)
Significance:	Not Significant (if present)

Short-joint beavertail cactus is included on CNPS List 1B, and is a federal species of concern. Shortjoint beavertail cactus was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the chaparral communities on site.

In addition to the results of the field investigations, this plant has been assigned a low probability of occurrence on the Newhall Ranch site because of its rarity and/or the fact that this plant is readily identifiable and would have been observed during the field investigations if it was present on site.

Implementation of the Specific Plan would result in the loss of habitat in which these plants are most likely to occur, including about 202 of the 1,213 acres of chaparral on site. Should this taxon be present, it does not likely occur in large numbers as no individuals of the species have been detected on the site.

Based on the information provided above, potential impacts to this plant are not considered likely and due to the sensitivity designations and the amount of habitat preserved, impacts, should they occur at all, are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual Palmer's grapplinghook
	(if present)
Significance:	Not Significant (if present)

Palmer's grapplinghook is included on CNPS List 2 and is a federal species of concern. Palmer's grapplinghook was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the chaparral, coastal sage scrub and grassland communities.

In addition to the results of the field investigations, this plant has been assigned a low probability of occurrence on the Newhall Ranch site because of its rarity.

Implementation of the Specific Plan would result in the loss of habitat in which this plant is most likely to occur, including about 202 of the 1,213 acres of chaparral on site, about 1,820 of the 5,183 acres of coastal sage scrub, and 1,480 of the 1,896 acres of non-native grassland habitat. Should this taxon be present, it does not likely occur in large numbers as no individuals of the species have been detected on the site.

Based on the information provided above, potential impacts to this plant are not considered likely and, due to the sensitivity designations and the amount of habitat preserved, impacts, should they occur at all, are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

7. Federal Plant Species of Concern Included on CNPS List 4 Not Observed and with a Low Potential for Occurrence On-site

Impact:	Potential loss of individual ocellated humboldt
-	lily (if present)
Significance:	Not Significant (if present)

Ocellated humboldt lily is included on CNPS List 4 and is a federal species of concern. Ocellated humboldt lily was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the chaparral, oak woodlands or mainland cherry forest.

This plant has been assigned a low probability of occurrence on the Newhall Ranch site because of lack of high quality habitat (ocellated lily is generally associated with openings in yellow pine forests or oak canyons). Based on: (1) the lack of occurrence of this plant on the Newhall Ranch site; (2) the sensitivity designation of the plant (i.e., a CNPS List 4 species versus a rare, threatened or endangered species); and, (3) the fact that relatively small areas in which this plant could potentially occur may be lost (i.e., 16 percent of the site's 1,206 acres of mixed chaparral and 6 percent of the site's oak communities may be lost), any impacts to this species (should they actually occur) are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

8. CNPS List 4 Plants Not Observed and with a Low Potential for Occurrence On-site

Impact:	Potential loss of individual heart-leaved thorn-mint
-	(if present)
Significance:	Not Significant (if present)

Heart-leaved thorn-mint has not been assigned any formal state or federal rarity designation, but is included on CNPS List 4. This taxon was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the chaparral communities.

Given the results of the field investigations conducted on site over the past years, this taxon has been assigned a low probability of occurrence at the Newhall Ranch site for the following reasons: lack of direct observation, and the main distribution of heart-leaved thorn-mint is situated north of the site.

Implementation of the Specific Plan would not substantially impact this plant as it was not observed on site, the probability of its occurrence is low, and relatively small areas of the habitat in which these plants are most likely to occur would be lost. This includes about 202 of the 1,213 acres of chaparral on site. Based on the sensitivity designation of this taxon and the information provided above, any impacts to this species (should they actually occur) are not considered significant. This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual California androsace
~	(if present)
Significance:	Not Significant (if present)

California androsace has not been assigned any formal state or federal rarity designation, but is included on CNPS List 4. This taxon was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the chaparral and coastal sage scrub communities.

The Specific Plan would not substantially impact this plant as it was not observed on site, the probability of its occurrence is low, and relatively small areas of the habitat in which these plants are most likely to occur would be lost. This includes about 202 of the 1,213 acres of chaparral on site and about 1,820 of the 5,183 acres of coastal sage scrub. Based on the sensitivity designation of this taxon and the information provided above, any impacts to this species (should they actually occur) are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual Plummer's baccharis
-	(if present)
Significance:	Not Significant (if present)

Plummer's baccharis has not been assigned any formal state or federal rarity designation, but is included on CNPS List 4. This taxon was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the chaparral and coastal sage scrub communities.

Given the information provided above, it can be concluded that implementation of the Specific Plan would not substantially impact this plant as it was not observed on site, the probability of its occurrence is low, and relatively small areas of the habitat in which these plants are most likely to occur would be lost. This includes about 202 of the 1,213 acres of chaparral on site and about 1,820 of the 5,183 acres of coastal sage scrub. Based on the sensitivity designation of this taxon and the information provided above, any impacts to this species (should they actually occur) are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual Brewer's calandrinia
-	(if present)
Significance:	Not Significant (if present)

Brewer's calandrinia has not been assigned any formal state or federal rarity designation, but is included on CNPS List 4. This taxon was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the chaparral, coastal sage scrub, or non native grasslands.

It can be concluded that implementation of the Specific Plan would not substantially impact this plant as it was not observed on site, the probability of its occurrence is low, and relatively small areas of the habitat in which these plants are most likely to occur would be lost. This includes about 202 of the 1,213 acres of chaparral on site, about 1,820 of the 5,183 acres of coastal sage scrubland, and 1,480 of the 1,896 acres of non-native grassland. Based on the sensitivity designation of this taxon and the information provided above, any impacts to this species (should they actually occur) are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual prostrate spineflower
	(if present)
Significance:	Not Significant (if present)

Prostrate spineflower has not been assigned any formal state or federal rarity designation, but is included on CNPS List 4 (plant species of limited distribution, a watch list). This taxon was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the chaparral, coastal sage scrub and non-native grasslands.

Given the results of the field investigations conducted on site over the past years, this taxon has been assigned a low probability of occurrence due to the lack of appropriate substrate or habitat (prostrate spineflower occurs in gabbroic clay or granitic soils that are not common on site).

Specific Plan implementation would not substantially impact this plant as it was not observed on site, the probability of its occurrence is low and relatively small areas of the habitat in which this plant is most likely to occur would be lost. This includes about 202 of the 1,213 acres of chaparral on site, about 1,820 of the 5,183 acres of coastal sage scrub and 1,480 of the 1,896 acres of non-native grassland. Based on the sensitivity designation of this taxon and the information provided above, any impacts to this species (should they actually occur) are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual small-flowered morning-
-	glory (if present)
Significance:	Not Significant (if present)

Small-flowered morning-glory has not been assigned any formal state or federal rarity designation, but is included on CNPS List 4. This taxon was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the coastal sage scrub or non-native grasslands.

This taxon has been assigned a low probability of occurrence at the Newhall Ranch site as smallflowered morning-glory typically occurs in clay or serpentine soils that are not common on site.

Specific Plan implementation would not substantially impact this plant as it was not observed on site, the probability of its occurrence is low, and relatively small areas of the habitat in which this plant is most likely to occur would be lost. This includes about 1,820 of the 5,183 acres of coastal sage scrub and 1,480 of the 1,896 acres of non-native grasslands. Based on the sensitivity designation of this taxon and the information provided above, any impacts to this species (should they actually occur) are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual Santa Barbara bedstraw
-	(if present)
Significance:	Not Significant (if present)

Santa Barbara bedstraw has not been assigned any formal state or federal rarity designation, but is included on CNPS List 4. This taxon was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the oak woodlands.

Given the results of the field investigations conducted on-site over the past years, this taxon has been assigned a low probability of occurrence at the Newhall Ranch site because this species is readily identifiable and would have been observed during field investigations.

Specific Plan implementation would not substantially impact this plant as it was not observed on site, the probability of its occurrence is low, and relatively small areas of the habitat in which this plant is most likely to occur would be lost. This includes about 64 of the 1,090 acres of oak woodlands. Based on the sensitivity designation of this taxon and the information provided above, any impacts to this species (should they actually occur) are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual small flowered microseris
	(if present)
Significance:	Not Significant (if present)

Small-flowered microseris has not been assigned any formal state or federal rarity designation, but is included on CNPS List 4. This taxon was not recorded on the Newhall Ranch site during the biological field surveys.

This taxon has been assigned a low probability of occurrence at the Newhall Ranch site because smallflowered microseris occurs in vernal pool habitat that does not occur on site.

Specific Plan implementation would not substantially impact this plant as it was not observed on site and the probability of its occurrence is low. Based on the sensitivity designation of this taxon (i.e., CNPS List 4 species versus rare, threatened or endangered species), and the information provided above, any impacts to this species (should they actually occur) are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual California spineflower
-	(if present)
Significance:	Not Significant (if present)

California spineflower has not been assigned any formal state or federal rarity designation, but is included on CNPS List 4. This taxon was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the chaparral, coastal sage scrub, and non-native grasslands.

This taxon has been assigned a low probability of occurrence at the Newhall Ranch site because California spineflower is most commonly found closer to the coast.

Specific Plan implementation would not substantially impact this plant as it was not observed on site, the probability of its occurrence is low, and relatively small areas of the habitat in which this plant is most likely to occur would be lost. This includes about 202 of the 1,213 acres of chaparral on site, about 1,820 of the 5,183 acres of coastal sage scrub, and 1,480 of the 1,896 acres of non-native grassland on-site. Based on the sensitivity designation of this taxon (i.e., CNPS List 4 species versus rare, threatened or endangered species), and the information provided above, any impacts to this species (should they actually occur) are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:Potential loss of slender nemacladus - (if present)Significance:Not Significant (if present)

Slender nemacladus has not been assigned any formal state or federal rarity designation, but is included on CNPS List 4. This taxon was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the oak woodland or nonnative grasslands.

Specific Plan implementation would not substantially impact this plant as it was not observed on site and the probability of its occurrence is low. Based on the sensitivity designation of this and the information provided above, any impacts to this species (should they actually occur) are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

Impact:	Potential loss of individual Pringle's yampah -
-	(if present)
Significance:	Not Significant (if present)

Pringle's yampah has not been assigned any formal state or federal rarity designation, but is included on CNPS List 4. This taxon was not recorded on the Newhall Ranch site during the biological field surveys. Should this plant occur on the site, it would most likely occur in the chaparral, coastal sage scrub, oak woodlands or non-native grasslands. Given the results of the field investigations conducted on site over the past years, this taxon has been assigned a low probability of occurrence at the site because Pringle's yampah typically occurs in serpentine soils that are not common on the Newhall Ranch site.

Implementation of the Specific Plan would not substantially impact this plant as it was not observed on site and the probability of its occurrence is low. Based on the sensitivity designation of this taxon and the information provided above, any impacts to this species (should they actually occur) are not considered significant.

This conclusion assumes implementation of Mitigation Measure numbers BIO-27, BIO- 34, BIO- 35 and BIO-53. These mitigation measures are defined in detail later in this section.

(b) Wildlife

Impacts to wildlife species that may occur as a result of implementation of the Newhall Ranch Specific Plan are described in this section. As shown, twenty-nine sensitive wildlife species and eight declining butterfly species were observed on Newhall Ranch and may be impacted by project implementation. The impact of this project on sensitive species observed on the project site, as well as sensitive species that are known to occur on the Newhall Ranch are described individually below.

1. Endangered Fish Species Observed On-site

Impact:Potential loss of unarmored threespine stickleback individualsSignificance:Not significant

The unarmored threespine stickleback has been designated as endangered by the USFWS and the CDFG. This endangered species has been recorded in the region and various locations on the Santa Clara River on the Newhall Ranch property. The portion of the Santa Clara River on the Newhall Ranch is included in the proposed critical habitat and designated essential habitat for this species. Although the fish is not abundant, it may occur in areas that are proposed for short-term disturbances that would occur during construction activities.

The Newhall Ranch Specific Plan proposes no substantial physical alteration to the River bottom. Bank stabilization would occur on approximately 30 percent of the southern side and 80 percent of the northern side of the River. In general, bank stabilization is proposed to be ungrouted rock (see Section **4.2**, **Flood**). It is expected that direct impacts to the unarmored threespine stickleback would be limited to those impacts associated with short-term construction related activities (principally for bridge crossings and bank protection) that are proposed in the River Corridor. There is the potential for these fish to be directly impacted by bridge or bank construction for a short time period unless mitigated.

A potential indirect impact of implementation of the Newhall Ranch Specific Plan is the reduction in water quality in the Santa Clara River. This reduction in water quality could occur as a result of site nmoff and potential contamination of the River through oils and grease, pesticides, herbicides, fertilizers and other contaminants characteristic of urban areas. However, the property is currently used for cattle grazing, farming, and oil and gas operations which may already be adding pollutants to the River at this time. It is not possible to quantify the magnitude of this impact potential. However, without mitigation, impacts to River water quality have the potential to reduce habitat quality for the unarmored threespine stickleback. Based upon mitigation measures for maintenance of water quality included in Section 4.2 of the EIR, these impacts are not considered significant (see Section 4.2, Flood).

Development, both on the site and upstream, will add water to the low flow condition of the Santa Clara River through the property from increased irrigation runoff and discharges from the proposed water reclamation plant. Under normal conditions, no discharges of treated wastewater are expected from the proposed water reclamation plant, and all water would be reclaimed and used to water landscape vegetation on site. However, it is possible that approximately 522 to 1,372 acre-feet of tertiary treated wastewater could be discharged into the River near the County line during wet winter months when demand for reclaimed water would be low. This amount of discharge translates to a flow rate of 3.5 to 6.3 cubic feet per second, which would be a 1.5 to 3.9 percent increase in the average annual flow volume in the River, or approximately 0.002 percent of the Capital Flood volume at the County line. These discharges would not significantly impact water quality or increase flows in the Santa Clara River, nor would they impact the distribution of fish and aquatic species on the site, or the movement of these species through the property. For additional information regarding this topic refer to Section 4.2 (Flood) of the EIR.

The Resource Management Plan (RMP) of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, Mitigation Measures BIO-

53, BIO-54, BIO-55, BIO-57, BIO-58 and BIO-59 would be implemented and impacts to the unarmored threespine stickleback would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and EIR, impacts to this taxon are not considered significant.

2. Endangered Bird Species Observed On-site

Impact:	Potential loss of individual least Bell's vireo
	(if present)
Significance:	Not Significant

This taxon is designated as an endangered species by the USFWS and the CDFG. This endangered species has been recorded in the region and a few locations on the Newhall Ranch property. Although populations of this bird are not abundant, they may occur in areas impacted by implementation of the Specific Plan.

Portions of riparian habitat that occur on the Newhall Ranch are designated as critical habitat for the least Bell's vireo. Recorded occurrences of the least Bell's vireo are uncommon on the Newhall Ranch. One least Bell's vireo has been recorded.

Specific Plan implementation would result in the loss of riparian vegetation (inclusive of mule fat scrub, southern willow scrub, southern willow riparian woodland, southern cottonwood willow riparian forest, arrow weed scrub, valley freshwater marsh and ponds, cottonwood/oak woodland and alluvial scrub), and may result in direct or indirect impacts to the least Bell's vireo in areas where disturbances occur. Although direct impacts to these birds cannot be quantified, impacts to habitat are defined as follows: 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodland, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be severely disturbed or eliminated).

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through

BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-56, and BIO-59 would be implemented and impacts to individual least Bell's vireo would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and EIR, impacts to this taxon are not considered significant.

Impact:

Significance:

Potential loss of individual southwestern willow flycatcher (if present) Not Significant

This taxon is designated as an endangered species by the USFWS and the CDFG. This endangered species has been recorded in the region and a few locations on the Newhall Ranch property. Although populations of this bird are not abundant, they may occur in areas impacted by implementation of the Specific Plan.

No critical habitat has been designated at this time for the willow flycatcher on the Newhall Ranch, and occurrences of this species are uncommon. No breeding willow flycatchers have been observed on the Newhall Ranch.

Specific Plan implementation would result in the loss of riparian vegetation (inclusive of mule fat scrub, southern willow scrub, southern willow riparian woodland, southern cottonwood willow riparian forest, arrow weed scrub, valley freshwater marsh and ponds, cottonwood/oak woodland and alluvial scrub), and may result in direct or indirect impacts to willow flycatcher in areas where disturbances occur. Although direct impacts to these birds cannot be quantified, impacts to habitat are defined as follows: 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodland, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be severely disturbed or eliminated).

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-56, and BIO-59 would be implemented and impacts to individual willow flycatchers would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and EIR, impacts to this taxon are not considered significant.

3. Federal Fish Species of Concern Observed On-site

Impact:	Potential loss of individual arroyo chub (if present)
Significance:	Not Significant

The arroyo chub is considered a federal species of concern and a California species of special concern. It resides in stream course habitat and has been observed in the Santa Clara River on Newhall Ranch during biological field investigations

As stated for the unarmored threespine stickleback, a principal goal of the Specific Plan has been to retain the continuity and ecological integrity of the Santa Clara River. As such, the Newhall Ranch Specific Plan proposes no substantial physical alteration to the River. It is expected that direct impacts to the arroyo chub can be limited to those impacts associated with short-term construction related activities (principally for bridge crossings and bank protection) that are proposed in the River Corridor. This fish has been recorded in the Santa Clara River on the Ranch. Therefore, there is the potential for this fish to be directly impacted by bridge construction or bank protection construction for a short time period without mitigation.

A potential indirect impact of the implementation of the Newhall Ranch Specific Plan is the reduction in water quality in the Santa Clara River. This reduction in water quality may occur as a result of site runoff and potential contamination of the River through oils and grease, pesticides, herbicides, fertilizers and other contaminants characteristic of urban areas. However, the property is currently used for cattle grazing, farming, and oil and gas extraction that may already be adding pollutants to the River at this time. It is not possible to quantify the magnitude of this impact potential. However, impacts to River water quality have the potential to reduce habitat quality for this fish taxon, unless mitigated.

Development, both on the site and upstream, will add water to the low flow condition of the Santa Clara River through the property from increased irrigation runoff and discharges from the proposed water reclamation plant. Under normal conditions, no discharges of treated wastewater are expected from the proposed water reclamation plant, and all water would be reclaimed and used to water landscape vegetation on-site. However, it is possible that approximately 522 to 1,372 acre-feet of tertiary treated wastewater could be discharged into the River near the County line during wet winter months when demand for reclaimed water would be low. This amount of discharge translates to a flow rate of 3.5 to 6.3 cubic feet per second, which would be a 1.5 to 3.9 percent increase in the average annual flow volume in the River, or approximately 0.002 percent of the Capital Flood volume at the County line. These discharges would not significantly increase flows in the Santa Clara River, nor would they

impact the distribution of fish and aquatic species on the site, or the movement of these species through the property. These discharges would not result in the extension of the current range through the Santa Clara River system of several introduced, aggressive non-native predatory fish and amphibian species.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measure BIO-44, as well as EIR Mitigation Measures BIO-53, BIO-55 BIO-57, and BIO-58 would be implemented and impacts to individual arroyo chubs would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and EIR, impacts to this taxon are not considered significant.

Impact: Potential loss of individual Santa Ana sucker (if present) Significance: Not Significant

The Santa Ana sucker is considered a federal species of concern and a California species of special concern. It resides in stream course habitat and has been observed in the Santa Clara River on Newhall Ranch during biological field investigations.

As previously stated, a principal goal of the Specific Plan has been to retain the continuity and ecological integrity of the Santa Clara River. As such, the Newhall Ranch Specific Plan proposes no substantial physical alteration to the River. It is expected that direct impacts to the Santa Ana sucker would be limited to those impacts associated with short-term construction related activities (principally for bridge crossings and bank protection) that are proposed in the River Corridor. This fish has been recorded in the Santa Clara River on the Ranch. Therefore, there is the potential for this fish to be directly impacted by bridge construction or bank protection construction for a short time period without mitigation.

A potential indirect impact of the implementation of the Newhall Ranch Specific Plan is the reduction in water quality in the Santa Clara River. This reduction in water quality may occur as a result of site runoff and potential contamination of the River through oils and grease, pesticides, herbicides, fertilizers and other contaminants characteristic of urban areas. However, the property is currently used for cattle grazing, farming, and oil and gas extraction that may already be adding pollutants to the River at this time. It is not possible to quantify the magnitude of this impact potential. However, impacts to River water quality have the potential to reduce habitat quality for this fish unless mitigated. Development, both on the site and upstream, will add water to the low flow condition of the Santa Clara River through the property from increased irrigation runoff and discharges from the proposed water reclamation plant. Under normal conditions, no discharges of treated wastewater are expected from the proposed water reclamation plant, and all water would be reclaimed and used to water landscape vegetation on site. However, it is possible that approximately 522 to 1,327 acre-feet of tertiary treated wastewater could be discharged into the River near the County line during wet winter months when demand for reclaimed water would be low. This amount of discharge translates to a flow rate of 3.5 to 6.3 cubic feet per second, which would be a 1.5 to 3.9 percent increase in the average annual flow volume in the River, or approximately 0.002 percent of the Capital Flood volume at the County line. These discharges would not significantly increase flows in the Santa Clara River, nor would they impact the distribution of fish and aquatic species on the site, or the movement of these species through the property. These discharges would not result in the extension of the current range through the Santa Clara River system of several introduced, aggressive non-native predatory fish and amphibian species.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measure BIO-44, as well as EIR Mitigation Measures BIO-53, BIO-55 BIO-57, and BIO-58 would be implemented and impacts to individual Santa Ana suckers would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and EIR, impacts to this taxon are not considered significant.

4. Federal Wildlife Species of Concern Observed On-site (Riparian Habitat Affinity)

Impact:	Potential loss of individual southwestern pond turtle
	(if present)
Significance:	Not Significant

The southwestern pond turtle is considered a federal species of concern and a California species of special concern. It generally resides in aquatic/riparian habitats and has been observed on the site during biological field investigations.

As stated, this taxon has been observed on the Newhall Ranch site and is primarily associated with riparian and freshwater marsh vegetation. During sensitive aquatic reptile trapping efforts along the Santa Clara River, 25 southwestern pond turtles were captured between the Castaic Creek confluence and the Old Road bridge just west of I-5. About half of this stretch of the River is located within the Newhall Ranch Specific Plan area.

Specific Plan implementation would result in the loss of 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodland, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be lost). Loss of habitat in which this species is known to occur could result in the direct loss of individual southwestern pond turtles.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-56, and BIO-55 would be implemented and impacts to individual southwestern pond turtles would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and EIR, impacts to this taxon are not considered significant.

Impact:	Potential loss of individual western spadefoot toad
-	(if present)
Significance:	Not Significant

The western spadefoot toad is considered a federal species of concern and a California species of special concern. It resides in aquatic/riparian habitats and has been observed on the site during biological field investigations.

As stated, this taxon has been observed on the Newhall Ranch site and is primarily associated with riparian and freshwater marsh vegetation. No surveys have been conducted on the site that provided quantifiable data regarding the number of western spadefoot toads that are present.

Specific Plan implementation would result in the loss of 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodland, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater

marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be lost). Loss of habitat in which this species is known to occur could result in the direct loss of individual western spadefoot toads.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-56, and BIO-55 would be implemented and impacts to individual western spadefoot toads would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and EIR, impacts to this taxon are not considered significant

Impact:Potential loss of two-striped garter snakeSignificance:Not Significant

The two-striped garter snake is considered a federal species of concern and a California species of special concern. It generally resides in aquatic/riparian habitats and has been observed on the site during biological field investigations.

As stated, this taxon has been observed on the Newhall Ranch site and is primarily associated with riparian and/or freshwater marsh vegetation. During the aquatic reptile trapping efforts conducted along the Santa Clara River, no two-striped garter snakes were captured between the Castaic Creek confluence and the Old Road bridge just west of I-5. About half of this stretch of the River is located within the Newhall Ranch Specific Plan area.

Specific Plan implementation would result in the loss of 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodland, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be lost). Loss of habitat in which this species is known to occur could result in the direct loss of individual two-striped garter snakes.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-56, and BIO-55 would be implemented and impacts to individual two-striped garter snakes would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to this taxon are not considered significant.

5. Federal Wildlife Species of Concern Observed On-site (Upland Habitat Affinity)

Impact: Potential (if presen Significance: Significa

Potential loss of individual California horned lizard (if present) Significant

The California homed lizard is considered a federal species of concern and a California species of special concern.

This taxon has been observed on the Ranch during the biological field investigations. As stated, this taxon is primarily associated with upland habitats, including coastal sage scrub, chaparral and grassland habitat. Given that a substantial acreage of these habitat types occurs on the site and in the region, the abundance and distribution of this species are generally not limited.

The loss of habitat on the site is substantial. As proposed, implementation of the Specific Plan would result in the loss of 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and 1,480 of the 1,896 acres of non-native grassland habitat present on the site (when combined, 42 percent of these vegetation types would be lost). Given the concern for this species in the region, the substantial loss of habitat, and potentially the direct loss of individuals of this species, this impact would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measures BIO-53, BIO-56, and BIO-55 would be implemented and impacts to individual California homed lizards would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

Impact: Potential loss of individual San Diego horned lizard (if present) Significance: Significant

The San Diego horned lizard is considered a federal species of concern and a California species of special concern.

This taxon has been observed on the Ranch during the biological field investigations. As stated, this taxon is also primarily associated with upland habitats, including coastal sage scrub, chaparral and grassland habitat. Given that a substantial acreage of these habitat types occurs on the site and in the region, the abundance and distribution of this species are generally not limited.

The loss of habitat on the site is substantial. As proposed, implementation of the Specific Plan would result in the loss of 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and 1,480 of the 1,896 acres of non-native grassland habitat present on the site (when combined, 52 percent of these vegetation types would be lost). Given the concern for this species in the region, the substantial loss of habitat, and potentially the direct loss of individuals of this species, this impact would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measures BIO-53, BIO-56, and BIO-55 would be implemented and impacts to individual San Diego horned lizards would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

Impact:	Potential loss of individual southern California rufous-
	crowned sparrow
Significance:	Significant

The southern California rufous-crowned sparrow is considered a federal species of concern and a California species of special concern.

This taxon has been observed on the Ranch during the biological field investigations. Southern California rufous-crowned sparrow are primarily associated with upland habitats, including coastal sage scrub, chaparral and grassland habitat. Given that a substantial acreage of these habitat types occur on the site and in the region, the abundance and distribution of these species are generally not limited.

Loss of habitat on the site is substantial. As proposed, implementation of the Specific Plan would result in the loss of 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and 1,480 of the 1,896 acres of non-native grassland habitat present on the site (when combined, 42 percent of these vegetation types would be lost). Given the rarity of this species in the region, the substantial loss of habitat, and potentially the direct loss of individuals of this species, impacts would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measures BIO-53, BIO-56, and BIO-55 would be implemented and impacts to southern California rufous-crowned sparrow would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

Impact:Potential loss of San Diego desert woodratSignificance:Significant

The San Diego desert woodrat is considered a federal species of concern and a California species of special concern.

This taxon has been observed on the Ranch during the biological field investigations. The San Diego desert woodrat is primarily associated with upland habitats, including coastal sage scrub and chaparral habitats. Given that a substantial acreage of these habitat types occur on the site and in the region, the abundance and distribution of this species is generally not limited throughout the region.

Loss of habitat on the site for this species is substantial. As proposed, implementation of the Specific Plan would result in the loss of 1,820 of the 5,183 acres of coastal sage scrub, and 202 of the 1,213 acres of chaparral habitat present on the site. Given the concern of this species in the region, the substantial loss of habitat, and potentially the direct loss of individuals of this species, impacts would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted

and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measures BIO-53, BIO-56, and BIO-55 would be implemented and impacts to individual San Diego desert woodrats would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

Impact:Potential loss of San Diego black-tailed jackrabbitSignificance:Significant

The San Diego black-tailed jackrabbit is considered a federal species of concern and a California species of special concern.

This taxon has been observed on the Ranch during the biological field investigations. San Diego blacktailed jackrabbit are primarily associated with upland habitat, including coastal sage scrub, chaparral and grassland habitat.

The loss of habitat for this species on the site is substantial. As proposed, implementation of the Specific Plan would result in the loss of 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and 1,480 of the 1,896 acres of non-native grassland habitat present on the site (when combined, 42 percent of these vegetation types would be lost). Given the rarity of these species in the region, the substantial loss of habitat, and potentially the direct loss of individuals of this species, impacts to this species would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measures BIO-53, BIO-56, and BIO-55 would be implemented and impacts to individual San Diego black-tailed jackrabbits would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

6. Federal Wildlife Species of Concern Observed On-site (Breeding Colony)

Impact:Potential loss of tricolored blackbird breeding locationsSignificance:Significant

The tricolored blackbird is a California species of special concern and federal species of concern that generally resides in aquatic or riparian habitats. A flock of about 20 tricolored blackbirds was observed in Middle Potrero Canyon and a flock of 50 birds was seen on the Newhall Ranch property north of

Mayo Crossing during earlier biological field surveys, although none was recorded during the recent surveys conducted in 1995. Tricolored blackbirds generally breed in colonies in freshwater marsh vegetation and aquatic habitat. As such, their abundance and distribution are relatively limited throughout the region.

Specific Plan implementation would result in the loss of 175 of the 932 acres of the appropriate types of riparian habitat (19 percent of these vegetation types would be lost) present within the proposed development area and the loss of tricolored blackbird breeding colonies may occur, if this species uses the areas to be impacted as a breeding colony site. Given the direct loss of habitat, the breeding behavior of this bird may be directly impacted by project implementation, if there is a breeding colony established at the time of construction.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-56, and BIO-55 would be implemented and impacts to breeding colonies (if present) may be reduced. However, the potential to re-locate breeding colonies at new locations is relatively low; therefore, impacts to breeding colonies (if present) are considered significant.

7. California Fully Protected Species Observed On-site (Upland Habitat Affinity)

Impact:Potential loss of white-tailed kite habitatSignificance:Significant

The white-tailed kite is a California fully protected species. This species has been observed foraging on the Newhall Ranch, and may occur in areas proposed for disturbance. This taxon forages over open upland vegetation, including non-native grassland, coastal sage scrub, and the more open areas of chaparral and oak vegetation, which together represent the dominant habitat type in the region. Therefore, this species is relatively widely distributed throughout the region. However, large blocks of contiguous open foraging habitats used by this raptor are becoming increasingly scarce in the region.

The loss of individual white-tailed kite, particularly nesting individuals (if present) as a result of project implementation would be considered a potential adverse impact. However, loss of nesting individuals can be avoided by conducting preconstruction breeding kite surveys prior to disturbance of potential breeding habitat during the breeding season (approximately mid-March through August). Impacts to certain types of occupied or occupiable foraging and nesting habitat for this species would occur as a result of implementation of the Specific Plan and the loss of habitat for this species on the

site is substantial. As proposed, implementation of the Specific Plan would result in the loss of 1,480 of the 1,896 acres of non-native grassland, 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and about 64 of the 1,090 acres of oak vegetation present on the site (when combined, 38 percent of these vegetation types would be lost). This bird is known to occur over a relatively broad geographic range. However, the loss of these large amounts of foraging habitat is considered a significant impact.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to individual white-tailed kites and their foraging habitat may be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

8. California Species of Special Concern and Special Animals Observed On-site (Riparian Habitat Affinity)

Impact:	Potential loss of individual Cooper's hawk
Significance:	Not Significant

This taxon is considered sensitive in the region and is a California species of special concern. This animal has been observed on the Newhall Ranch during the biological field investigations. This taxon is primarily associated with riparian vegetation and aquatic habitat, including riparian scrub, riparian woodland, and freshwater marsh vegetation. Due to the scarcity of such habitats, the distribution of these species is relatively limited throughout the region. However, these species can be relatively common where appropriate habitat is present, although population levels do fluctuate year to year. The Cooper's hawk is most likely to nest in riparian scrub and woodlands in the area. Observations indicate that these species may be common on the Newhall Ranch site, and they may use the site for nesting or roosting.

Specific Plan implementation would result in the loss of 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodland, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be lost). Loss of habitat in which this species is known to occur is expected to result in the direct loss of habitat utilized by Cooper's hawk.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-55, and BIO-56 would be implemented and impacts to individual Cooper's hawk would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and EIR, impacts to this taxon are not considered significant.

Impact:Potential loss of individual yellow warblerSignificance:Not Significant

This taxon is considered sensitive in the region and is a California species of special concern. Yellow warblers have been observed on the Newhall Ranch during the biological field investigations. This taxon is primarily associated with riparian vegetation and aquatic habitat, including riparian scrub, riparian woodland, and freshwater marsh vegetation. Due to the scarcity of such habitats, the distribution of this species is relatively limited throughout the region. However, this species can be relatively common where appropriate habitat is present, although population levels do fluctuate year to year. Yellow warblers are most likely to nest in riparian scrub and woodlands in the area and may breed communally in these habitat types. Observations indicate that this species may be common on the Newhall Ranch site, and it may use the site for nesting or roosting.

Specific Plan implementation would result in the loss of 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodland, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be lost). Loss of habitat in which this species is known to occur is expected to result in the direct loss of habitat utilized by yellow warbler.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-55, and BIO-56 would be implemented and impacts to individual yellow warblers would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to this taxon are not considered significant.

Impact:Potential loss of individual vermilion flycatcherSignificance:Not Significant

This taxon is considered sensitive in the region and is a California species of special concern. This species has been observed on the Newhall Ranch during the biological field investigations, and is primarily associated with riparian vegetation and aquatic habitat, including riparian scrub, riparian woodland, and freshwater marsh vegetation. Due to the scarcity of such habitats, the distribution of this species is relatively limited throughout the region. However, this species can be relatively common where appropriate habitat is present, although population levels do fluctuate year to year. The vermilion flycatcher is most likely to nest in riparian scrub and woodlands in the area. Observations indicate that this species may be common on the Newhall Ranch site, and it may use the site for nesting or roosting.

Specific Plan implementation would result in the loss of 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodiand, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be lost). Loss of habitat in which this species is known to occur is expected to result in the direct loss of habitat utilized by vermilion flycatcher.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-55, and BIO-56 would be implemented and impacts to individual vermilion flycatchers would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and EIR, impacts to this taxon are not considered significant.

Impact:Potential loss of individual summer tanagerSignificance:Not Significant

This taxon is considered sensitive in the region and is a California species of special concern. Summer tanager has been observed on the Newhall Ranch during the biological field investigations. This taxon is also associated with riparian vegetation and aquatic habitat, including riparian scrub, riparian woodland, and freshwater marsh vegetation. Due to the scarcity of such habitats, the distribution of this species is relatively limited throughout the region. However, this species can be relatively common where appropriate habitat is present, although population levels do fluctuate year to year. Summer tanagers are most likely to nest in riparian scrub and woodlands in the area and may breed in these habitat types. Observations indicate that this species may be common on the Newhall Ranch site, and members of this species may use the site for nesting, foraging or roosting.

Specific Plan implementation would result in the loss of 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodland, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be lost). Loss of habitat in which this species is known to occur is expected to result in the direct loss of habitat utilized by summer tanager.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-55, and BIO-56 would be implemented and impacts to individual summer tanagers would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and EIR, impacts to this taxon are not considered significant.

Impact:Potential loss of great blue heron habitatSignificance:Not Significant

Great blue heron has been defined as a California special animal and been observed on the Newhall Ranch during the biological field investigations. Great blue heron are primarily associated with riparian vegetation and aquatic habitat, including riparian scrub, riparian woodland, and freshwater marsh vegetation. Due to the scarcity of such habitats, the distribution of this species is limited throughout the region. However, this species can be common where appropriate habitat is present, although population levels do fluctuate year to year. Great blue heron feed, roost and breed communally in these habitat types and observations indicate that this species may be common on the Newhall Ranch site.

Specific Plan implementation would result in the loss of 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodland, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater

marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be lost). Loss of habitat in which this species is known to occur is expected to result in the direct loss of habitat utilized by great blue heron.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-55, and BIO-56 would be implemented and impacts to individual great blue herons would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to this taxon are not considered significant.

Impact:Potential loss of great egret habitatSignificance:Not Significant

Great egrets have been defined as a California special animal and have been observed on the Newhall Ranch during the biological field investigations. Great egrets are primarily associated with riparian vegetation and aquatic habitat, including riparian scrub, riparian woodland, and freshwater marsh vegetation. Due to the scarcity of such habitats, the distribution of this species is limited throughout the region. However, this species can be common where appropriate habitat is present, although population levels do fluctuate year to year. Great egrets feed, roost and breed communally in these habitat types and observations indicate that this species may be common on the Newhall Ranch site.

Specific Plan implementation would result in the loss of 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodland, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be lost). Loss of habitat in which this species is known to occur is expected to result in the direct loss of habitat utilized by great egrets.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures
BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-55, and BIO-56 would be implemented and impacts to individual great egrets would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to this taxon are not considered significant.

Impact:Potential loss of snowy egret habitatSignificance:Not Significant

Snowy egrets have also been defined as a California special animal and have been observed on the Newhall Ranch during the biological field investigations. Snowy egrets are primarily associated with riparian vegetation and aquatic habitat, including riparian scrub, riparian woodland, and freshwater marsh vegetation. Due to the scarcity of such habitats, the distribution of this species is limited throughout the region. However, this species can be common where appropriate habitat is present, although population levels do fluctuate year to year. Snowy egrets feed, roost and breed communally in these habitat types, and observations indicate that this species may be common on the Newhall Ranch site.

Specific Plan implementation would result in the loss of 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodland, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be lost). Loss of habitat in which this species is known to occur is expected to result in the direct loss of habitat utilized by snowy egrets.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-55, and BIO-56 would be implemented and impacts to individual snowy egrets would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to this taxon are not considered significant.

Impact: Significance: Potential loss of black crowned night heron habitat Not Significant

Black-crowned night herons have been defined as a California special animal and have been observed on the Newhall Ranch during the biological field investigations. Black-crowned night herons are primarily associated with riparian vegetation and aquatic habitat, including riparian scrub, riparian woodland, and freshwater marsh vegetation. Due to the scarcity of such habitats, the distribution of this species is limited throughout the region. However, this species can be common where appropriate habitat is present, although population levels do fluctuate year to year. Black-crowned night herons feed, roost and breed communally in these habitat types and observations indicate that this species may be common on the Newhall Ranch site.

Specific Plan implementation would result in the loss of 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodland, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be lost). Loss of habitat in which this species is known to occur is expected to result in the direct loss of habitat utilized by black-crowned night herons.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-55, and BIO-56 would be implemented and impacts to individual black-crowned night herons would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to this taxon are not considered significant.

9. California Species of Special Concern Observed On-site (Upland Habitat Affinity)

Impact: Significance:

Potential loss of northern harrier foraging habitat Significant

The northern harrier is considered a California species of special concern. This species has been observed foraging on the Newhall Ranch, and occur or may occur in areas proposed for disturbance. This taxon primarily forages over open upland vegetation, including non-native grassland, coastal sage

scrub, and the more open areas of chaparral and oak vegetation, which together represent the dominant habitat type in the region. Therefore, this species is relatively widely distributed throughout the region. However, large blocks of contiguous open foraging habitats used by this raptor are becoming increasingly scarce in the region.

The loss of individual northern harriers, particularly nesting individuals (if present) as a result of project implementation would be considered a potential adverse impact. However, loss of nesting individuals will be avoided by conducting preconstruction breeding harrier surveys prior to disturbance of potential breeding habitat during the breeding season (approximately mid-March through August). Impacts to certain types of occupied or occupiable foraging and nesting habitat for this species would occur as a result of implementation of the Specific Plan. The loss of habitat on the site is substantial. As proposed, implementation of the Specific Plan would result in the loss of 1,480 of the 1,896 acres of non-native grassland, 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and about 64 of the 1,090 acres of oak vegetation present on the site (when combined, 38 percent of these vegetation types would be lost). This bird is known to occur over a relatively broad geographic range. However, the loss of these large amounts of foraging habitat is considered a significant impact.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to northern harrier foraging habitat would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

Impact:Potential loss of individual California horned larkSignificance:Not Significant

This taxon is considered a California species of special concern and is considered to be sensitive in the region. This species has been observed on Newhall Ranch during the extensive biological field investigations. This taxon is primarily associated with open upland vegetation, including non-native grassland, coastal sage scrub, and the more open areas of chaparral, which together represent the dominant habitat type present in the region. As such, California homed lark can occur with relatively high frequency and abundance, and members of this species are relatively widely distributed throughout southern and central California.

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Impacts to certain types of occupied or occupiable habitat for this species would occur as a result of implementation of the Specific Plan. As proposed, implementation of the Specific Plan would result in the loss of 1,480 of the 1,896 acres of non-native grassland, 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and about 64 of the 1,090 acres of oak vegetation present on the site (when combined, 38 percent of these vegetation types would be lost). Because this taxon can occur with relatively high frequency and abundance, and this bird is widely distributed throughout southern and central California, the loss of a number of individuals of this taxon or their habitat would represent an adverse, but not a significant impact.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to individual California horned lark would be reduced further.

Impact:Potential loss of individual loggerhead shrikeSignificance:Not Significant

This taxon is considered sensitive in the region and, is a California species of special concern. Loggerhead shrikes were observed on Newhall Ranch during the biological field investigations. This taxon is also primarily associated with open upland vegetation, including non-native grassland, coastal sage scrub, and the more open areas of chaparral, which together represent the dominant habitat type present in the region. As such, this taxon can occur with relatively high frequency and abundance, and is relatively widely distributed throughout southern and central California.

Impacts to certain types of occupied or occupiable habitat for this species would occur as a result of implementation of the Specific Plan. As proposed, implementation of the Specific Plan would result in the loss of 1,480 of the 1,896 acres of non-native grassland, 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and about 64 of the 1,090 acres of oak vegetation present on the site(when combined, 38 percent of these vegetation types would be lost). Because this taxon can occur with relatively high frequency and abundance, and the species is widely distributed throughout southern and central California, the loss of a number of individuals of this taxon or their habitat would represent an adverse, but not significant impact.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to individual loggerhead shrike would be reduced further.

10. Declining Butterflies Observed On-site

Impact:Loss of Becker's white, California white, Harford's sulfur,
Comstock's fritillary, Gabb's checkerspot, Lorquin's admiral,
cloudy copper, or Gorgon copper butterfly individualsSignificance:Not Significant

These eight butterfly taxa are considered to be declining in the region. All have been observed on the Ranch and occur or may occur in the future in areas subject to disturbance. These taxa primarily are dependent upon a relatively narrow range of larval food plants and/or adult nectar sources associated with plants that occur in natural areas of the site. Therefore, their distribution may be relatively limited throughout the region. However, these species can be relatively common where appropriate food plants and other habitat features are present. The loss of even a substantial number of these taxa would represent an adverse, but not significant impact, due to their relative abundance in the region where appropriate habitat features are present. Impacts to certain occupied or occupiable habitat for these species include about 1,820 of the 5,183 acres of coastal sage scrub, about 64 of the 1,090 acres of oak vegetation, 15 of the 93 acres southern willow scrub vegetation and about 19 of the 219 acres of riparian woodland vegetation that occurs on-site (when combined, about 29 percent of these vegetation types would be lost).

Given the amount of habitat preserved on the site and habitat present in the region, the loss of individual Becker's white, California white, Harford's sulfur, Comstock's fritillary, Gabb's checkerspot, Lorquin's admiral, cloudy copper, or Gorgon copper butterflies as a result of Specific Plan implementation would be considered an adverse impact that is not significant.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to these butterflies would be further reduced.

11. Federal Candidate Wildlife Species Not Observed but with a Moderate to High Potential for Occurrence On-site (Upland Habitat Affinity)

Impact:	Potential loss of individual mountain plover
	(if present)
Significance:	Significant (if present)

The mountain plover has not been observed on the Newhall Ranch site during the biological field surveys. However, this species has been assigned a moderate to high potential for occurrence given their habitat preference and known geographic range. If present, this federal candidate and California species of special concern likely occurs in coastal sage scrub, chaparral, and open riparian scrub vegetation.

The loss of habitat on the site for this sensitive species is substantial. As proposed, implementation of the Specific Plan would result in the loss of 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and about 64 of the 171 acres of the more open riparian scrub vegetation (when combined, 32 percent of these vegetation types would be lost). Given this substantial loss of habitat and potentially the direct loss of individuals of this species, this impact would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to individual mountain plovers would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

12. Federal Wildlife Species of Concern Not Observed but with a Moderate to High Potential for Occurrence On-site (Upland Habitat Affinity)

Impact:	Potential loss of individual Bell's sage sparrow
	(if present)
Significance:	Significant (if present)

The Bell's sage sparrow has not been observed on the Newhall Ranch site during the biological field surveys. However, this species has been assigned a moderate to high potential for occurrence given its habitat preference and known geographic range. If present, this California species of special concern and federal species of concern likely occurs in coastal sage scrub, chaparral, and open riparian scrub vegetation.

The loss of habitat on the site for this sensitive species is substantial. As proposed, implementation of the Specific Plan would result in the loss of 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and about 64 of the 171 acres of the more open riparian scrub vegetation (when combined, 32 percent of these vegetation types would be lost). Given this substantial loss of habitat and potentially the direct loss of individuals of this species, this impact would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to individual Bell's sage sparrows would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

Impact:	Potential loss of individual ferruginous hawk
-	(if present)
Significance:	Significant (if present)

The ferruginous hawk has not been observed on the Newhall Ranch site during the biological field surveys. However, this species has been assigned a moderate to high potential for occurrence given it's habitat preference and known geographic range. If present, this California species of special concern and federal species of concern likely occurs in coastal sage scrub, chaparral, and open riparian scrub vegetation.

The loss of habitat on the site for this sensitive species is substantial. As proposed, implementation of the Specific Plan would result in the loss of 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and about 64 of the 171 acres of the more open riparian scrub vegetation (when combined, 32 percent of these vegetation types would be lost). Given this substantial loss of habitat and potentially the direct loss of individuals of this species, this impact would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to individual ferruginous hawks would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

Impact:	Potential loss of individual silvery legless lizard
-	(if present)
Significance:	Significant (if present)

The silvery legless lizard has not been observed on the Newhall Ranch site during the biological field surveys. However, this species has been assigned a moderate to high potential for occurrence given its habitat preference and known geographic range. If present, this California species of special concern and federal species of concern likely occurs in coastal sage scrub, chaparral, and open riparian scrub vegetation.

The loss of habitat on the site for this sensitive species is substantial. As proposed, implementation of the Specific Plan would result in the loss of 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and about 64 of the 171 acres of the more open riparian scrub vegetation (when combined, 32 percent of these vegetation types would be lost). Given this substantial loss of habitat and potentially the direct loss of individuals of this species, this impact would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted

and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to individual silvery legless lizards would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

Impact:	Potential loss of individual coast patch-nosed snake
	(if present)
Significance:	Significant (if present)

The coast patch-nosed snake has not been observed on the Newhall Ranch site during the biological field surveys. However, this species has been assigned a moderate to high potential for occurrence given its habitat preference and known geographic range. If present, this California species of special concern and federal species of concern likely occurs in coastal sage scrub, chaparral, and open riparian scrub vegetation.

The loss of habitat on the site for this sensitive species is substantial. As proposed, implementation of the Specific Plan would result in the loss of 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and about 64 of the 171 acres of the more open riparian scrub vegetation (when combined, 32 percent of these vegetation types would be lost). Given this substantial loss of habitat and potentially the direct loss of individuals of this species, this impact would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to individual coast patch-nosed snakes would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

Impact:	Potential loss of individual coastal rosy boa
-	(if present)
Significance:	Significant (if present)

The coastal rosy boa has not been observed on the Newhall Ranch site during the biological field surveys. However, this species has been assigned a moderate to high potential for occurrence given its habitat preference and known geographic range. If present, this federal species of concern likely occurs in coastal sage scrub, chaparral, and open riparian scrub vegetation.

The loss of habitat on the site for this sensitive species is substantial. As proposed, implementation of the Specific Plan would result in the loss of 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and about 64 of the 171 acres of the more open riparian scrub vegetation (when combined, 32 percent of these vegetation types would be lost). Given this substantial loss of habitat and potentially the direct loss of individuals of this species, this impact would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to individual coastal rosy boa's would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

Impact:	Potential loss of individual San Bernardino ringneck
	snake (if present)
Significance:	Significant (if present)

The San Bernardino ringneck snake has not been observed on the Newhall Ranch site during the biological field surveys. However, this species has been assigned a moderate to high potential for occurrence given its habitat preference and known geographic range. If present, this federal species of concern likely occurs in coastal sage scrub, chaparral, and open riparian scrub vegetation.

The loss of habitat on the site for this sensitive species is substantial. As proposed, implementation of the Specific Plan would result in the loss of 1,820 of the 5,183 acres of coastal sage scrub, 202 of the 1,213 acres of chaparral, and about 64 of the 171 acres of the more open riparian scrub vegetation (when combined, 32 percent of these vegetation types would be lost). Given this substantial loss of habitat and potentially the direct loss of individuals of this species, this impact would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to individual San Bernardino ringneck snakes would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

13. Federal Endangered and Federal Wildlife Species of Concern Not Observed but with a Moderate Potential for Occurrence On-site (Riparian Habitat Affinity)

Impact:	Potential loss of individual arroyo southwestern toad
-	(if present)
Significance:	Not Significant

The arroyo southwestern toad has not been observed on the Newhall Ranch site during the biological field surveys. However, it has been assigned a moderate potential for occurrence on the site due to the presence of substantial areas of preferred habitat. If present, this federally listed endangered species likely occurs in riparian scrub, riparian woodland, alluvial scrub, and freshwater marsh vegetation and aquatic habitat.

Specific Plan implementation would result in the loss of 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodland, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be lost). Loss of habitat in which this species is known to occur could result in the direct loss of individual arroyo toads (if present).

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-55, and BIO-56 would be implemented and impacts to individual arroyo southwestern toads would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to this taxon are not considered significant.

Impact:	Potential loss of individual western least bittern
-	(if present)
Significance:	Not Significant

The western least bittern has not been observed on the Newhall Ranch site during the biological field surveys. However, it has been assigned a moderate potential for occurrence on the site due to the presence of substantial areas of preferred habitat. If the western least bittern occurs on the Ranch, it would most likely be associated with freshwater marsh vegetation and aquatic habitat along the Santa Clara River. This species is not expected to nest on the Ranch.

Specific Plan implementation would result in the loss of 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodland, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be lost). Loss of habitat in which this species is known to occur could result in the displacement of western least bittern (if present).

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-55, and BIO-56 would be implemented and impacts to individual western least bitterns would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to this taxon are not considered significant.

Impact:	Potential loss of individual fulvous whistling duck
	(if present)
Significance:	Not Significant

The fulvous whistling duck has not been observed on the Newhall Ranch site during the biological field surveys. However, it has been assigned a moderate potential for occurrence on the site due to the presence of substantial areas of preferred habitat. If the fulvous whistling duck occurs on the Ranch, it would most likely be associated with freshwater marsh vegetation and aquatic habitat along the Santa Clara River. This species in not expected to nest on the Ranch.

Specific Plan implementation would result in the loss of 63 of the 222 acres of mule fat scrub vegetation, 15 of the 96 acres of southern willow scrub, 4 of the 126 acres of southern willow riparian woodland, 15 of the 93 acres of southern cottonwood-willow riparian forest, 2 of the 5 acres of valley freshwater marsh and ponds, 7 of the 26 acres of cottonwood/oak woodland, 11 of the 16 acres of arrow weed scrub, and 21 of the 39 acres of alluvial scrub (when combined, 22 percent of these vegetation types would be lost). Loss of habitat in which this species is known to occur could result in the displacement of fulvous whistling-duck.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-55, and BIO-56 would be implemented and impacts to fulvous whistling-ducks would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to this taxon are not considered significant.

Impact: Significance:

Potential loss of individual Yuma myotis (if present) Not Significant

Yuma myotis has not been recorded from the Newhall Ranch. However, due to the presence of suitable habitat, this bat has been assigned a moderate potential for occurrence. The Yuma myotis tends to roost under bridges. No loss of bat roosts (if present) as a result of project implementation would be expected, as little if any direct disturbance would occur in the High Country portions of the Newhall Ranch where roosts would most likely be located. However, this species likely occurs in and forages over the riparian scrub and riparian woodland vegetation.

Acreage subject to disturbance in vegetation communities which may represent potential foraging habitat for these species includes about 175 of the 932 acres of the appropriate types of riparian and wetland vegetation (inclusive of riparian woodlands) that occur on site (19 percent of this vegetation types would be lost).

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-55, and BIO-56 would be implemented and impacts to individual Yuma myotis would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to this taxon are not considered significant.

Impact: Significance: Potential loss of individual pale Townsend's big-eared bat (if present) Not Significant

Pale Townsend's big-eared bat has not been recorded from the Newhall Ranch. However, due to the presence of suitable habitat, this bat has been assigned a moderate potential for occurrence. The pale Townsend's big-eared bat tends to roost in steep rocky cliff faces. No loss of bat roosts (if present) as a result of project implementation would be expected, as little if any direct disturbance would occur in the High Country portions of the Newhall Ranch where roosts would most likely be located. However, this species likely occurs in and forages over the riparian scrub and riparian woodland vegetation.

Acreage subject to disturbance in vegetation communities which may represent potential foraging habitat for these species includes about 175 of the 932 acres of the appropriate types of riparian and wetland vegetation (inclusive of riparian woodlands) that occur on-site (19 percent of this vegetation types would be lost).

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-55, and BIO-56 would be implemented and impacts to individual pale Townsend's big-eared bats would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to this taxon are not considered significant.

Impact:	Potential loss of individual greater western mastiff bat
	(if present)
Significance:	Not Significant

Greater western mastiff bat has not been recorded from the Newhall Ranch. However, due to the presence of suitable habitat, this bat has been assigned a moderate potential for occurrence. The greater western mastiff bat tends to roost in steep rocky cliff faces. No loss of bat roosts (if present) as a result of project implementation would be expected, as little if any direct disturbance would occur in the High Country portions of the Newhall Ranch where roosts would most likely be located. However, this species likely occurs in and forages over the riparian scrub and riparian woodland vegetation.

Acreage subject to disturbance in vegetation communities which may represent potential foraging habitat for these species includes about 175 of the 932 acres of the appropriate types of riparian and wetland vegetation (inclusive of riparian woodlands) that occur on-site (19 percent of this vegetation types would be lost).

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-55, and BIO-56 would be implemented and impacts to individual greater western mastiff-bats would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and EIR, impacts to this taxon are not considered significant.

14. State Threatened Species Not Observed but with a Moderate Potential for Occurrence On-site (Upland Affinity)

Impact: Significance: Potential loss of individual Swainson's hawk (if present) Significant (if present)

Swainson's hawk was not observed on the Newhall Ranch site during the biological field surveys. However, Swainson's hawk has been assigned a moderate potential for occurrence due to the presence of suitable habitat and the geographic range of this bird. If this taxon is present, it would most likely occur in, fly over, and forage in the riparian woodland, coastal sage scrub and chaparral vegetation.

The loss of habitat on the site is substantial. Acreage subject to disturbance in vegetation communities which may represent the greatest potential habitat for these species includes 19 of the 219 acres of riparian woodland, 1,820 acres of the 5,183 acres of coastal sage scrub, and 202 acres of the 1,213 chaparral vegetation that occurs on site (when combined, 31 percent of these vegetation types would be lost). The loss of individual Swainson's hawk as a result of Specific Plan implementation would be an adverse impact that is considered significant, given the listing status of Swainson's hawk. Also, given this substantial loss of habitat, this impact would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted

and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to individual Swainson's hawks would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

15. Federal Species of Concern Not Observed but with a Moderate Potential for Occurrence On-site (Upland Affinity)

Impact:Potential loss of individual western burrowing owls
(if present)Significance:Significant (if present)

Western burrowing owls were not observed on the Newhall Ranch site during the biological field surveys. However, this California species of special concern has been assigned a moderate potential for occurrence due to the presence of suitable habitat and the geographic range of these birds. If this taxon is present, it would most likely occur in non-native grassland, valley oak savanna, coastal sage scrub and disturbed areas (those areas where ground squirrels are prevalent).

The loss of habitat on the site is substantial. Acreage subject to disturbance in vegetation communities which may represent the greatest potential habitat for this species includes 1,820 of the site's 5,183 acres of coastal sage scrub, 1,480 acres of the 1,896 acres of non-native grassland, 25 acres of the 394 acres of valley oak savanna, and 1,317 acres of the 1,523 acres of disturbed habitat (when combined, about 42 percent of these vegetation types would be lost). Given this substantial loss of habitat and potentially the direct loss of individuals of this species, this impact would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to individual western burrowing owls would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

16. California Species of Special Concern and Special Interest Species Not Observed but with a Moderate Potential for Occurrence On-site

Impact:	Potential loss of individual sharp-shinned hawk
_	(if present)
Significance:	Significant (if present)

Sharp-shinned hawk was not observed on the Newhall Ranch site during the biological field surveys. However, sharp-shinned hawk has been assigned a moderate potential for occurrence due to the presence of suitable habitat on the site and the geographic range of this bird. If this taxon is present on Newhall Ranch, it would most likely occur in, fly over, and forage in the riparian woodland, coastal sage scrub and chaparral vegetation.

The loss of habitat on the site is substantial. Acreage subject to disturbance in vegetation communities which may represent the greatest potential habitat for these species includes 19 of the 219 acres of riparian woodland, 1,820 acres of the 5,183 acres of coastal sage scrub, and 202 acres of the 1,213 chaparral vegetation that occurs on-site (when combined, 31 percent of these vegetation types would be lost). The loss of a large number of individual sharp-shinned hawk, particularly nesting sharp-shinned hawk individuals (if present), would also be an adverse impact that is considered significant. Also, given this substantial loss of habitat, this impact would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to individual sharp-shinned hawks would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

Impact:Potential loss of individual golden eagle (if present)Significance:Significant (if present)

Golden eagle was not observed on the Newhall Ranch site during the biological field surveys. However, golden eagle has been assigned a moderate potential for occurrence due to the presence of suitable habitat and the geographic range of this bird. If this taxon is present, it would most likely occur in, fly over, and forage in the riparian woodland, coastal sage scrub and chaparral vegetation. The loss of habitat on the site is substantial. Acreage subject to disturbance in vegetation communities which may represent the greatest potential habitat for these species includes 19 of the 219 acres of riparian woodland, 1,820 acres of the 5,183 acres of coastal sage scrub, and 202 acres of the 1,213 chaparral vegetation that occurs on-site (when combined, 31 percent of these vegetation types would be lost). The loss of a large number of individual golden eagles would be an adverse impact that is considered significant. Also, given this substantial loss of habitat, this impact would be considered significant without mitigation.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to individual golden eagle would be reduced. However, in spite of these measures, impacts to this taxon are still considered significant.

Impact:Potential loss of individual pallid bat (if present)Significance:Not Significant

The pallid bat has not been recorded from the Newhall Ranch. However, due to the presence of suitable habitat, this bat has been assigned a moderate potential for occurrence. The pallid bat tends to roost in steep rocky cliff faces. No loss of bat roosts (if present) as a result of project implementation would be expected, as little if any direct disturbance would occur in the High Country portions of the Newhall Ranch where roosts would most likely be located. However, this species likely occurs in and forages over the uplands as well as riparian scrub and riparian woodland vegetation.

Acreage subject to disturbance in vegetation communities which may represent potential foraging habitat for these species includes about 175 of the 932 acres of the appropriate types of riparian and wetland vegetation (inclusive of riparian woodlands) that occur on-site (19 percent of this vegetation types would be lost).

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures

BIO-1 through BIO-26, as well as EIR Mitigation Measures BIO-53, BIO-55, and BIO-56 would be implemented and impacts to individual pallid bats would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to this taxon are not considered significant.

17. Declining Butterflies Not Observed but Expected to Occur On-site

Impact:	Potential loss of individual Leussler's skipper butterfly (if present)
Significance:	Not Significant

The Leussler's skipper butterfly has not been observed on the Newhall Ranch site during the biological surveys. However, it has been assigned a moderate to high potential for occurrence. If this taxon is present, it likely occurs in the oak woodland and oak savanna, coastal sage scrub and chaparral vegetation. It is believed that this species of butterfly is declining in numbers. However, this species can be relatively common where appropriate food plants and other habitat features are present. Due to its substantial geographic range, the loss of even a substantial number of this taxon would represent an adverse, but not significant impact. Acreage subject to disturbance in vegetation communities which may represent potential habitat for these species includes 1,820 acres of the 5,183 acres of coastal sage scrub, 202 acres of the 1,213 acres of chaparral, and 64 of the 1,090 acres of various oak habitats that occur on the project site (when combined, 28 percent of these vegetation types would be lost).

Given the amount of habitat preserved on the site and habitat present in the region, the loss of individual Leussler's skipper butterflies as a result of Specific Plan implementation would be considered an adverse impact that is not significant.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to this butterfly would be further reduced.

Impact:Potential loss of individual Columbia skipper
butterfly (if present)Significance:Not Significant

The Columbia skipper butterfly has not been observed on the Newhall Ranch site during the biological surveys. However, it has been assigned a moderate to high potential for occurrence. If this taxon is present, it likely occurs in the oak woodland and oak savanna, coastal sage scrub and chaparral vegetation. It is believed that this species of butterfly is declining in number. However, this species can be relatively common where appropriate food plants and other habitat features are present. Due to its substantial geographic range, the loss of even a substantial number of this taxon would represent an adverse, but not significant impact. Acreage subject to disturbance in vegetation communities which may represent potential habitat for these species includes 1,820 acres of the 5,183 acres of coastal sage scrub, 202 acres of the 1,213 acres of chaparral, and 64 of the 1,090 acres of various oak habitats that occur on the project site (when combined, 28 percent of these vegetation types would be lost).

Given the amount of habitat preserved on the site and habitat present in the region, the loss of individual Columbia skipper butterflies as a result of Specific Plan implementation would be considered an adverse impact that is not significant.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, RMP Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-53 would be implemented and impacts to this butterfly would be further reduced.

(c) Conclusion

Based on the information provided above the proposed project has the potential to significantly impact (post mitigation) several sensitive wildlife species generally considered to occur in upland habitats. Given the criteria set forth in Subsection 4.a., Significance Threshold Criteria, this project would significantly affect endangered, rare or sensitive plants or animals. Therefore, the impact potential of this project is considered significant with respect to this impact criterion.

(4) Effects on Sensitive Habitats

Habitats designated as sensitive by the state of California are present on the proposed Newhall Ranch site. This discussion is intended to define and describe the impact potential of the Specific Plan on these sensitive habitat types.

(a) California Department of Fish and Game CNNDB Designated Sensitive Habitats

Most of the vegetation communities present on the site are not identified as being sensitive by the California Natural Diversity Database. However, Venturan coastal sage scrub, valley oak woodland/savanna, elderberry scrub, mainland cherry forest, southern willow scrub, southern cottonwood-willow riparian forest and valley freshwater marsh and ponds have been designated by the CDFG as threatened. A discussion of these sensitive habitat types is provided below.

1. Coastal Sage Scrub

Coastal sage scrub vegetation is considered sensitive by the CDFG, and is the current focus of the state's Natural Community Conservation Planning (NCCP) process. The CDFG has assigned this vegetation type a status S3.1 (i.e., threatened status in habitats that are not common [as defined by the California Department of Fish and Game Natural Diversity Data Base]). As proposed, implementation of the Newhall Ranch Specific Plan would result in the removal of 1,820 of the 5,183 acres of this habitat on the project site, or 35 percent of this total. This impact of such a large amount of this sensitive habitat is considered significant.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, Mitigation Measures BIO-27 through BIO-43 would be implemented and impacts to coastal sage scrub would be reduced. However, in spite of these measures, impacts to this sensitive habitat type are still considered significant.

2. Valley Oak Woodland/Savanna

Valley oak woodland/savanna has been greatly reduced throughout its range. It provides valuable habitat for many special wildlife species. In response to this condition, the CDFG has assigned this vegetation type a status of S2.1 (i.e., very threatened status in habitats that are not common, [as defined by the California Department of Fish and Game Natural Diversity Data Base]). As proposed,

implementation of the Newhall Ranch Specific Plan would result in the removal of 27 of the 420 acres of this habitat on the project site, or 6 percent of this total. The majority of this habitat type is located in the uplands that would not be directly or indirectly impacted by this project. Oak trees removed will be replanted on a 2 to 1 replacement basis, as required by the Los Angeles County ordinance. However, given the sensitivity designation of this habitat type, these impacts are considered significant.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, Mitigation Measures BIO-27 through BIO-43 would be implemented and impacts to valley oak woodland/savanna would be reduced. However, in spite of these measures, impacts to this sensitive habitat type are still considered significant.

3. Elderberry Scrub

Elderberry scrub is not a common vegetation type and has been greatly reduced throughout its range, particularly in southern California. In response to this condition, the CDFG has assigned this vegetation type a status of S2.1 (i.e., very threatened status in habitats that are not common). As proposed, implementation of the Newhall Ranch Specific Plan would result in the removal of 14 of the 24 acres (58 percent of the total) of this habitat on the project site. Portions of elderberry scrub that would be removed on the site have been classified as having low biological value based on the Habitat Value Study (Figure BIO-15, Habitat Value Study). Cattle grazing has reduced the biological integrity of this habitat type where disturbances are proposed. The remaining portions of elderberry scrub are located in the uplands that would not be directly or indirectly impacted by this project and have been assigned a higher biological value on Figure BIO-15.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-60 would be implemented and impacts to elderberry scrub would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and EIR, impacts to this sensitive habitat type are not considered significant.

4. Mainland Cherry Forest

Similar to elderberry scrub, mainland cherry forest is a rare vegetation type which has been greatly reduced throughout its range, particularly in southern California. In response to this condition, the CDFG has assigned this vegetation type a status of S1.1 (i.e., a very threatened designation assigned to habitat types that are of very limited distribution). As proposed, implementation of the Newhall Ranch Specific Plan would result in the removal of 11 of the 18 acres (61 percent of the total) of this habitat on the site. On Figure BIO-15, the 11 acres of mainland cherry forest being impacted were assigned the two lowest Habitat Value ranks through application of the Habitat Value Analysis. Portions of mainland cherry forest preserved as part of this project are located in the uplands (generally in association with coast live oak woodlands) and were assigned higher value ranks on Figure BIO-15.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, Mitigation Measures BIO-27 through BIO-43, as well as EIR Mitigation Measure BIO-61 would be implemented and impacts to mainland cherry forest would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to this sensitive habitat type are not considered significant.

5. Southern Willow Scrub

Like many willow dominated riparian habitats in California, southern willow scrub has been greatly reduced throughout its range and provides valuable habitat for many special wildlife species, particularly songbirds. In response to this condition, the CDFG has assigned this vegetation type a status of S2.1 (i.e., very threatened status in habitats that are not common). As proposed, implementation of the Newhall Ranch Specific Plan would result in the removal of 15 of the 96 acres (16 percent of the total acres) of this habitat on the project site.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted

and would assure the implementation of the provisions therein. As a result, Mitigation Measures BIO-1 through BIO-26 would be implemented and impacts to southern willow scrub would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to this sensitive habitat type are not considered significant.

6. Southern Cottonwood-Willow Riparian Forest and Southern Willow Riparian Woodland

Like most riparian habitats in California, southern cottonwood-willow riparian forest and southern willow riparian woodland have been greatly reduced throughout their range and provide valuable habitat for many special wildlife species. In response to this condition, the CDFG has assigned these vegetation types a status of S3.2 (i.e., threatened status in habitats that are relatively common). As proposed, implementation of the Newhall Ranch Specific Plan would result in the removal of 15 of the 93 acres (16 percent of the total) of the cottonwood-willow riparian forest and 4 of the 126 acres (3 percent of the total) of southern willow riparian forest on the project site.

The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, Mitigation Measures BIO-1 through BIO-26 would be implemented and impacts to southern cottonwood-willow riparian forest and southern willow riparian woodland would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to these sensitive habitat types are not considered significant.

7. Valley Freshwater Marsh and Ponds

Like many wetland habitats in southern California, freshwater marshes and ponds have been greatly reduced throughout their range. This habitat type provides a water source in arid areas and, as such, is valuable habitat for many special wildlife species. In response to this condition, the CDFG has assigned this vegetation/habitat type a status of S2.1 (i.e., very threatened status in habitat that are not common). As proposed, implementation of the Newhall Ranch Specific Plan would result in the removal of 2 of the 5 acres of this habitat on the project site. Given the assumption that these features are wetlands and would require replacement as part of the ACOE and CDFG permitting processes, and the relatively small acreage affected, impacts to this habitat type are not considered significant.

(b) Wetlands

Wetland habitats are considered to be sensitive based upon the high value of wetlands and aquatic habitats to wildlife, as well as the relative rarity of these resources throughout the region and the state. The Santa Clara River Corridor supports the endangered fish species unarmored threespine stickleback, as well as the endangered least Bell's vireo and southwestern willow flycatcher. It also provides occupied or occupiable habitat for federal candidate species, including western spadefoot toad, southwestern pond turtle, two-striped garter snake, and tricolored blackbird, as well as more common amphibians, migratory waterfowl, and aquatic insects. Those jurisdictional wetlands located along or near the Santa Clara River are typically higher quality wetlands, and usually have an aquatic component or are located relatively close to an aquatic area. The jurisdictional wetlands that may be subject to disturbance in the upland portions of the Ranch are typically ephemeral, and are generally considered less sensitive than those associated with permanent or semi-permanent water. About 8 percent of the jurisdictional wetlands present along the Santa Clara River would be disturbed.

Jurisdictional wetlands and waters of the U.S. include those wetlands features subject to jurisdiction of the U.S. Army Corps of Engineers under Section 404 of the federal Clean Water Act. "Waters of the U.S." are broadly defined in 33 CFR 328.3(a) to include navigable Rivers and intermittent streams which are tributary to these watercourses, as well as wetlands, either associated with watercourses or isolated. By definition, all aquatic habitat present on the Newhall Ranch is contained within the waters of the U.S. or wetlands categories.

As proposed, implementation of the Newhall Ranch Specific Plan would result in the loss of approximately 53 acres of jurisdictional wetlands, waters of the U.S., and their associated aquatic habitat along the Santa Clara River. In addition, jurisdictional 'waters' may be subject to disturbance along the drainage features and intermittent streams in the upland portion of the Newhall Ranch. The severity of this impact will be offset via the replacement of wetland vegetation in association with the ACOE and/or CDFG permit process. Further, the Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implemented and impacts to wetlands would be reduced. Given the avoidance of impacts associated with construction and operation and mitigation within the RMP and this EIR, impacts to this sensitive habitat type are not considered significant.

(c) Significant Ecological Areas

The Significant Ecological Area (SEA) boundaries are policy lines, established by Los Angeles County, creating areas designated as having sensitive, unique or exemplary biological conditions. The mapped boundaries are not necessarily a precise portrayal of the limits of the biological resource defined in the SEA description. SEAs contain land that may be characterized by lower quality habitat values, and may exclude adjacent lands that are of higher quality. As part of the General Plan Amendment process, modification of the boundaries of SEAs 20 and 23 to, in part, better reflect the biological resources present on the site is proposed. In general, it is the intent of the Specific Plan to develop those portions of the existing SEAs which maintain lower quality habitat values (thereby removing these areas from the SEAs), and to add land to the SEA which maintains a higher quality habitat value. An assessment of the Specific Plan's impact on SEAs 20 and 23 is provided below.

1. Potential Impact on SEA 20

Presently, approximately 3,947 acres are located within the portion of SEA 20 which is located on the Newhall Ranch. The Specific Plan proposes a total of approximately 3,949.9 acres within this portion of SEA 20, resulting in an increase of approximately 3 acres of SEA land area. In addition, as discussed below, the modification of the SEA boundary and the consequent inclusion of other acreage results in an increase in the amount of land characterized by higher value habitats.

Impacts to SEA 20 occur in two forms. First, is the impact of the construction of 15 estate lots, access roads and recreational trails within the SEA; and second is the adjustment proposed in the boundary of SEA 20. As stated, 15 estate lots, access roads and recreational trails are proposed within SEA 20. Plans indicate that construction of the estate lots and roads would disturb approximately 45 acres of natural habitat within the SEA. Additional impacts would occur as a result of the indirect impacts of human use that are discussed later in this report section.

Table BIO-17 indicates the amount of each type of habitat and total amount of land currently within SEA 20, and the habitat and total within the proposed adjusted SEA boundaries. It also shows the incremental acreage of sensitive habitats that will be removed and added to the SEA. As shown, a total increase in SEA size of 2.86 acres would occur. Not all habitat types represented in the SEA would increase in total acreage. As shown in Table BIO-17, habitats that would decrease in acreage include alluvial scrub, coastal sage scrub-grassland, non-native annual grassland, Great Basin scrub, and mule fat scrub. In all, these habitats would be reduced in acreage by approximately 94 acres. Habitats that would be represented by a greater amount of land would include coastal sage scrub, live oak woodland, and mixed chaparral. Their acreages would be increased by a total of approximately 60 acres. The

amount of land represented by pond, valley oak savarua, valley oak woodland, and southern willow scrub would remain essentially unchanged by development. SEA 20 is primarily noted for its oak related conditions (e.g., coast live oak and valley oak woodland, and valley oak savanna). As noted in **Table BIO-17**, the total amount of land represented by oak woodland and savanna habitats in the SEA would increase by about 28 acres as a result of the proposed SEA boundary adjustment. Regarding sensitive habitats present, a total of 59.61 acres of such habitats will be added to the SEA with the boundary adjustment.

Table BIQ-17 SEA 20 Habitats Existing and Proposed					
Habitat Types		Existing Acres	Proposed Acres	Total Added (Removed)	Sensitive Hab. Added (Removed)
Disturbed/Road		36.45	25.04	(11.41)	
Alluvial Scrub Coastal Sage Scrub Coastal Sage Scrub - Grassland Non-Native Annual Grassland Great Basin Scrub Live Oak Woodland Mixed Chaparral Mule Fat Scrub		9.34 1,965.96 28.17 160.20 26.22 519.54 814.57 21.25	$1.29 \\ 1,997.67 \\ 0.00 \\ 116.74 \\ 18.38 \\ 547.42 \\ 863.38 \\ 14.68 \\ 14.68 \\$	(8.05) 31.71 (28.17) (43.46) (7.84) 27.88 48.81 (6.57)	31.71 27.88
Pond		0.20	0.20	, ό	Q
Valley Oak Savanna		356.91	356.90	(0.01)	(0.01)
Valley Oak Woodland Southern Willow Scrub		4.81	4.81	0.03	0. <u>03</u>
	Subtotal	3,910.23	3,924.56	(14.27)	<u>59.61</u>
	Total	3,946.68	3,949.60	2.86	59.61

Another way to analyze the impact of the proposed Specific Plan is to compare pre- and post-project SEA habitat values. As indicated, four categories of habitat values have been identified, with value 1 being lowest and value 4 being highest. As shown on Table BIO-18, the amount of land represented by the lower value habitats (1 and 2) would decrease from 2,133 to 1,958 acres. However, the amount of land represented by the higher value habitats (3 and 4) would increase from 1,814 to 1,992 acres. In the end, a total of 175 acres of lower value habitat would be removed from the SEA, while a total of 178 acres of higher quality habitat would be added to the SEA.

	Exis	Table BIO-18 SEA 20 Habitats- Existing and Proposed by Habitat Value				
	Habitat Value		Existing	Proposed Acres	Added (Removed)	
1 (lowest) 2 3 4 (highest)			262 1,871 1,291 523	220 1,738 1,451 541	(42) (133) 160 18	
		Subtotal	3,947	3,950	3	

A further method of impact analysis of the project on the SEA is the extent of edge effects measured in linear feet of land fronting on the SEA. This provides a rough measure of potential impacts of urban uses on the edge of the SEA. A total of 24,724 linear feet (LF) of land fronts on SEA 20. Of that total length, nearly half (11,722 LF or 47 percent) fronts on the proposed Estate residential uses, 18 percent (4,446 LF) fronts on proposed roadways (with Low Residential uses above), 14 percent (3,566 LF) fronts directly onto Low Medium Residential uses, 12 percent (2,983 LF) fronts onto Visitor Serving uses, and 8 percent (2,007 LF) fronts onto proposed Open Space. Of the edge that fronts onto the Estate residential, the effects of this development are minimized due to the fact that this area is separated by a fairly severe vertical grade. The roadways that make up 18 percent of the edge are at grade with the SEA, but the Low Residential uses adjacent to the roadways are also separated vertically. The 14 percent of the edge made up by Low Medium Residential uses is adjacent to a portion of the SEA that is elevated steeply above the proposed uses. Lastly, the 12 percent Visitor Serving edge is the portion of the project that would control access to the SEA and proposed High Country Special Management Area (SMA). In all, approximately 69 percent of the SEA edge is either adjacent to proposed open space or is separated topographically from proposed development.

In conclusion, the total SEA 20 area would be increased by approximately 3 acres, and the relocation of SEA 20's northern boundary line and the resultant impact of the proposed project is not considered to be significant for the following reasons:

- 1) the Specific Plan would increase the amount of higher value habitat in the SEA by 178 acres;
- 2) the amount of land devoted to the habitat types SEA 20 is known for (oak woodland type habitats) would increase by approximately 28 acres;
- 3) the Specific Plan provides for a major interconnection (Salt Creek Canyon) between SEA 20 and the Santa Clara River which will allow for the continued movement of species between SEA 20 and major open space areas to the north and south; and
- 4) the Specific Plan provides for the actual permanent dedication of land located within the SEA and removal of cattle grazing, except for grazing for resource management purposes as development occurs.

2. Potential Impact on SEA 23

Presently, approximately 1,290 acres are located within the portion of SEA 23 which is located on the Newhall Ranch. The Specific Plan proposes a total of approximately 813 acres within this portion of SEA 23, resulting in a reduction of 477 acres of SEA land area. As discussed below, the modification of the SEA boundary and the consequent reduction in SEA acreage will reduce the amount of sensitive habitats within SEA 23 by 103.62 acres prior to mitigation. In addition, buffer areas along the River will be modified.

As shown in **Table BIO-19**, of the 1,290 acres located within SEA 23 on the project site, approximately 466 acres (36 percent) are non-riparian in character, and presently in either a disturbed condition (defined as areas already impacted under agricultural production, generally disturbed or ruderal areas, and roadways) or in non-native grassland (a non-riparian habitat type).

Table BIO-19 indicates that 340.58 acres of disturbed and non-riparian (non-native grassland) habitat will be removed from the SEA. Of the undisturbed habitats, their land area would be reduced from 823.48 acres to 687.16 acres. As shown in Table BIO-19, habitats that would decrease in acreage include alluvial scrub, cottonwood/oak woodland, southern cottonwood-willow riparian forest, elderberry scrub, freshwater marsh, coast live oak woodland, mixed chaparral, mesic meadows, and coastal sage scrub-grassland, mule fat scrub, successional mule fat scrub, coastal sage scrub, coastal sage scrub-grassland, and southern willow scrub. Willow riparian woodland habitat would increase in acreage by 0.65 acre, and arrow weed scrub would increase by 2.26 acres.

The Newhall Ranch Specific Plan proposes no substantial physical alteration to the River bottom. However, bank stabilization would occur on approximately 30 percent of the southern side and 80 percent of the northern side of the River. In general, bank stabilization is proposed to be ungrouted rock (see EIR Section 4.2, Flood). Bank stabilization construction could disturb wildlife species associated with the adjacent riparian vegetation and open channels.

Habitat Types	Existing Acres	Proposed Acres	Total Added (Removed)	Sensitive Hab. Added (Removed)
Agricultural/Disturbed/Road	458.52	125.71	(332.81	
Non-Native Annual Grassland	7.79	0.21	(7.77)	
Subtotal	466.31	125.92	(340.58)	
Alluvial Scrub	0.12	0.00	(0.12)	
Arrow Weed Scrub	6.18	8.44	2.26	
Cottonwood/Oak Woodland	10.06	3.22	(6.84)	(6.84)
So. Cottonwood-Willow Riparian Forest	85.98	74.90	(11.08)	(11.08)
Elderberry Scrub	3.84	0.12	(3.72)	(3.72)
Freshwater Marsh	3.27	2.94	(0.33)	(0.33)
Live Oak Woodland	7.18	0.04	(7.14)	(7.14)
Mixed Chaparral	3.75	0.06	(3.69)	• • •
Mule Fat Scrub	156.61	13 4.78	(21.83)	
Successional Mule Fat Scrub	271.08	267.09	(3.99)	
Mesic Meadow	1.05	0.00	(1.05)	(1.05)
Coastal Sage Scrub*	64.02	1.73	(62.29)	(62.29)*
Coastal Sage Scrub-Grassland	5.38	0.01	(5.37)	. ,
Southern Willow Riparian Woodland	123.73	124.38	0.65	0.65
Southern Willow Scrub	81.23	69.41	(11.82)	(11.82)
Subtotal	823.48	687.16	(136.36)	
Total	1,289.79	813.08	(476.94)	(103.62)

Table BIO-19 SEA 23 Existing and Proposed

* Coastal Sage Scrub is not included in the County's description of SEA 23 as being an important biological component of the biological resources of that SEA. SEA is known for its riparian habitats (which coastal sage scrub is not). The portion of SEA 23 on the Specific Plan site has 41.33 acres of sensitive riparian habitats.

SEA 23 is primarily noted for its wetlands and critical habitat for the unarmored threespine stickleback and the least Bell's vireo. The vireo is known to commonly utilize the following habitat types found in this portion of SEA 23: arrow weed scrub (increased by 2.26 acres), southern cottonwood-willow riparian forest (reduced by 11.08 acres), mule fat scrub (reduced by 21.83 acres), southern willow riparian woodland (increased by 0.65 acres), and southern willow scrub (reduced by 11.82 acres). This portion of SEA 23 also contains a total of 62.29 acres of coast sage scrub which is considered a sensitive upland habitat. Based on the above discussion and the information presented in Table BIO-19, the total amount of land represented by habitats in the SEA used by the vireo or otherwise considered sensitive, without mitigation, would decrease by approximately 103.62 acres.

As was presented with the SEA 20 analysis above, a further method of impact analysis of the project on SEA 23 (including Travel Village which is not a part of the Specific Plan), is the extent of edge effects measured in linear feet of land fronting on the SEA. A total of 59,545 LF of land fronts on SEA 23. Excluding Travel Village, nearly half (48 percent or 28,242 LF) would front on uses that do not support human populations and associated lighting and domestic animals (i.e., proposed open area and roadways).

The impact of the proposed project on SEA 23 is not considered to be significant as provisions of the RMP state that restoration would occur in which would offset potential impacts associated with the loss of sensitive River resources. The Resource Management Plan of the Newhall Ranch Specific Plan provides numerous mitigation measures to reduce the potential impacts identified in this section of the Biota Report. With the approval of the Specific Plan by the County Board of Supervisors, those measures would be adopted and would assure the implementation of the provisions therein. As a result, Mitigation Measures BIO-1 through BIO-26 would be implemented and impacts to SEA 23 would be reduced.

Furthermore, the Specific Plan proposes to offer for permanent dedication approximately 451 acres of land designated by the Specific Plan as Open Area as part of the Specific Plan's buildout. This Open Area is located adjacent to the south side of the River Corridor SMA and includes the oak-filled canyons, blueline streams (drainages) tributary to the River, the River bluffs, and ridges contiguous with the River Corridor. **Table BIO-20**, **Comparison Between Sensitive Habitats Removed from SEA 23 and Added to Open Area Adjacent to Proposed River Corridor SMA**, shows this Open Area to be offered for dedication by habitat type. **Table BIO-20** also compares the amount of habitats classified as sensitive which are proposed to be removed from SEA 23 with the proposed amount of sensitive habitats are proposed to be removed from the existing bounds of SEA 23, while 259.14 acres of sensitive habitats would be offered for dedication to the public as Open Area adjacent to the River Corridor SMA. As a result of Specific Plan buildout, the amount of sensitive habitat acreage within or adjacent to the River Corridor and protected under the restrictions provided by the Specific Plan would increase by approximately 155 acres. The total acreage of the designated Open Area and River Corridor SMA would be comparable to the acreage in the current designated SEA 23 (1264 versus 1290 acres).

Given the avoidance of impacts associated with construction and operation, mitigation proposed within the RMP and this EIR, and the dedication of Open Area adjacent to the River Corridor SMA, impacts to this sensitive habitat type (SEA) are not considered significant.

(d) Conclusion of Impact on Sensitive Habitats

Based on the information provided above, the proposed project has the potential to significantly impact several sensitive habitat types that include Venturan coastal sage scrub, valley oak woodland/savanna, southern willow scrub, southern cottonwood-willow riparian forest and valley freshwater marsh and ponds. Through Specific Plan design and mitigation efforts, the magnitude of impacts to sensitive habitats would be reduced. However, these impacts would remain significant.

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Comparison Between Sensitive Habitats Removed from SEA 23 and Added to Open Area Adjacent to Proposed River Corridor SMA (all in acres)					
Ilabitat Types	Total Habitats Added (Removed) From SEA 23	Sensiliye Habitats Added (Removed) From SEA 23	Proposed Open Area Habitats Added Adjacent to River Corridor SMA	Proposed Sensitive Open Area Habitats Added Adjacent to River Corridor SMA	Net Proposed Sensitive Habitate; Adjacent Open Area + River Corridor SMA (SEA)
Agricultural/Disturbed/Road	(332.81)		19.1		
Non-Native Annual Grassland	(7.77)		18.2		
Anuvial Scrub	(0.12)		3.4		
Chambre Chambre	2.26		0.4		
Cottonwood (Oak Woodland	(6.94)	(6 Q N	0.6	12 7	1.26
So Cottonwood Willow Rinarian Borest	(0.04)	(0.0%)	13.2	13.2	0.00 (6.19)
Fiderborry Scrub	(11.00)	(11.00)	4.7	4.7	1.08
Great Basin Scrub	(0-74)	(0.72)	2.0	4.0	1.00
Freshwater Marsh	(0.33)	(0.33)	2.7		(0.33)
Live Oak Woodland	(7.14)	(7.14)	46.3	46.3	39.16
Live Oak Woodland/Mixed Chaparral	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(, , , , , , , , , , , , , , , , , , ,	4.9	1010	0,110
Mixed Chaparral	(3.69)		65.6		
Mule Fat Scrub	(21.83)		9.0		
Successional Mule Fat Scrub	(3.99)		6.2		
Mesic Meadow	(1.05)	(1.05)	0.01	0.01	(1.04)
Coastal Sage Scrub	(62.29)	(62.29)	181.3	181.3	119.01
Coastal Sage Scrub-Grassland	(5.37)		62.2		
Southern Willow Riparian Woodland	0.65	0.65			0.65
Southern Willow Scrub	(11.82)	(11.82)	8.3	8.3	(3.52)
Total	(476.94)	(103.62)	450,91	259.14	155.19

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c. Indirect Impacts

Indirect impacts would occur in areas surrounding the proposed development area subsequent to project operation. Section 15358 of the CEQA <u>Guidelines</u> defines these indirect impacts as "Indirect or secondary effects which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems." In simple terms, indirect impacts are generally those impacts that would occur outside the proposed development area subsequent to project operation.

It is expected that implementation of the Newhall Ranch Specific Plan would result in indirect impacts to biological resources in the following ways:

- an increased human and domestic animal presence in the Santa Clara River and High Country SMAs;
- increased use of on- and off-site areas by wildlife associated with an urban environment (e.g., ravens, crows, ground squirrels, etc.); and
- increased noise, light, glare, and low flow runoff in the Santa Clara River area.

Indirect impacts associated with implementation of the Newhall Ranch Specific Plan would adversely impact wildlife that currently utilize the Santa Clara River and upland areas, in particular the sensitive species that occur proximal to development areas in the riparian and other wetland plant communities. However, it must be acknowledged that most of these indirect impacts are not unique to this area. Many animals that utilize this area have adjusted to a constant human presence. Therefore, implementation of the Newhall Ranch Specific Plan as proposed would incrementally contribute to increased use of the Santa Clara River area by people and pets and would serve to exacerbate this existing problem, particularly as to sensitive species that occur in the Santa Clara River area. It is anticipated that indirect impacts in the High Country SMA would be less than for the River area due to both the distance of the upland areas from areas proposed for urban development and the presence of a smaller number of sensitive species in the High Country SMA compared to the River area.

Indirect impacts have the potential to degrade the quality of the wildlife corridor potential within and adjacent to the Santa Clara River drainage. The indirect impacts associated with development of the project will compound the direct impact of the physical loss of undeveloped land and could further constrict habitat linkages. Indirect impacts associated with the proposed project are not quantifiable, but are reasonably foreseeable. As such, the discussion that follows provides a common sense identification of the types of secondary impacts and their relative magnitude such that decision makers and the general public are aware of the indirect impact potential associated with implementation of the Newhall Ranch Specific Plan.

(1) Increased Human and Domestic Animal Presence in the River and High Country Areas

Implementation of the Newhall Ranch Specific Plan would place a substantial human population adjacent to the Santa Clara River and High Country SMAs. Common sense dictates that some people who reside on the project site will also use the Santa Clara River Corridor (River) and upland High Country area for recreational purposes. The most substantial effect would be the disturbance to and potential loss of habitat for the variety of sensitive animal species that occur in the River Corridor, as well as potential impacts to the sensitive vegetation.

It is anticipated that increased human use in the adjacent River areas would not affect all taxa equally. It is likely that human use would occur most frequently on the ground and, consequently, would have the greatest impact on ground dwelling animals versus those animals that primarily utilize the tree canopy. In addition, aquatic species would likely be subject to disturbance with an increased human presence.

It is expected that increased use of the site by residents of Newhall Ranch would also result in a corresponding increase in use of the site by domestic animals. Dogs are known to disturb nesting or resting areas, and disrupt the normal foraging activities associated with wildlife in adjacent River and upland areas. Should this activity occur frequently, and over a long time period, these disturbances may have a long-term effect on the behavior of sensitive animals and can result in their evacuation from the area.

Disturbances associated with feral cats on natural wildlife is well documented and can result in major alterations to the species composition of natural areas. In addition, house cats living adjacent to wildland areas can be considered to be "subsidized predators" who may spend an inordinate amount of time hunting native wildlife species (including some sensitive species) when the resultant food value of the prey item is low. It is also true that cats, and to a lesser extent dogs, are sources of food for some wild animal species (e.g., coyotes, bobcats, mountain lions, etc.).

A method of analysis available for use in estimating the Specific Plan's indirect impact on the River and High Country habitats is to estimate the amount of edges (measured in linear feet) that would occur between proposed urban uses and open areas, as was previously discussed in this section.

As is shown by this analysis, 48 percent of urban edges (37,678 of 78,255 LF) of SEA 20 and SEA 23 created by implementation of the Newhall Ranch Specific Plan would consist of uses that do not support human and domestic animal populations, and the types of disturbance potentially associated with them.

(2) Increased Use of the On- and Off-site Areas by Wildlife Associated With an Urban Environment

A concern of agencies is the potential that a project would introduce exotic wildlife to River and upland areas that are typical of an urban setting, and that these animals could adversely impact natural wildlife populations through habitat displacement or predation. It is understood that wildlife animals typical of an urban environment (e.g., ravens, crows, ground squirrels, etc.) do occur in the region (and in the Specific Plan area) at this time based upon on-site field investigations. Development of the Newhall Ranch site would introduce similar urban uses proximal to River and upland areas. Therefore, this indirect impact would not be considered new, but would further an already observed and adverse condition.

(3) Increased Noise, Light, Glare and Water Quality Impacts in the Santa Clara River

Nighttime illumination is known to adversely impact animals in natural areas. Nighttime light can disturb resting behavior and can potentially alter breeding cycles and nesting behavior. Land uses or facilities presently located on the Specific Plan site require constant monitoring and available light is critical to their safe operation. Other light sources present in the area include vehicular traffic that occurs on roadways. The Specific Plan site, however, is void of any measurable sources of light and glare. While the sources of light and glare located east of the site are somewhat visible in the distance, the site is relatively dark.

Project operation would increase the number of nighttime light sources on the Specific Plan site. If uncontrolled, such light, where proximal to sensitive natural areas, could adversely impact the animal species composition that occurs in these areas. However, just over 50 percent of the edges created by implementation of the Newhall Ranch Specific Plan adjacent to the River Corridor and the High Country areas would front on either open areas or land uses that produce limited light and/or are separated vertically from these areas (e.g., estate and low density residential uses). Based on this information, the project would increase the amount of light and glare sources on the project site; however, mitigation measures incorporated as part of project design specifies that all lighting along the perimeter of natural areas will be downcast luminaries with light patterns directed away from natural areas. This measure would further reduce lighting impacts. However, impacts as a result of edge lighting would be considered significant.

It is also possible that the River Corridor could be impacted by the discharge of sediments and urban pollutants, such as oils, fertilizers, pesticides, etc. Construction (particularly site clearing and grading operations) would have the potential for discharging sediment downstream during storm events. Therefore, per County of Los Angeles Department of Public Works standards, temporary erosion control measures would be required in disturbed areas of the site during construction. A complete discussion of the impacts and mitigation measures related to the impact of sediments and urban pollutants on the Santa Clara River are discussed and defined in Section 4.2 (Flood) of the EIR.

(4) Indirect Impact Conclusion

Based on the information provided above, it can be concluded that implementation of the Newhall Ranch Specific Plan has the potential to indirectly impact adjacent natural areas and sensitive biological resources that occur proximal to the site. This would occur as a result of increased use of the Santa Clara River and upland areas by humans and domestic animals, increased use of adjacent natural areas by animals typical of an urban environment, and the potential effects of light, glare, and sediment- and urban pollutant-laden runoff, unless mitigated.

Further, many of the potential indirect impacts described above are now occurring in some cases on the Specific Plan site and in the region. The adjacent drainage areas are used indiscriminately by humans and domestic animals and this use is having a substantial impact on sensitive biological resources that occur adjacent to and proximal to the site. However, of important note is the fact that the Specific Plan proposes to transition the intensity of land uses away from the River, with low intensity uses proposed along the outer edges of the River and higher intensity land uses proposed away from the edges of the River. Also, in areas proposed for development next to the High Country and Salt Creek Canyon, most uses would be separated vertically from open space areas and their habitats, thereby lessening potential indirect impacts. Along the River Corridor, the Plan proposes many areas next to the River that are either to be left open, or developed only with land uses with limited human populations, and, where development areas and the River Corridor. While such design features cannot eliminate indirect impacts potential altogether, they would act to reduce these impacts.
Approval of the Specific Plan and its associated RMP would involve an amendment to the Los Angeles County zoning ordinance such that the provisions of the Specific Plan and RMP are binding. Given this fact, it can be assumed that Mitigation Measures BIO-18 and BIO-19, as well as EIR Mitigation Measure BIO-56 would be incorporated. Given implementation of the mitigation measures identified above, indirect impacts would be reduced and or eliminated. However, others would remain significant.

d. Cumulative Impacts

The locations of major related projects around Newhall Ranch are illustrated on Figure BIO-16. Each of these projects is identified below.

(1) Los Angeles County Projects

Implementation of the Newhall Ranch Specific Plan is part of a continuing trend toward urbanization that is occurring along the eastern-most section of SR-126 near I-5 and along I-5 through the Santa Clarita Valley, north to Castaic. Along SR-126, large-scale development projects are planned and/or underway on land near the Specific Plan site that will marginally influence the biotic character of this area. These include the Valencia Commerce Center, a planned industrial development underway at the northwestern side of the Castaic Junction and the I-5/SR-126 interchange. This project includes an interchange at Commerce Center Drive's intersection with SR-126.

Along the west side of I-5, between the eastern boundary of the Specific Plan site and the freeway, several development projects are underway or proposed. These include: 1) Stevenson Ranch, a mediumdensity, single family residential community set in the hills south of McBean Parkway and north of Pico Canyon Road; 2) Magic Mountain Theme Park expansion; 3) Westridge development, a residential and golf course project to be located generally half a mile north of Valencia Boulevard on the north to McBean Parkway on the south; and, 4) Valencia Marketplace, a regional shopping center to be located along the freeway, between McBean Parkway on the north and Pico Canyon Road on the south.

The City of Santa Clarita and the community of Valencia are located on the immediate east side of I-5. Additional projects existing, proposed or under construction along the east side of I-5 include: 5) The North River community, a residential area that will be similar to already existing parts of Valencia is being developed on the east and west sides of San Francisquito Creek, north of the Santa Clara River; 6) The Valencia Industrial Center, an industrial park generally south of Newhall Ranch Road and west of San Francisquito Creek; 7) Tesoro del Valle project, a residential development proposed north of the North River community and adjacent to and including portions of San Francisquito Creek; 8) The

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FIGURE BIO-16

Porta Bella project, a mixed-use project proposed in the City of Santa Clarita at the southeast corner of the intersection of Soledad Canyon and San Fernando Roads; and, 9) The Valencia Corporate Center, a business park located between Magic Mountain Parkway on the north and Valencia Boulevard on the south.

(2) Ventura County Projects

In Ventura County, development occurs along the Santa Clara River, downstream of the Newhall Ranch Specific Plan site in the community of Piru, and the cities of Fillmore, and further west in the cities of Santa Paula, Oxnard and Ventura. Southwest of the Specific Plan site are the cities of Simi Valley and Moorpark. Various scattered development also occurs in unincorporated portions of the County. Several large proposed development projects are in various states of the entitlement process. They include: 10) Temescal Ranch-Texaco, a mixed-use development proposed near Piru; 11) Big Sky Ranch, a residential development proposed north of Simi Valley on the south-facing side of the Santa Susana Mountains; 12) Strathearn Ranch, a mixed-use development proposed north of Moorpark on the south-facing side of the Santa Susana Mountains; and, 13) Ahmanson Ranch, a mixed-use development approved at the southeast corner of Ventura County.

(3) Cumulative Projects

The following discussion addresses cumulative impacts from the perspective of the potential cumulative impact of the conversion of a natural habitat condition to that of a suburban/urban condition.

Development in the region (Ventura, as well as the San Fernando, Simi, and Santa Clara River valleys) has been cumulatively reducing the amount of open area and extent of sensitive habitats, and has been constricting wildlife movement. This trend is not new. Rather this trend has been occurring since the early 1950s. Remaining undeveloped are major open areas including the Angeles National Forest and Los Padres National Forest. As indicated above, several large development projects are proposed for the Los Angeles/Ventura County region including the Newhall Ranch Specific Plan.

The Newhall Ranch Specific Plan is proposing to permanently dedicate major amounts of land in the Santa Clara River Corridor and the Santa Susana Mountains, while at the same time converting approximately 5,132 acres of land from a largely natural, albeit partially disturbed, habitat condition, to that of a suburban/urban environment. That conversion, when added to all the other such conversions of open space that are proposed, has been and will continue to permanently lead to the shrinkage of the amount of land available for natural habitats and the flora and fauna that inhabit them. In some cases

specific natural habitats and plant and animal species occur in relative abundance despite the amount of development that is on the horizon; however, others do not. In these latter cases, incremental development has been contributing to habitat loss. When viewed individually, it may be possible for each of the projects to mitigate potential project-specific significant impacts through the implementation of habitat replacement programs and the requirements of the regulatory processes to which each of the projects may be subject (e.g., ACOE Section 404 permit process, California Fish and Game Code 1603 permit process, etc.). However, neither implementation of the Newhall Ranch Specific Plan nor any other similar large scale project proposed on the edge of the existing urban environment can mitigate from a biological perspective the permanent conversion of large blocks of open area. It is for this reason that the cumulative impact is considered unavoidably significant.

e. Unavoidable Significant Impacts

(1) Specific Plan Impacts

The Specific Plan would have unavoidable and significant project-specific impacts on several sensitive upland habitat types (including coastal sage scrub and oak woodlands), and the sensitive wildlife associated with upland habitats on the site (including San Diego coast homed lizard, California homed lizard, coastal western whiptail, southern California rufous-crowned sparrow, San Diego desert woodrat and San Diego black-tailed jackrabbit, and others). Also, due to the conversion of approximately 5,132 acres of habitat that is in a largely natural condition to a suburban and urban condition and the reduction in open land available for wildlife movement between the River and upland areas, the project would substantially diminish habitat for fish, wildlife and plants, and would significantly impact the movement of resident wildlife species. Consequently, the project's individual impacts on the site's and the regional biotic environment are considered significant impacts that cannot be mitigated.

(2) Cumulative Impacts

As indicated above, several large development projects are proposed for the Los Angeles/Ventura County region including the Newhall Ranch Specific Plan. All of these proposed developments would remove natural habitat. The Newhall Ranch Specific Plan will convert approximately 5,132 acres of land from a largely natural, albeit partially disturbed, habitat condition, to that of a suburban/urban environment. That conversion, when added to all the other such conversions of open space that are proposed, has been and will continue to permanently lead to the shrinkage of the amount of land

available for natural habitats and the flora and fauna that inhabit them. Neither implementation of the Newhall Ranch Specific Plan nor any other similar large scale project proposed on the edge of the existing urban environment can mitigate from a biological perspective the permanent conversion of large blocks of open area. It is for this reason that the cumulative impact is considered unavoidably significant.

IV.MITIGATION MEASURES

Development of the Newhall Ranch project will result in impacts to biological resources, some of which are considered to be significant. However, the Specific Plan generally avoids areas of highest biological value, and concentrates development in lower quality areas. The mitigation measures presented below, if successfully implemented, would reduce the degree of many of these impacts to a level that is considered not significant.

Mitigation measures are separated into three categories. The first includes an overview of those design features that are incorporated as part of the Specific Plan to reduce the biological impact potential. The second category includes specific mitigation measures incorporated as part of the Resource Management Plan. The last category includes additional mitigation measures recommended as part of the Draft EIR. The specific mitigation measures in each of these categories are defined below.

a. Specific Plan Design Measures

The project was designed to partially mitigate potential impacts to sensitive biological resources through avoidance in order to maximize the conservation of important biological features of the site. Specific elements of project design that are intended to reduce impacts to plants, animals and habitat would be implemented through adoption and approval of the Specific Plan.

The habitat types and associated plant and wildlife species which occur on the property have become an integral part of the overall Specific Plan design, through the formulation of a conservation strategy that allows for the development of the site in a way that minimizes the effects to sensitive biological resources. In addition, this conservation strategy incorporates the design and management of important open space areas in a way that conserves biological values. An important aspect of this approach was an analysis of the conservation value of habitats on the property, which used conservation principles and a GIS mapping methodology. An additional component of the conservation strategy was the consideration of the larger regional context in the conservation design of biological resources on the site. The Ranch, which extends from the ridgeline of the Santa Susana Mountains across the Santa Clara River to the uplands on the north, offers the potential for significant habitat contributions to a Santa Susana Mountains open space area and a key segment of the Santa Clara River system, as well as regionally important connections between these habitat areas and across the River.

The biological resource conservation strategy developed for the Newhall Ranch property addresses the sequencing recommended by the resource agencies: avoidance, minimization, and mitigation for unavoidable impacts to key sensitive resources. The proposed large, open space areas on the Newhall Ranch property avoid impacts to many of the highly sensitive species present or potentially occurring on the site, and their habitats. Further design with respect to potential unavoidable impacts to biological resources has minimized encroachments into key areas of the property, decreasing the overall impacts. Indirect impacts to biological resources are minimized through the dedication of large blocks of habitat that decreases the edge-area ratio, and thus, buffers the habitat from noise, lighting, and encroachment by domestic pets, non-native plants, and humans. The result of these design efforts has produced a biological resource conservation strategy that has focused conservation and mitigation *efforts* on the Newhall Ranch property into three Special Management Areas:

- the Santa Clara River Corridor (River Corridor SMA);
- the large block of relatively undisturbed habitats on higher elevations into the Santa Susana Mountains (High Country SMA); and
- the connection between these two areas along the Salt Creek drainage.

In this design, the Conceptual Grading Plan (EIR Figure 1.0-14) has been developed to allow for preservation of significantly large areas of sensitive native habitats associated with the natural drainage areas of the site, and major landforms have been maintained. Large contiguous blocks of valuable habitat have been avoided and provided with direct linkage. The Specific Plan has focused on putting the two key habitat resource areas into consolidated blocks (connected by the Salt Creek drainage), resulting in minimal boundaries with developed areas. The assembly of these three elements will facilitate their management as a single special management area system within the Specific Plan area, as well as allowing coordination and interface with other programs outside the boundary of Newhall Ranch. The transitions between development and the special management areas will be the focus of special design treatments to protect the integrity of the conserved areas. As indicated above, the "edges" of urban development areas have been minimized to reduce the indirect impact potential of the Specific Plan, and native and compatible species will be used for landscaping in these areas.

The open area system for Newhall Ranch includes the most important habitat areas of the Santa Clara River (River Corridor SMA) and the areas which have been least impacted by agricultural, and oil and natural gas production activities (High Country SMA). It also includes the largest, least fragmented patches of each habitat type that remain on Newhall Ranch. In addition to consolidating the habitat on the Ranch into two major interconnected blocks, the open areas include the largest remaining individual blocks of each of the important habitat types. Substantial proportions of each of the habitat types and vegetation associations that occur on the Ranch will be conserved within the open area system. The incorporation of the River, the mountains, and connection provides for conservation of substantially the entire range of terrain and vegetation types on Newhall Ranch.

By connecting the open areas into two major blocks with a major linkage, the land use plan for the Ranch provides for a minimum edge-to-area ratio within the Specific Plan area. The least accessible portion of the property, in terms of topography and presence of roads, is the High Country SMA. In addition, there is limited existing access to the River and to the Salt Creek corridor area. The topography along the High Country and River provide the opportunity to focus management activities to effectively limit access to the habitat in these key resource areas. Additional management practices are intended to restrict future access as the Specific Plan is implemented.

A critical component of the open area system within the Newhall Ranch property and in the region is the connection between the High Country and the River Corridor along Salt Creek. The corridor will provide continuity between the habitats and the wildlife populations within the property, as well as forming a permanent regional linkage between the Santa Clara River and the Santa Susana Mountains. Salt Creek is the most appropriate location for such a wildlife corridor connection because of several distinguishing characteristics. These include provision of a direct link between the two major open space areas; less disturbance than any of the other potential connections; it is bound through most of its length by open space on the north side and, therefore, will not be surrounded by development in the future; it is the only drainage that would provide more than a discontinuous, narrow connection; it includes both upland and riparian vegetation through most of the corridor; and it is topographically isolated from areas of development on Newhall Ranch. Currently, a portion of the wildlife corridor is situated in Ventura County. Future land use decisions will be required to define the corridor's final configuration in areas that occur outside the County of Los Angeles.

b. Resource Management Plan Mitigation

Approval of the Specific Plan and its associated RMP would involve an amendment to the Los Angeles County zoning ordinance such that the provisions of the Specific Plan and RMP are binding. Specific measures to mitigate impacts to biological resources are incorporated as part of the Resource Management Plan (RMP) that is part of the Newhall Ranch Specific Plan. These measures are identified below:

(1) Santa Clara River SMA

(a) Mitigation Requirements

Mitigation for impacts for the Specific Plan on riparian resources will include restoration of riparian habitat and may include enhancement activities as well. In addition, a mitigation bank may be established as discussed in this section. The general areas in which riparian mitigation activities may take place are shown on Exhibit 2.6-3 of the Resource Management Plan, Candidate Riparian Restoration/Enhancement Areas of the Specific Plan.

The mitigation of Specific Plan impacts through restoration of habitat and enhancement of existing habitat quality shall conform to the requirements set forth below:

1. Mitigation Through Restoration

Habitat restoration as referred to in the Specific Plan means the revegetation of native plant communities on sites that have had the habitat removed due to past activities, such as agricultural or oil and natural gas operations.

Riparian resources along the Santa Clara River that are impacted by the Newhall Ranch Specific Plan will require restoration of similar habitat and values. Avoidance of impacts to riparian resources shall be the primary goal during the design of the individual stages of the Specific Plan. Unavoidable impacts to riparian resources shall be minimized through Specific Plan design, and then mitigated by the implementation of a revegetation plan. The revegetation plan may be prepared as part of a California Department of Fish and Game 1603 Streambed Alteration Agreement or U.S. Army Corps of Engineers Section 404 Permit and shall include the following:

- BIO 1. The restoration mitigation areas located within the River Corridor SMA shall be in areas that have been disturbed by previous uses or activities. Mitigation shall be conducted only on sites where soils, hydrology, and microclimate conditions are suitable for riparian habitat. First priority will be given to those restorable areas that occur adjacent to existing patches (areas) of native habitat that support sensitive species, particularly endangered or threatened species. The goal is to increase habitat patch size and connectivity with other existing habitat patches while restoring habitat values that will benefit sensitive species.
- BIO 2. A qualified biologist shall prepare or review revegetation plans. The biologist shall also monitor the restoration effort from its inception through the establishment phase.
- BIO 3. Revegetation Plans may be prepared as part of a California Department of Fish and Game 1603 Streambed Alteration Agreement and/or an U.S. Army Corps of Engineers Section 404 Permit, and shall include:
 - Input from both the Specific Plan proponent and resource agencies to assure that the Specific Plan objectives applicable to the River Corridor SMA and the criteria of this RMP are met.
 - The identification of restoration/mitigation sites to be used. This effort shall involve an analysis of the suitability of potential sites to support the desired habitat, including a description of the existing conditions at the site(s).
- BIO 4. The revegetation effort shall involve an analysis of the site conditions such as soils and hydrology so that site preparation needs can be evaluated. The revegetation plan shall include the details and procedures required to prepare the restoration site for planting (i.e. grading, soil preparation, soil stockpiling, soil amendments, etc.), including the need for a supplemental irrigation system, if any.
- BIO 5. Restoration of riparian habitats within the River Corridor SMA shall use plant species native to the Santa Clara River whenever and to the extent possible. When possible, cuttings or seeds of native plants shall be gathered within the River Corridor SMA to provide good genetic stock for the replacement habitats. Plant species used in the restoration of riparian habitat shall be listed on the approved project plant palette (Specific Plan Table 2.6-1, Recommended Plant Species for Habitat Restoration in the River Corridor SMA) or as approved by the permitting State and Federal agencies.

- BIO 6. The final revegetation plans shall include notes that outline the methods and procedures for the installation of the plant materials. Plant protection measures identified by the project biologist shall be incorporated into the planting design/layout.
- BIO 7. The revegetation plan shall include guidelines for the maintenance of the mitigation site during the establishment phase of the plantings. The maintenance program shall contain guidelines for the control of non-native plant species, the maintenance of the irrigation system, and the replacement of plant species.
- BIO 8. The revegetation plan shall provide for monitoring to evaluate the growth of the developing habitat. Specific goals for the restored habitat shall be defined by qualitative and quantitative characteristics of similar habitats on the River (e.g., density, cover, species composition, structural development). The monitoring effort shall include an evaluation of not only the plant material installed, but the use of the site by wildlife.
- BIO 9. Monitoring reports for the mitigation site shall be reviewed by the permitting State and/or Federal agency.
- BIO 10. Contingency plans and appropriate remedial measures shall also be outlined in the revegetation plan.

2. Mitigation Through Enhancement

- BIO 11. Habitat enhancement as referred to in this document means the rehabilitation of areas of native habitat that have been moderately disturbed by past activities (e.g., cattle grazing, roads, oil and natural gas operations, etc.) or have been invaded by non-native plant species such as giant cane (*Arundo donax*) and tamarisk (*Tamarix* sp.).
- BIO 12. Removal of cattle grazing is an important means of enhancement of habitat values. Without ongoing disturbance from cattle, many riparian areas will recover naturally. Grazing except as permitted as a long-term resource management activity will be removed from the River Corridor SMA pursuant to the Long-Term Management Plan set forth in (b) 4. below.

- BIO 13. To provide guidelines for the installation of supplemental plantings of native species within enhancement areas, a revegetation plan shall be prepared prior to implementation of mitigation (see guidelines for revegetation plans above). These supplemental plantings will be composed of plant species similar to those growing in the existing habitat patch (see Specific Plan Table 2.6-1).
- BIO 14. Not all enhancement areas will necessarily require supplemental plantings of native species. Some areas may support conditions conducive for rapid "natural" re-establishment of native species. The revegetation plan may incorporate means of enhancement to areas of compacted soils, poor soil fertility, trash or flood debris, and roads as a way of enhancing riparian habitat values.
- BIO 15. Removal of non-native species such as giant cane (Arundo donax), salt cedar or tamarisk (Tamarix sp.), tree tobacco (Nicotiana glauca), castor bean (Ricinus communis), if included in a revegetation plan to mitigate impacts, shall be subject to the following standards:
 - First priority shall be given to those habitat patches that support or have a high potential for supporting sensitive species, particularly endangered or threatened species.
 - All non-native species removals shall be conducted according to a resource agency approved exotics removal program.
 - Removal of non-native species in patches of native habitat shall be conducted in such a way as to minimize impacts to the existing native riparian plant species.

3. Mitigation Banking

BIO 16. Mitigation banking activities for riparian habitats will be subject to State and Federal regulations and permits. Mitigation banking for oak resources shall be conducted pursuant to the Oak Resources Replacement Program. Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester.

(b) Management Requirements

1. Recreation and Access

The quality of the habitat values that are conserved in the River Corridor SMA will benefit from the control of access to riparian areas. Guidelines for the control of access to the River Corridor SMA include the following:

- BIO 17. Access to the River Corridor SMA for hiking and biking shall be limited to the River trail system (including the Regional River Trail and various Local Trails) as set forth in the Specific Plan.
 - The River trail system shall be designed to avoid impacts to existing native riparian habitat, especially habitat areas known to support sensitive species. Where impacts to riparian habitat are unavoidable, disturbance shall be minimized and mitigated as outlined above under habitat restoration.

2. Transition Areas

BIO 18. Where development lies adjacent to the boundary of the River Corridor SMA a transition area shall be designed to lessen the impact of the development on the conserved area. Transition areas may be comprised of Open Area, natural or revegetated manufactured slopes, other planted areas, bank protection areas, and trails. Exhibits 2.6-4, 2.6-5, and 2.6-6 of the Resource Management Plan indicate the relationship between the River Corridor SMA and the development (disturbed) areas of the Specific Plan. The SMAs and the Open Area as well as the undisturbed portions of the development areas are shown in green. As indicated on the exhibits, on the south side of the River the River Corridor SMA is separated from development by the River bluffs, except in one location. The Regional River Trail will serve as transition area on the north side of the River where development areas adjoin the River Corridor SMA (excluding Travel Village).

BIO 19. The following are the standards for design of transition areas:

• In all locations where there is no steep grade separation between the River Corridor and development, a trail shall be provided along this edge.

- Native riparian plants shall be incorporated into the landscaping of the transition areas between the River Corridor SMA and adjacent development areas where feasible for their long-term survival. Plants used in these areas shall be those listed on the approved plant palette (Specific Plan Table 2.6-2 of the Resource Management Plan[Recommended Plants for Transition Areas Adjacent to the River Corridor SMA]).
- Roads and bridges that cross the River Corridor SMA shall have adequate barriers at their perimeters to discourage access to the River Corridor SMA adjacent to the structures.
- Where bank stabilization is required to protect development areas, it shall be composed of ungrouted rock except at bridge crossings and other locations where public health and safety requirements necessitate concrete or other bank protection.
- 3. Grading Activities
- BIO 20. The following guidelines shall be followed during any grading activities that take place within the River Corridor SMA:
 - Grading perimeters shall be clearly marked and inspected by the project biologist prior to grading occurring within or immediately adjacent to the River Corridor SMA.
 - The project biologist shall work with the grading contractor to avoid inadvertent impacts to riparian resources.

4. Long-Term Management Plan

- BIO 21. Upon final approval of the Newhall Ranch Specific Plan, the Special Management Area designation for the River Corridor SMA shall become effective. The permitted uses and development standards for the SMA are governed by the Development Regulations, Chapter 3 of the Specific Plan.
- BIO 22. Upon completion of development of all land uses, utilities, roads, flood control improvements, bridges, trails, and other improvements necessary for the implementation of the Specific Plan within the River Corridor, a permanent, non-revocable conservation easement shall be recorded over the River Corridor SMA.

- BIO 23. The River Corridor SMA conservation easement shall be granted to the County of Los Angeles or to such other public or private entity, with the expertise to perform long-term conservation management, on which the County and the land owner agree.
- BIO 24. The River Corridor SMA conservation easement shall prohibit grazing except as long-term resource management activity, and agriculture within the River Corridor and shall restrict recreation use to the established trail system.
- BIO 25. The River Corridor SMA conservation easement shall be consistent in its provisions with any other conservation easements to State or Federal resource agencies which may have been granted as part of mitigation or mitigation banking activities.
- BIO 26. Prior to the recordation of the River Corridor SMA conservation easement as specified in the measures defined above, the land owner shall provide a plan to the County for the permanent ownership and management of the River Corridor SMA, including any necessary financing. This plan may include the transfer of ownership of the River Corridor SMA to an entity agreeable to the County and the land owner. This entity may include the County, a public or private organization or agency, or a Newhall Ranch owner's association.

(2) High Country Special Management Area (SMA)

(a) Mitigation Requirements

Mitigation activities which may occur in the High Country SMA, either for impacts associated with the construction of Estate lots, trails or access roads, or for impacts identified during the subdivision process in other portions of the Specific Plan Area, include restoration of habitat and enhancement to existing habitat (see discussion below). Mitigation banking may be established as provided below. In addition, Salt Creek Canyon is a high priority area for riparian mitigation.

1. Mitigation Through Restoration

Two types of habitat restoration may occur in the High Country SMA: 1) riparian revegetation activities principally in Salt Creek Canyon; and 2) oak resource replacement in, or adjacent to, existing oak woodlands and savannas.

Mitigation requirements for riparian revegetation activities within the High Country SMA are the same as those for the River Corridor SMA and are set forth above.

Mitigation requirements for oak resource replacement are set forth in Specific Plan Section 2.6, paragraph 3b of the Oak Tree Replacement Program of the Resource Management Program.

2. Enhancement of Habitat

BIO 27. Removal of grazing from the High Country SMA except for those grazing activities associated with long-term resource management programs, is a principal means of enhancing habitat values in the creeks, brushland and woodland areas of the SMA. The removal of grazing in the High Country SMA is discussed below under (b) 4. Long Term Management. All enhancement activities for riparian habitat within the High Country SMA shall be governed by the same provisions as set forth for enhancement in the River Corridor SMA. Specific Plan Table 2.6-3 of the Resource Management Plan provides a list of appropriate plant species for use in enhancement areas in the High Country SMA.

3. Mitigation Banking

BIO 28. Mitigation banking activities for riparian habitats will be subject to State and Federal regulations and permits. Mitigation banking for oak resources, shall be conducted pursuant to the Oak Resource Replacement Program. Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester.

(b) Management Requirements

1. Recreation and Access

The recreation opportunities presented by the High Country SMA are a major benefit of the SMA. However, recreational needs must be balanced with the preservation of the habitat values which are conserved in the SMA. Recreation and access will be governed by the following standards:

BIO 29. Access to the High Country SMA will be limited to day time use of the designated trail system.

- BIO 30. No pets of any kind will be allowed within the High Country SMA, with the exception that equestrian use is permitted on established trails.
- BIO 31. No hunting, fishing, or motor or trail bike riding shall be permitted.

BIO 32. The trail system shall be designed and constructed to minimize impacts on native habitats.

2. Transition/Fuel Modification Areas

Development areas are generally separated from the High Country SMA by steep slopes. Specific Plan Exhibit 2.6-7 of the Resource Management Program, Salt Creek Wildlife Corridor Land Use Perspective, illustrates that development adjacent to the Salt Creek Wildlife Corridor is significantly separated vertically from the corridor.

BIO 33. Transition from the development edge to the natural area shall be controlled by the standards of wildfire fuel modification zones as set forth in Specific Plan Section 2.6, paragraph 4 of the Resource Management Plan.

3. Grading Activities

- BIO 34. Grading perimeters shall be clearly marked and inspected by the project biologist prior to impacts occurring within or adjacent to the High Country SMA.
- BIO 35. The project biologist shall work with the grading contractor to avoid inadvertent impacts to biological resources outside of the grading area.

4. Long-Term Management

- BIO 36. Upon final approval of the Newhall Ranch Specific Plan, the Special Management Area designation for the High Country SMA shall become effective. The permitted uses and development standards for the SMA are governed by the Development Regulations, Chapter 3.
- BIO 37. Upon completion of development of all land uses, utilities, roads, flood control improvements, trails, and other improvements necessary for Planning Area PV-01 (the Visitor Center area), a permanent, non-revocable conservation easement shall be recorded over the High Country SMA. The conservation easement shall allow the permitted uses pursuant to Chapter 3, Development Regulation of the Specific Plan.
- BIO 38. The High Country SMA conservation easement shall be granted to the County of Los Angeles, or to such other public or private entity with the expertise to perform long-term conservation management, on which the County and the land owner agree.

- BIO 39. The High Country SMA conservation easement shall prohibit grazing within the High Country, except for those grazing activities associated with the long-term resource management programs and shall restrict recreation to the established trail system.
- BIO 40. The High Country SMA conservation easement shall be consistent in its provisions with any other conservation easements to State or Federal resource agencies which may have been granted as part of mitigation or mitigation banking activities.
- BIO 41. Prior to the recordation of the High Country SMA conservation easement as specified in the measures identified above, the land owner shall provide a plan to the County for the permanent ownership and management of the High Country SMA. This plan may include the transfer of ownership of the High Country SMA to an entity agreeable to the County and the land owner. This entity may be the County, a public or private organization, or a Newhall Ranch owner's association.
 - (3) Open Area
 - (a) Mitigation Requirements
- BIO 42. Suitable portions of Open Area may be used for mitigation of riparian, oak resources, or elderberry scrub. Mitigation Requirements applicable to Open Area include:
 - River Corridor SMA Mitigation Requirement [paragraph 2a (2)(a) of the Resource Management Plan]
 - Mitigation Through Restoration [2a (2)(a) of the Resource Management Plan]
 - Mitigation Banking [2a (2)(c) of the Resource Management Plan]
 - High Country SMA Mitigation Requirement [2b (2) of the Resource Management Plan]
 - Mitigation Requirements [2b (2)(a) of the Resource Management Plan]
 - Enhancement of Habitat [2b (2)(b) of the Resource Management Plan]
 - Mitigation Banking [2b (2)(c) of the Resource Management Plan]
- BIO 43. Mitigation Banking activities are permitted within Open Area. Mitigation banking activities for riparian habitats will be subject to State and federal regulations. Mitigation banking for oak resources shall be conducted pursuant to the Oak Resources Replacement Program. Plans for elderberry scrub mitigation banking shall be subject to approval by the County Forester.

(b) Management Requirements

- BIO 44. Drainages with flows greater than 2,000 cfs will have soft bottoms. Bank protection will be of ungrouted rock except at bridge crossings and other areas where public health and safety considerations require concrete or other stabilization.
- BIO 45. The precise alignments and widths of major drainages will be established through the preparation of drainage studies to be approved by the County at the time of subdivision maps which permit construction.
- BIO 46. While Open Area is generally intended to remain in a natural state, some grading may take place, especially for parks, major drainages, trails, and roadways. Trails are also planned to be within Open Area.
- BIO 47. At the time that final subdivision maps permitting construction are recorded, Open Area within that subdivision being recorded will be offered for dedication to the County. (Community Parks are intended to be public parks.)
 - (4) Oak Resources Replacement Program
- BIO 48. Standards for the restoration and enhancement of oak resources within the High Country SMA and the Open Area include the following (oak resources include oak trees of the sizes regulated under the County Oak Tree Ordinance, southern California black walnut trees, Mainland cherry trees, and Mainland cherry shrubs:
 - To mitigate the impacts to oak resources which may be removed as development occurs in the Specific Plan Area, replacement trees shall be planted in conformance with the oak tree ordinance in effect at that time.
 - Oak resource species obtained from the local gene pool, if economically feasible, shall be used in restoration or enhancement.
 - Prior to recordation of construction-level final subdivision maps, an oak resource replacement plan shall be prepared that provides the guidelines for the oak tree planting and/or replanting. The Plan shall be reviewed by the Los Angeles County Department of

Regional Planning and the County Forester and shall include the following: site selection and preparation, selection of proper species including sizes and plantings densities, protection from herbivores, site maintenance, performance standards, remedial actions, and a monitoring program.

• All plans and specifications shall follow County oak tree guidelines, as specified in the County Oak Tree Ordinance.

(5) Wildfire Fuel Modification

The Specific Plan Area is within the extreme and moderate fire hazard zones as identified in the Los Angeles County <u>General Plan</u>. The moderate fire hazard zone extends to those areas of Newhall Ranch where native brush can be found growing in its natural state. This is most common in the hillside areas. The extreme fire hazard zone includes high brush and woodlands, and all steep slopes regardless of vegetation (refer to EIR Section 4.18, Fire Services and Hazards, for a detailed description of on-site fire zones).

Development of Newhall Ranch will reduce the amount of native flammable vegetation present within the Specific Plan Area. Fire fighting capabilities will be provided by two fire stations on the Specific Plan site (see EIR Figure 1.0-3, Land Use Plan), other nearby stations, and a system of improved roads and an urban water system with fire flows as required by the County Fire Department. Existing and proposed off-site fire facilities will also serve the Specific Plan Area.

Property damage and public safety risks associated with wildfire are greatest where homes and other structures will be located adjacent to large open areas dominated by native vegetation. This condition will occur primarily in the southern portion of the Specific Plan site and where portions of the development area in the northwest section of Riverwood Village abut large natural open areas.

Access is currently provided to the Los Angeles County Fire Department for fire prevention control of the Specific Plan Area. Access will continue to be provided as the Specific Plan is implemented.

(a) Fuel Modification Requirements

BIO 49. To minimize the potential exposure of the development areas, Open Area, and the SMAs to fire hazards, the Specific Plan is subject to the requirements of the Los Angeles County Fire Protection District (LACFPD), which provides fire protection for the area. At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMAs, a wildfire fuel modification plan shall be prepared in accordance with the final modification ordinance standards in effect at that time and shall be submitted for approval to the County Fire Department.

- BIO 50. The wildfire fuel modification plan shall depict a fuel modification zone the size of which shall be consistent with the County fuel modification ordinance requirements. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the fuel modification ordinance.
- BIO 51. In order to enhance the habitat value of plant communities which require fuel modification, fire retardant plant species containing habitat value may be planted within the fuel modification zone. Typical plant species suitable for Fuel Modification Zones are indicated in Specific Plan Table 2.6-5 of the Resource Management Plan. Fuel modification zones adjacent to SMA's and Open Areas containing habitats of high value such as oak woodland and savannas shall utilize a more restrictive plant list, which shall be reviewed by the County Forester.
- BIO 52. The wildfire fuel modification plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to the County Fire Department requirements.

c. EIR Mitigation Measures

To further reduce impacts to biological resources that would result from Specific Plan implementation the following mitigation measures are proposed.

- BIO 53. If at the time subdivisions permitting construction are processed, the County determines through an Initial Study that there may be rare threatened or endangered species on the property being subdivided, then a site specific survey shall be conducted to define the presence or absence of such species and any necessary mitigation measures shall be determined and applied.
- BIO 54. Prior to development within or disturbance to occupied unarmored threespine stickleback habitat, a formal consultation with the USFWS and a Section 2081 Agreement with the CDFG shall occur.

- BIO 55. Prior to development or disturbance within wetlands or other sensitive habitats permits shall be obtained from pertinent federal and state agencies and the Specific Plan shall conform with the specific provisions of said permits.
- BIO 56. All lighting along the perimeter of natural areas shall be downcast luminaries with light patterns directed away from natural areas.
- BIO 57. Where bridge construction is proposed and water flow would be diverted, blocking nets and seines shall be used to control and remove fish from the area of activity. All fish captured during this operation would be stored in tubs and returned unharmed back to the River after construction activities were complete.
- BIO 58. To limit impacts to water quality the Specific Plan shall conform with all provisions of required NPDES permits and water quality permits that would be required by the State of California Regional Water Quality Control Board.
- BIO 59. Prior to development within or disturbance to habitat occupied by species listed as endangered, a formal consultation with the USFWS and a Section 2081 Agreement with the CDFG shall occur.
- BIO 60. If at the time subdivisions permitting construction are processed, the County determines through an Initial Study that there may be elderberry scrub vegetation on the property being subdivided, then a site specific survey shall be conducted to define the presence or absence of such habitat and any necessary mitigation measures shall be determined and applied.
- BIO 61. If at the time subdivisions permitting construction are processed, the County determines through an Initial Study that there may be mainland cherry trees and/or mainland cherry shrubs on the property being subdivided, then a site specific survey shall be conducted to define the presence or absence of such habitat and any necessary mitigation measures shall be determined and applied.
- BIO 62. When a map revision or Substantial Conformance determination on any subdivision map or Conditional Use Permit would result in changes to an approved oak tree permit, then the oak tree report for that oak tree permit must be amended for the area of change, and the addendum must be approved by the County Forester prior to issuance of grading permits for the area of the map or CUP being changed.

BIO 63. Riparian resources that are impacted by buildout of the Newhall Ranch Specific Plan shall be restored with similar habitat at the rate of one acre replaced for each acre lost.

d. Cumulative Mitigation Measures

When viewed individually, it may be possible for each of the proposed projects which contribute to the cumulative loss of habitat and other impacts described above to mitigate potential project-specific significant impacts through the implementation of appropriate mitigation. However, neither implementation of the Newhall Ranch Specific Plan nor any other similar large scale project proposed on the edge of the existing urban environment can mitigate from a biological perspective the permanent conversion of large blocks of open area. As such, there are no known mitigation measures available to reduce the level of the identified cumulative impacts.

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APPENDIX A Color Aerial Photograph of the Site





APPENDIX B Color Site Photographs





PHOTOGRAPH KEY MAP

	S	MPACT SCIENCES NC	NORTH
100 ACRES 40	English		
100 ACRES 1 40	•	223m 450m 900m	

D N L E G E

TOPOGRAPHIC ELEVATION CONTOUR LINES (50 FOOT INTERVALS)

DRAFT 4/95

Photograph Key Map for Newhall Ranch

Photo #	Photograph Description		
1	Geologic formation, Potrero Canyon		
2	Lower Potrero Canyon, looking south		
3	Lower Potrero; Valley oak and grassland.		
4	Salt Creek Canyon (creek in foreground, scrub oak, rock formation in		
	background)		
5	Salt Čreek (water in creek)		
6	Salt Creek Canyon; Coastal sage scrub		
7	Salt Creek Canyon; Coastal sage scrub, Great Basin scrub, grassland		
8	Mouth of Salt Creek Canyon		
9	Salt Creek/ Grave Canyon		
10	Grave Canyon/ Upper Salt Creek; Coastal sage scrub		
11	Upper Grave Canyon; looking west		
12	Santa Clara River (sloping flat ag. field in distance)		
13	Santa Clara River; Cottonwood/willow		
14	Santa Clara River (in river)		
15	Santa Clara River; Cottonwood/willow riparian forest		
16	Long Canyon; Geologic formation		
17	Long Canyon; Mainland Cherry/Oak woodland		
18	Upper Long Canyon; Coastal sage scrub (oil rig to right)		
19	Lower Long Canyon; Oak woodland (with cows)		
20	Long Canyon, looking south		
21	Long Canyon, drainage course		
22	Long Canyon, drainage course		
23	Upper Long Canyon, looking south		
24	Long Canyon; Mainland cherry/Oak woodland		
25	Upper Long Canyon, looking south		
26	View north across Onion Field		
27	Upper Via Canyon		
28	Rawhide Canyon (oak on left, mountain in background)		
29	Rawhide Canyon (drainage, oak tree)		
30	Upper Lion (creek bed)		
31	Lion Canyon; Mainland cherry in bloom.		
32	Lion Canyon; Mainland cherry/Oak woodland		
33	Middle Canyon; looking north		
34	Chiquito Canyon; looking south		
35	Chiquito Canyon (dry creek, rock formation in background)		
36	San Martinez Grande Canyon; looking south		
37	San Martinez Grande Canyon; looking north		
38	High Country; Santa Susana Mountains, geologic formation		
	(picture taken from off-site but rock formation may be on the site		
	on the western boundary)		
39	California walnut (off-site to the west on way to High Country; not		
	shown on map)		
40	High Country, Santa Susana Mountains; Valley Oak Savanna		



Photo 1.



Photo 2.

Photo 3.



Photo 4.



Photo 5.

Photo 6.







Photo 7.

Photo 8.



Photo 9.



Photo 10.



Photo 11.









Photo 13.



Photo 14.





Photo 16.



Photo 17.



Photo 18.




Photo 19.



Photo 20.





Photo 22.



Photo 23.







Photo 25.



Photo 26.



Photo 28.



Photo 29.



Photo 30.





Photo 31.



Photo 32.



Photo 34.







Photo 36.



Photo 37.





Photo 39.





APPENDIX C USGS Topographic Map

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APPENDIX D Topography and Place Names







Newhall Ranch Company

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D

L E G E

APPENDIX E Dames & Moore Biological Survey Results

BIOLOGICAL RESOURCES OF THE UPLAND AREAS OF THE WEST RANCH

Prepared for:

Newhall Land and Farming Company Planning Department Valencia, California

Prepared by:

Dames & Moore Santa Barbara, California

July, 1993

BIOLOGICAL RESOURCES OF THE UPLAND AREAS OF THE WEST RANCH

Prepared for: Newhall Land and Farming Company Planning Department 23823 Valencia Blvd. Valencia, CA 91355

> Prepared by: Dames & Moore 5425 Hollister Ave. Suite 160 Santa Barbara, CA 93111 05280-010-001

> > July 1993

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1.0 INTRODUCTION

This report presents the results of biological resources studies conducted in the upland areas on the West Ranch holdings of the Newhall Land and Farming Company (the Company). It does not include specific information about the biological resources in aquatic and riparian habitats associated with the Santa Clara River. The Company requested that Dames & Moore provide descriptive information on the distribution of vegetation types and associated wildlife occurring on the West Ranch. The potential for rare plant occurrence was also an objective of the study. The purpose of this report is to provide the Company with information on sensitive species and habitats which can be used in planning efforts.

Field studies were conducted in the spring and summer of 1992. As such, this report presents the conditions of the vegetation types and wildlife habitats observed at that time. Information provided in this report on the status of sensitive species is current as of June 1993. It is important to note that processes such as vegetative succession, climatic trends, and other natural and human-caused disturbances, are dynamic phenomena which could potentially alter the vegetative features and habitat conditions that are described in this report over time. In addition, the sensitivity status of species are periodically reevaluated and reclassified by governmental resource agencies. These considerations should be understood by Company personnel during review of this report during any constraints analysis process.

2.0 METHODS AND STUDY AREA

2.1 SURVEYS

Dames & Moore biologists Thomas Olson, Melinda Trask, and Donald Mitchell, and subcontracting biologist Zev Labinger, conducted the field studies. The study area included the "upland" portion of the West Ranch located to the north and south of the Santa Clara River floodplain. The riparian vegetation and habitats of the floodplain were not surveyed per the agreed-upon scope of work. The following studies were conducted:

(1) Delimiting the boundaries of vegetation types and land uses on $1^{*}=400^{\circ}$ feet scale base maps from aerial photographs and reconnaissance field surveys to accessible portions of the West Ranch. The minimum mapping unit on the maps was about one acre. Five oversized figures (Map 1 through Map 5) accompanying this report show the distribution of vegetation types.

(2) Rare plant surveys (see Table 1) which were conducted simultaneously with the vegetation mapping effort. The most intensive survey coverage for rare plants occurred on: 1) the ridge areas of the Santa Susana Mountains near the southern boundary of the property; 2) upland areas south of San Jose Flat; and 3) most of the major canyons, including Lion, Upper Potrero, Middle Potrero, Lower Potrero, Long, Adobe, Salt Creek, and Rawhide. Table 1 lists sensitive plants with potential to occur in the study area. During field surveys conducted for sensitive plants and to assist in vegetation mapping, a list was compiled of all plant species observed (Table 2).

(3) Two surveys in April and May 1992 for common and sensitive species with emphasis on birds and sensitive species. Sensitive wildlife species with potential to occur on the West Ranch are described in Table 3.

(4) Two nights of small mammal trapping and scent-station monitoring study (28, 29 May 1992).

(5) Spotlight surveys during one night (28 May 1992).

(6) Incidental wildlife species observations made during all field surveys. Table 4 includes a list of wildlife species observed during field surveys.

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2.2 SENSITIVE SPECIES

Classifications of species considered as "sensitive" for this report are described in the footnotes for Table 1 (sensitive plant species) and Table 3 (sensitive wildlife species).

3.0 RESULTS

3.1 VEGETATION AND WILDLIFE HABITATS

Twenty-four vegetation types were identified on the West Ranch (see the oversized figures). The general physiognomy (structure and appearance) of each vegetation type and the general characteristics of the particular land use are described below. The dominant plant species associated with each vegetation type are also noted. In addition, the different vegetation types are generally evaluated in terms of their suitability as habitat for common and sensitive wildlife species. One consideration for assessing wildlife habitat was the amount of plant biomass available to provide wildlife with valuable resources such as food (e.g., fruits, seeds, browse, insect populations), "escape cover" (e.g., protection from predators), and reproductive effort components (e.g., nest sites, singing perches). Vegetation types with relatively more biomass also tend to provide more structural diversity and vertical layering of wildlife habitat components. Therefore, the amount of biomass present in one vegetation type relative to others is included in the discussions below.

Several vegetation types with similar structure were combined to indicate wildlife species observed, as described in Table 4. The combined wildlife habitats (and vegetation types comprising the combinations) included in Table 4 are:

Wildlife habitat	Vegetation Types
Coastal sage scrub	Sparse coastal sage scrub, dense coastal sage scrub
Chaparral	Chamise chaparral, mixed chaparral
Great Basin scrub	Great Basin scrub
Oak woodland/savanna	Live oak woodland, valley oak woodland, valley oak savanna, cottonwood/oak woodland
Elderberry scrub	Elderberry scrub
Grassland	Grassland
Ruderal	Ruderal

Wildlife habitat	Vegetation Types	
Riparian scrub/Alluvial scrub	Mulefat scrub, willow scrub, arrowweed scrub, alluvial scrub, scalebroom (Lepidospartum) scrub	
Cottonwood woodland	Cottonwood woodland	
Mesic meadow	Mesic meadow	
Freshwater marsh	Freshwater marsh	
Pond	Pond	
Disturbed	Disturbed areas	
Agricultural land	Agricultural land	
Ornamental plantings	Ornamental plantings	

3.1.1 Native/Natural Habitats

3.1.1.1 Sparse Coastal Sage Scrub

Sparse coastal sage scrub is a shrubland vegetation type (i.e., a "scrub"). Sparse coastal sage scrub occurs in hilly terrain throughout the West Ranch mostly on drier south-facing slopes. This vegetation type also occurs in areas that appear to have burned within the past decade. Extensive tracts of sparse coastal sage scrub occur in the hills located north of Route 126, the slopes above Potrero, Salt Creek and Long canyons, and in the vicinity of Magic Mountain Amusement Park (Magic Mountain) (see the oversized figures). Dominant plant species are coastal sagebrush (*Artemisia californica*), gray sage (*Salvia leucophylla*), deerweed (*Lotus scoparius*), California encelia (*Encelia californica*), and California buckwheat (*Eriogonum fasciculatum*). Although these species dominate sparse coastal sage scrub, they account for less than 50 percent cover; hence, these areas are referred to as "sparse". Grasses, herbs and/or bare ground occur on the remaining ground surface area. The only rare plant species which was observed on the West Ranch occurred within this vegetation type: Peirson's morning glory (*Calystegia peirsonii*) (see Table 1). This species was observed scattered throughout hilly areas above Salt Creek Holding, Dead End Canyon, Lion Canyon, and Middle Potrero Canyon.

In recent years, additional populations of Peirson's morning glory have been located in the region. Some of the populations have been relatively large, represented by thousands of plants (Hendrickson, personal communication, 1993).

Sparse coastal sage provides a moderate level of biomass to support bird and terrestrial mammal species. The relatively open characteristics of the vegetation would provide foraging opportunities for raptors which prey on exposed small animal species (e.g., rabbits, mice, kangaroo rats, snakes, lizards, etc.). The sparsity of the vegetation would be less restrictive on the movements of regional wildlife species (e.g., deer [Odocoileus hemionus], coyote [Canis latrans], bobcat [Lynx rufus]) than denser vegetation types. Wildlife species observed during 1992 surveys in this vegetation type included western whiptail (Cnemidophorus tigris), California quail (Callipepla californica), rock wren (Salpinctes obsoletus), and Pacific kangaroo rat (Dipodomys agilis). Rufous-crowned sparrow (Aimophila ruficeps canescens), a species closely associated with coastal sage scrub, was observed at several locations, including south of Airport Mesa, west of Grape Vine Mesa, near Potrero Mesa, and in Dead End, Long, and Lion canyons. Loggerhead shrike (Lanius ludovicianus), a Category 2 candidate for listing as a federal endangered or threatened species, was observed foraging around coastal sage scrub and chaparral on Bee Fiat and in Potrero Canyon.

3.1.1.2 Dense Coastal Sage Scrub

Extensive tracts of dense coastal sage occur throughout the West Ranch in hilly terrain on northfacing slopes of the Santa Susana Mountains and within several canyons (e.g., Rawhide, Grave, Via, Dead End canyons), and in the vicinity of Magic Mountain. The relatively moister regime of these areas compared to sparse coastal sage areas promotes a more dense growth of scrub vegetation. The denser growth also indicates that the vegetation is at or near a mature stage of development and that these areas have probably not burned in several decades. Coastal sage scrub dominants (coastal sagebrush, gray sage, deerweed, California encelia, and California buckwheat) occupy more than 50 percent of the areal cover. Herbs and grasses provide a sparse understory.

Dense coastal sage has more biomass than sparse coastal sage scrub and can potentially support somewhat higher numbers of birds. However, this habitat would probably not be utilized to a great extent by most raptor species because of escape cover for potential prey species. The density of the vegetation and the associated rugged terrain probably limit large mammal movements. Evidence of wildlife movements within areas of dense scrub was mostly apparent on dirt roads and along watercourses. Wildlife species known or expected to occur in this habitat include side-blotched lizard (*Uta stansburiana*), greater roadrunner (*Geococcyx californianus*), scrub jay (*Aphelocoma coerulescens*), and brush mouse (*Peromyscus boylii*). The San Diego desert woodrat (*Neotoma lepida intermedia*), a Category 2 candidate for listing as a federally threatened or endangered species, was trapped in coastal sage scrub mixed with other vegetation types at Trap Sites 4 and 6 (see Section 3.2.1). Those trap sites were located in Bee Flat and Salt Creek Canyon, respectively.

3.1.1.3 Chamise Chaparral

Chamise chaparral is a shrubby vegetation type which consists of relatively homogeneous stands of chamise (*Adenostoma fasciculatum*). Chamise chaparral occurs as a few small patches in the hilly terrain located north of Potrero Canyon. Generally, it occurs on dry, impoverished mineral soil types.

Although chamise chaparral vegetation may achieve a relatively high density and biomass, chamise is not a highly valuable resource plant for wildlife species. This vegetation provides habitat for a relatively low to moderate diversity of reptiles, birds, and small mammals. Some species observed in this habitat during the 1992 surveys included side-blotched lizard, western fence lizard (*Sceloporus occidentalis*), California quail, ash-throated flycatcher (*Myiarchus cinerascens*), blue-gray gnatcatcher (*Polioptila caerulea*), and several species of mammals, such as coyote, bobcat, and deer mouse (*Peromyscus maniculatus*).

3.1.1.4 Mixed Chaparral

Mixed chaparral is a dense, woody vegetation type that occurs in the hilly terrain located north and south of Potrero Canyon. Extensive tracts occur to the southeast and southwest of Grape Vine Mesa. Shrubby plants in the genera *Ceanothus*, *Rhus*, and *Salvia* provide most of the biomass. Other dominants include chamise and toyon (*Heteromeles arbutifolia*). Altogether, these species account for more than 50 percent cover. Herbs and grasses occur as a sparse understory or are restricted to edges and openings.

The composition of mixed chaparral includes many shrub species that produce berries and seeds that are consumed by birds and mammals. However, most of the mixed chaparral on the West Ranch occurs on areas of rugged terrain; this is likely to restrict mammal densities and movements to the vicinities of arroyos and dirt roads. Raptors are not likely to extensively utilize this habitat for foraging purposes due to the high level of escape cover afforded prey species. The species composition of wildlife that utilize this habitat would be similar to that of chamise chaparral. San Diego desert woodrat was trapped at Trap Site 2 in Lion Canyon in a mix of chaparral, Great Basin scrub, and scalebroom (Lepidospartum) scrub.

3.1.1.5 Great Basin Scrub

Great Basin scrub consists of relatively homogeneous stands of Artemisia tridentata which occur within arroyos and on upper floodplain terraces adjacent to riparian areas. Great Basin scrub mostly occurs as a transitional vegetation type between riparian and sage scrub types. Great Basin scrub occurs adjacent to the Santa Clara River and within Salt Creek, Long, and Lion canyons. The distinctive gray coloration of the foliage makes this vegetation type easily distinguishable from scrub and chaparral vegetation.

The fauna of Great Basin scrub habitat is similar to that of sage scrub habitats, but with some species that also utilize riparian zones, particularly birds. In addition to habitat provided, Great Basin scrub in the study area occurs within movement corridors. Among those observed during surveys were house wren (*Troglodytes aedon*), Bewick's wren (*Thryomanes bewickii*), phainopepla (*Phainopepla nitens*), and rufous-sided towhee (*Pipilo erythrophthalmus*).

3.1.1.6 Live Oak Woodland

Live oak woodland consists of open and closed canopy woodland with coast live oak (*Quercus agrifolia*) as the dominant species. Live oak woodland occurs within several unnamed canyons in the Santa Susana Mountain portion of the West Ranch and within several canyons and arroyos located in hilly terrain located north of Potrero Canyon. Based upon site characteristics which influence vegetation growth (e.g., exposure, soil profile, soil moisture regime, slope, drainage) the understory components consist of scrub, chaparral, and riparian scrub vegetation type.

Oak woodlands provide valuable resources and habitat for as many as 60 species of mammals and 110 species of birds in California. Acoms are high in caloric value and easily obtained by wildlife species. Oaks provide browse and serve as habitat for insects which are preyed upon by insectivorous birds and mammals. The dense foliage provides thermal cover for roosting and nesting birds and escape cover for prey species. Cavities in limbs and trunks are used as nest sites by birds and den sites by small mammals. Understory components contribute to the overall biomass and can increase the overall wildlife habitat value of oak woodlands.

The oak woodlands on the West Ranch can be considered "edge habitats" because they occur as relatively limited areas within larger blocks of scrub vegetation. Edge habitats are areas where there is a great amount of interfacing between two or more different vegetation types. Such areas are synergistic with regard to the production and availability of resources for wildlife species due to the greater diversity of plant species per unit area. Oak woodlands and their edge areas provide habitat for a relatively high diversity of wildlife species on the West Ranch. Among those observed during the 1992 field surveys were western fence lizard, American kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), northern flicker (*Colaptes auratus*), and mountain lion (*Felis concolor* - tracks only). Several raptors were observed foraging over this habitat including black-shouldered kite (*Elanus caeruleus*) and red-tailed hawk (*Buteo jamaicensis*).

3.1.1.7 Valley Oak Woodland

Valley oak woodland consists of open and closed canopy woodland with valley oak (*Quercus lobata*) present as the dominant species. Valley oak woodland achieves its greatest extent within lower Rawhide Canyon and Via Canyon. The discussion concerning live oak woodland above also generally pertains to valley oak woodland with regard to understory components and utilization as wildlife habitat. Wildlife species that occur in valley oak woodland on the west Ranch are similar to those in live oak woodland.

3.1.1.8 Valley Oak Savanna

Savannas are stands of relatively widely-spaced trees within grassland. Valley oak savanna occurs on extensive areas within Lower Potrero Canyon and along the ridgeline of the Santa Susana Mountains between Bear Flat and Via Pond. Many of the valley oaks observed in these areas are very large, old trees.

The wildlife habitat values of valley oak savanna are similar to that described above for oak woodlands except that the former has lower overall biomass due to the presence of a grassland understory. As such, the density and diversity of breeding birds is expected to be lower than that of oak woodland. Foraging opportunities for raptors and terrestrial predators are high in savanna vegetation types because of the open physiognomic characteristics. Species observed foraging during the 1992 field surveys included red-tailed hawk, black-shouldered kite, turkey vulture (*Cathartes aura*), and American kestrel. Grassland adapted species were observed in valley oak savanna, including Brewer's blackbird (*Euphagus cyanocephalus*), goldfinches, and California ground squirrel (*Spermophilus beecheyi*).

3.1.1.9 Elderberry Scrub

Elderberry scrub consists of thickets dominated by Mexican elderberry (*Sambucus mexicana*). Elderberry scrub occurs mostly in association with riparian and scrub vegetation types on that portion of the West Ranch located north of Potrero Canyon adjacent to the Santa Clara River.

Several bird and mammal species use the berries and foliage of Mexican elderberry as resources. Elderberry scrub provides habitat for a fauna that is similar to that found in sage scrubs and mixed chaparral. This habitat provides a moderate amount of cover to about eight to ten feet in height. At ground level, there are scattered openings and a variable amount of bare ground. Among the species observed in elderberry scrub during the 1992 field surveys were coachwhip (*Masticophis flagellum*), mourning dove, black-chinned hummingbird (*Archilochus alexandri*), Anna's hummingbird, and black phoebe (*Sayornis nigricans*).

3.1.1.10 Cottonwood/Oak Woodland

Cottonwood/oak woodland is a late successional woodland that occurs at the interface of riparian areas with upland habitats. Cottonwood/oak woodland occurs on the upland portions of the West Ranch on higher elevation terraces along the Santa Clara River and at the mouth of an unnamed canyon located south of Airport Mesa near Magic Mountain. This vegetation type represents a successional trend of coast live oak replacing Fremont's cottonwood (*Populus fremontii*) on a site. The trend reflects a gradual transition of soil conditions from a wetter to a drier regime.

Cottonwood/oak woodland provides habitat for a variety of wildlife species because of the oak resource and because it functions as edge habitat. The vertical layering of cover provides a greater diversity of habitats for breeding birds. Among those known or expected to breed in this habitat are American kestrel, acorn woodpecker (*Melanerpes formicivorus*), other species of woodpeckers (*Picoides pubescens*, *P. villosus*, *P. nuttallii*), plain titmouse (*Parus inornatus*), and white-breasted nuthatch (*Sitta carolinensis*).

3.1.1.11 Grassland

Grasslands are dominated by non-native grasses, including Bromus, Avena, Hordeum, and Festuca. A major component of the grassland flora is provided by several native and non-native herb species including doveweed (Eremocarpus setigerus), common cryptantha (Cryptantha intermedia), purple owl's clover (Orthocarpus purpurascens), red-stemmed filaree (Erodium cicutarium), short-pod mustard (Brassica geniculata), wild radish (Raphanus sativa), cheeseweed

(*Malva parviflora*), and London rocket (*Sisymbrium irio*). Grasslands are most widespread within Potrero, Salt Creek and Long canyons, and on the crest of the Santa Susana mountains. Grasslands also occur within the unnamed canyon located south of Airport Mesa, and on Grape Vine Mesa.

The potential utilization of grasslands within the corridor for native wildlife species has been somewhat reduced by disturbances associated with cattle grazing and agriculture. Grasslands on the West Ranch are (together with sparse coastal sage scrub) primary foraging areas for raptors and loggerhead shrike. Among those observed during the 1993 field surveys were two sensitive species (black-shouldered kite and Cooper's hawk, *Accipiter cooperii*), as well as turkey vulture, red-tailed hawk, and red-shouldered hawk (*Buteo lineatus*). Large flocks of tricolored blackbirds (*Agelaius tricolor*) were observed in grassland in Potrero Canyon and on a terrace north of the Mayo Crossing. Raptors forage for small mammals which occur in grasslands at varying densities. Numerous sightings were made of California ground squirrel and desert cottontail (*Sylvilagus audubonii*).

3.1.1.12 Ruderal Vegetation

Ruderal plants are native and non-native herb and grass species that are well adapted for germination, growth and reproduction under disturbed soil conditions. Areas that are dominated by an association of these "weed" species are referred to as ruderal. Ruderal areas may be fallow agricultural lands, disturbed grasslands or scrublands, and other areas cleared for human use that have grown over with weeds. Ruderal areas within floodplains generally are replaced by a pioneer riparian flora such as mulefat scrub (mulefat scrub); however, ruderals tend to persist on upland sites by outcompeting native herb species. Ruderal lands occur around the Newhall Potrero Oilfield and the Castaic Junction Oilfield.

Areas with ruderal vegetation are of limited use to wildlife on the West Ranch because the native plant species that provide resources are mostly absent. However, some species have adapted well to disturbed conditions, including western fence lizard, California ground squirrel, and house finch. Loggerhead shrikes were observed foraging around ruderal areas near Bee Flat.

3.1.1.13 Mulefat Scrub

Mulefat scrub is an early successional riparian scrub dominated by mulefat (*Baccharis glutinosa*). Mulefat is a pioneer species on sites with periodically inundated or saturated soils. Typical habitat includes the banks of permanent watercourses, intermittent watercourses, recently

formed terraces within a floodplain, seasonally ponded areas, ground with a water table near the surface, drainage ditches, and seeps. Mulefat scrub can be maintained on a site by a cycle of frequent inundation and scouring, but generally will be replaced in time by other riparian shrub and tree species such as willows (*Salix* spp.) and cottonwoods (*Populus* spp.). Mulefat scrub occurs to some extent within all major and minor drainages on the West Ranch, including Potrero Creek and Salt Creek. Mulefat scrub occurs within these drainages in monotypic stands, and in association with willow scrub and sage scrub components. It is widespread along the adjacent Santa Clara River.

Mulefat scrub which occurs on upland portions of the West Ranch functions primarily as edge habitat, and is used principally as foraging habitat by birds. However, mulefat scrub is not very extensive and is considered suitable breeding habitat for a limited number of bird species. Raptors such as Cooper's hawk, and red-shouldered hawk, probably use mulefat scrub, as well as other riparian scrub and riparian woodland types, as foraging habitat. The arroyos and washes with mulefat scrub, as well as other riparian scrub and riparian woodland vegetation types (see below), function as movement corridors for mule deer, coyote, and other mammals.

3.1.1.14 Willow Scrub

Willow scrub is a mid-successional riparian scrub dominated by tree and shrub-like willow species (*Salix* spp.). The willow species on the West Ranch include arroyo willow (*Salix lasiolepis*), red willow (*S. laevigata*), and sandbar willow (*S. hindsiana*). These willows generally form thickets in conjunction with mulefat that largely exclude a herbaceous understory. Willow scrub generally replaces mulefat scrub on a site. Willow scrub occupies drainages within Potrero Canyon and Salt Creek Canyon.

The willow scrub on the West Ranch provides habitat for small birds and foraging raptors; utilization is similar to that described previously for mulefat scrub. However, willow scrub represents better nesting habitat for a variety of birds, such as black phoebe, house wren, Bewick's wren, and rufous-sided towhee.

3.1.1.15 Arrowweed Scrub

Arrowweed scrub is a riparian associated scrub type which consists of mostly homogeneous stands of arrowweed (*Pluchea sericea*). It occurs mostly along higher terraces above the Santa Clara River and forms a transitional vegetation type between more mesic riparian scrub areas and upland sage scrub and grassland areas. There are no sensitive species associations with

arrowweed scrub. It is probably utilized as habitat by a less diverse fauna than are mulefat scrub and willow scrub. Species observed included mourning dove, Anna's hummingbird, brown-headed cowbird (*Molothrus ater*), and desert cottontail.

3.1.1.16 Alluvial Scrub

Alluvial scrub is an association of shrubs occurring on alluvial materials within intermittent creeks, arroyos, and the drier terraces within large washes. Alluvial scrub occurs within some of the drier arroyos and washes located north of Potrero Canyon (i.e., Long and Lion canyons, the unnamed wash located below Airport Mesa, and the wash areas located south of Magic Mountain). This vegetation is typically found in association with Great Basin sage, scalebroom (*Lepidospartum squamatum*), Mexican elderberry, groundsel (*Senecio douglasii*), quail bush (*Atriplex lentiformis*), and squaw bush (*Rhus trilobata*). Some of these plant species provide food resources for birds and mammals. Wildlife species occurring in alluvial scrub are similar to those found in arrowweed scrub. Species known or expected to utilize this habitat include gopher snake (*Pituophis melanoleucus*), western fence lizard, side-blotched lizard, California quail, black phoebe, wrens, towhees, raccoon (*Procyon lotor*), gray fox (*Urocyon cinereoargenteus*), deer mouse, and kangaroo rats.

3.1.1.17 Scalebroom (Lepidospartum) Scrub

Scalebroom scrub (also known as *Lepidospartum* scrub) occurs in essentially the same types of arroyo and wash habitats as alluvial scrub, but is distinguishable by the more homogeneous stands of scalebroom. Because it is monotypic, there are fewer resources available to wildlife species and it is utilized by fewer wildlife species. Among wildlife species observed in this habitat were several western whiptails, potentially individuals of the coastal subspecies (*Cnemidophorus tigris multiscutatus*), a Category 2 federal candidate species.

3.1.1.18 Cottonwood Woodland

Extensive stands of cottonwood (*Populus fremontii*) occur adjacent to the Santa Clara River. In the study area, groups of a few to several trees occur within the upland portions of the West Ranch in the mouths of some side canyons located adjacent to San Jose Flat. In these areas the cottonwood woodland may also contain coast live oak as the woodland becomes transitional between mesic riparian to a drier upland habitat type (see cottonwood/oak woodland above).

Cottonwood woodlands provide foraging and nesting habitat for a diversity of bird species, as well as other wildlife species. During the 1993 field surveys, 30 species of birds and 6 species of mammals were observed in or flying over cottonwood woodland habitat. Sensitive species observed included black-shouldered kite and Cooper's hawk foraging overhead.

3.1.1.19 Mesic Meadow

Mesic meadows are areas in grasslands with seeps or springs that support one or more hydrophytic plant species. Dominant species include lizard tail (*Anemopsis californica*), curley dock (*Rumex crispus*), and spike rush (*Eleocharis* spp.). Mesic meadow habitat occurs within Potrero Creek in the Middle Potrero. Here, the slope of the topography may drop off at a sharper angle than the water table, thereby resulting in the seep. Mesic meadow habitat is of importance to some wildlife species because it may provide a drinking water source, breeding sites for amphibians (such as western spadefoot toads that breed in Potrero Canyon), and foraging habitat for raptors. During the 1993 field surveys, observations of wildlife at mesic meadow habitats included tree swallows (*Tachycineta bicolor*) and violet-green swallows (*Tachycineta thalassina*) foraging overhead, as well as American robins (*Turdus migratorius*), and red-winged blackbirds (*Agelaius phoeniceus*).

3.1.1.20 Freshwater Marsh

Freshwater marsh areas contain permanent and seasonal standing freshwater which support a flora dominated by hydrophytes and aquatic plants. This condition occurs along the Santa Clara River, but occurs at only one small location within the upland portion of the West Ranch (southwest of Airport Mesa). This location is adjacent to the riparian zone of the Santa Clara River. Subsequent to the Dames & Moore field surveys, it has been reported that this small area of freshwater marsh was washed out by high water flows of the Santa Clara River during the winter of 1993 (Gloria Glenn, Newhall Land and Farming Company, personal communication, 1993). Prior to its alteration, this habitat's floral elements included representatives of the genera Carex (sedges), Scirpus (bulrushes), and Typha (cattails). In general, freshwater marsh is important as wildlife habitat because it provides potential breeding habitat for California redlegged frog (Rana aurora) and southwestern pond turtle (Clemmys marmorata pallida), habitat for common and sensitive riparian/marsh associated birds and raptors, habitat for migratory waterfowl, and provides regional wildlife species with drinking water. Even before its removal by high flows, this habitat was very limited in extent within the West Ranch. As such, the occurrence of aquatic sensitive species such as red-legged frog and pond turtle was unlikely. The latter has potential to occur nearby in the Santa Clara River.

3.1.1.21 Pond

Artificial ponds occur in a few locations on the West Ranch and apparently serve as floodcontrol structures or water-holes for cattle. Ponds provide breeding habitat for amphibians such as frogs and toads. Western spadefoot toad (*Scaphiopus hammondii*), a species of special concern, and Pacific treefrog (*Hyla [Pseudacris] regilla*) tadpoles were observed in Via Pond and in a large pond in the Middle Potrero. Two-striped garter snakes (*Thamnophis hammondii*), a Category 2 candidate species for federal listing as threatened or endangered, were observed in Via Pond. In addition, waterfowl and shorebirds potentially occur on a seasonal basis at the ponds. The ponds also function as sources of water for regional wildlife species.

3.1.2 Developed Areas

3.1.2.1 Disturbed

For mapping purposes, areas of sparse vegetation cover (less than 20 percent) dedicated to oil production, residential use, industrial use, and roads, are designated as "D" on base maps. These areas generally have associated ruderal or grassland vegetation elements. Disturbed areas occur mostly in association with oilfields within Potrero Canyon, Long Canyon, and in the vicinity of Magic Mountain.

Disturbed areas are used by only a limited number of wildlife species because they provide little or no foraging habitat. However, deer, bobcat, coyotes, and other large mammals will use dirt roads and some other openings within the disturbed areas as movement corridors.

3.1.2.2 Agricultural

Areas dedicated to agricultural production include field crops and tree crops. Active and fallow agricultural areas occur adjacent to the Santa Clara River and in associated upland areas such as Potrero and Grape Vine mesas.

Agricultural areas are used by some bird and mammal species for foraging. However, the overall use by wildlife is low. Raptor species, particularly red-tailed hawks, are known to forage for small mammals, such as California ground squirrels in agricultural fields.

3.1.2.3 Ornamental Plantings

Landscaped areas and extensive plantings of non-native tree species such as eucalyptus (*Eucalyptus* spp.) and pepper tree (*Schinus molle*) occur mostly about occupied and abandoned residences, farm buildings, and as windrows of trees within agricultural areas. Ornamental plantings provide habitat for common bird species that normally occupy developed areas such as house finch (*Carpodacus mexicanus*), northern mockingbird (*Mimus polyglottos*), American crow (*Corvus brachyrhynchos*), and European starling (*Sturnus vulgaris*). Other species may use ornamental plantings as edge habitat, and raptors will sometimes nest within windrows. However, the overall diversity of wildlife utilizing ornamental plantings is relatively low.

3.2 WILDLIFE SURVEYS

To assess to potential occurrences of common and sensitive wildlife species, field surveys were conducted in April and May 1992. Survey efforts included small mammal trapping, monitoring of scent stations, spotlight survey, and general surveys. Results of those surveys follow.

3.2.1 Small Mammal Trapping

Live-trapping of small mammals was conducted at six trap sites during the nights of 28 and 29 May 1992. At each trap site, 10 standard-sized Sherman live traps were set and baited with rolled oats and bird seed. The total number of trap-nights per station was 20 (120 total trap-nights of effort overall). The trap sites included:

- Trap Site 1—Oak woodland and riparian scrub habitat in a drainage west of Grape Vine Mesa.
- Trap Site 2—Great Basin scrub, scalebroom (*Lepidospartum*) scrub, and chaparral along a dry wash in Lion Canyon.
- Trap Site 3—Oak woodland and coastal sage scrub in a small, unnamed drainage west of Lion Canyon.
- Trap Site 4—Coastal sage scrub bordered by disturbance (oil wells and pads) on Bee Flat.

- Trap Site 5—Great Basin scrub and mulefat scrub adjacent to coastal sage scrub and grassland in the Salt Creek Holding area.
- Trap Site 6—At edge of oak savanna, coastal sage scrub, and Great Basin scrub in Salt Creek Canyon.

During the trapping surveys, nine species of small mammals were captured (Table 5). The number of species trapped per site ranged from three at Trap Site 3 to five at Trap Sites 4, 5, and 6. The total number of individuals trapped per site varied from five (5 captures in 20 trapnights = 25% success rate) at Trap Site 3 to 15 (75%) at Trap Sites 2 and 4. The overall trapping success for the six sites was 52% (62 captures in 120 trap-nights). Results of trapping indicated relatively moderate to high densities of small mammals in scrub habitats with adequate vegetation cover close to ground level. Trap Sites 1, 2, and 4 had dense vegetative cover up to approximately three to four feet. In contrast, Trap Sites 3, 5, and 6 (with relatively few captures) included habitats that were quite open at ground level.

Dominant small mammal species were deer mouse (*Peromyscus maniculatus*) and Pacific kangaroo rat (*Dipodomys agilis*). It is interesting to note that San Diego desert woodrats (*Neotoma lepida intermedia*) were trapped at Trap Sites 2 (in Great Basin scrub), 4 (coastal sage scrub), and 6 (coastal sage scrub). This is a Category 2 federal candidate for listing as threatened or endangered.

3.2.2 Scent Station Monitoring

At each trap site location, a scent station was established and monitored for two days (following the nights of 28 and 29 May 1992). General habitat descriptions for Scent Stations 1 through 6 are included in Section 3.2.1 (descriptions of trap sites).

Each scent station consisted of a levelled area, approximately one square meter in size, over which a layer of diatomaceous earth was smoothed. Bait (cat food and commercial trappers' lure) was placed in the center of each station in an attempt to lure predators onto the diatomaceous earth. The objective was to develop information about the occurrence of predators on the West Ranch based on tracks left in the diatomaceous earth. Results of the scent station monitoring are included in Table 6.

Predator tracks were observed at only two scent stations (coyote and bobcat at Station 4 and bobcat at Station 2). Other species' tracks observed at scent stations included desert cottontail,

kangaroo rat, California ground squirrel, and unidentified small rodent tracks. Although no tracks were observed at Scent Station 3, bobcat and mountain lion tracks were detected in mud nearby.

3.2.3 Spotlight Survey

A spotlight survey was conducted on 28 May 1992 from approximately 8:30 p.m. to 10:30 p.m. Two biologists made observations using 300,000-candlepower spotlights while driving slowly in a vehicle on dirt roads. The survey focused on the following areas: Rawhide Canyon, Salt Creek Canyon, Salt Creek Holding area, the upland areas south of Mayo Crossing, Potrero Mesa, and Potrero Canyon.

The number and diversity of wildlife observed were very low. No large mammals were positively identified, although unidentified green eyeshine was noted in Salt Creek Canyon. Other observations included:

- Western toad in Salt Creek Canyon
- Pacific treefrogs heard throughout Salt Creek Canyon
- Great horned owls (one adult, two young) in Potrero Canyon
- Common barn owl in Potrero Canyon.

3.2.4 General Surveys

General surveys were conducted for wildlife species and to evaluate wildlife habitats in April and May 1992. In addition, incidental observations of wildlife made during sensitive plant surveys and vegetation mapping were noted. Table 4 includes a list of all wildlife species detected by observations of individuals and/or sign. Although intensive surveys were not conducted throughout the study area, most major features (canyons, hillsides, ridges, ponds, drainages, etc.) were reviewed.

During the 1992 field surveys on the West Ranch, 100 wildlife species were detected, including 3 amphibians, 7 reptiles, 73 birds, and 17 mammals. Included among those species were the following sensitive species (see Section 3.3 and Table 4 for additional details):

- Western spadefoot toad
- California horned lizard

- Coastal western whiptail (several observations of western whiptail with indications that the coastal subspecies occurs throughout the region)
- Two-striped garter snake
- Black-shouldered kite
- Cooper's hawk
- Loggerhead shrike
- Tricolored blackbird
- San Diego desert woodrat

Observations made during the general surveys supported the information presented in Section 3.1. The numbers and diversity of wildlife, particularly birds, were high in oak woodland, oak savanna, cottonwood-oak woodland, riparian scrub, and cottonwood woodland. Abundance and diversity declined in coastal sage scrub, chaparral, Great Basin scrub, and elderberry scrub. Wildlife observations were lowest in grassland, ruderal, agriculture, and developed areas, and included species adapted to human-caused habitat alterations, such as western fence lizard, rock dove (*Columba livia*), common barn owl, European starling, and house finch. Coyote tracks were observed along dirt roads and on oil well pads, indicating use of those facilities as travel corridors. Grassland, and to some extent agricultural areas, provided foraging sites for raptors. The diversity of wildlife species at mesic meadows and ponds (Via Pond, pond in Potrero Canyon) was relatively low, however these areas represent infrequently occurring habitats that are used by species such as western spadefoot toad and two-striped garter snake.

3.3 SUMMARY OF SENSITIVE SPECIES OCCURRENCES

Classification of plants and wildlife considered as "sensitive" for this report are described in Section 2.2 and as footnotes to Tables 1 and 3. Species from lower priority lists (such as CNPS Lists 3 and 4) are not considered here nor are species of local concern without official designation.

3.3.1 Sensitive Plants

Of the 11 sensitive plants with potential to occur on the West Ranch, only one (Peirson's morning glory) was observed (Table 1). This species was noted at multiple locations on slopes within sparse coastal sage scrub. Those populations of plants were in relatively steep locations.

Areas on the West Ranch where Peirson's morning glory was observed included slopes near Salt Creek Holding, West Fork of Salt Creek near the Ventura County line, Middle Potrero, Adobe Canyon, Red Rock Canyon, Lion Canyon, and Dead End Canyon. In addition, it could potentially occur in sparse coastal sage scrub north of Route 126.

Because the entire West Ranch was not intensively surveyed, other sensitive plants not observed could potentially occur in the study area. The species with the highest likelihood to occur is Pringle's yampah, which could occur in several areas of coastal sage scrub on the West Ranch. After a field review of the West Ranch, the remaining sensitive plant species were considered to have little or no likelihood of occurring (Table 1).

In addition to the sensitive plant species described above, it should be noted that valley oak trees occur within valley oak woodland and valley oak savanna habitats. This species is recognized by the state government as rare and declining species per Senate Concurrent Resolution 17. Valley oaks on the West Ranch occur primarily in Rawhide, Salt Creek, Via, and Lower Potrero canyons. As described in Section 3.1.1.8, many of the valley oaks are old, large trees.

3.3.2 Sensitive Wildlife

During 1992 field surveys, individuals or sign of nine sensitive wildlife species were observed, including (see Figure 1 for locations):

- Western spadefoot toad—Tadpoles and toadlets (small metamorphosed toads) were observed in and near Via Pond and a pond in Middle Potrero Canyon. The sizes of the tadpoles indicated at least three separate breeding events in 1992.
- *California horned lizard*—One individual observed in a canyon bottom near Grape Vine Mesa.
- Coastal western whiptail—Western whiptails were observed at several locations, primarily in areas dominated by coastal sage scrub, and in mixed habitat with coastal sage scrub present. Those individuals could have been the coastal subspecies, which is known from the region.
- Two-striped garter snake—Observed in two locations, including Via Pond and in Salt Creek within Rawhide Canyon.



LEGEND



SOURCE: DAMES AND MOORE, 1993

FIGURE 1 SENSITIVE WILDLIFE

- Black-shouldered kite—One observed flying overhead between San Jose Flat and Dead End Canyon. Apparent nesting by this species nearby in the Santa Clara River.
- Cooper's hawk—One observed in same general area as the black-shouldered kite. Apparent nesting by this species in 1992 near the study area.
- Loggerhead shrike—Observed in Potrero Canyon and near Bee Flat. Because this species is relatively tolerant of human-caused changes, loggerhead shrikes could potentially occur elsewhere on West Ranch.
- San Diego desert woodrat—Individuals live-trapped at three locations, including:

 (a) Trap Site 2 a combination of Great Basin scrub, scalebroom (Lepidospartum) scrub, and chaparral in Lion Canyon;
 (b) Trap Site 4 coastal sage scrub adjacent to oilfield disturbance on Bee Flat; and
 (c) Trap Site 6 oak savanna, coastal sage scrub, and Great Basin Scrub in Salt Creek Canyon.
- Tricolored blackbird—Flocks of approximately 20 and 50 were observed in Middle Potrero Canyon and north of Mayo Crossing, respectively.

Similar to conclusions regarding potential occurrence of sensitive plants, other sensitive wildlife species could occur on the West Ranch despite not being observed during field surveys. Intensive surveys were not conducted throughout all portions of the study area. Of the remaining 13 species of sensitive wildlife potentially occurring in upland areas of the West Ranch (Table 3), those with the highest likelihood include Bell's sage sparrow, golden eagle and American badger.

The potential occurrence of other species includes:

- Southwestern pond turtle—Unlikely, but possible occurrence in Via Pond. This species is known to travel over two miles between aquatic habitats (Hunt, personal communication, 1993). It potentially occurs in the Santa Clara River and tributaries.
- Silvery legless lizard—Possible occurrence in limited areas of sandstone-derived soils (Hunt, personal communication, 1993). This type of habitat occurs in Upper Potrero Canyon.
- San Diego horned lizard—Unlikely, but potential occurrence in coastal sage scrub and chaparral habitats. The West Ranch is within an area of intergradation between California and San Diego horned lizards. Some individuals observed in the region have exhibited characteristics of both subspecies (Hunt, 1993).
- *Prairie falcon*—Potential nesting habitat near Bee Flat, Long Canyon, and Salt Creek Canyon; however, occurs in the region primarily during winter and migration.
- Burrowing owl---No recent observations in the vicinity of West Ranch, but could possibly occur in grassland and oak savanna areas where California ground squirrel burrows are found.
- Yellow warbler—Unlikely occurrence in upland portions of West Ranch in oak woodland, oak/cottonwood woodland, and cottonwood woodland. Known occurrence in nearby riparian zone of the Santa Clara River.
- Bat species—Little is known about the distribution of bats. Appropriate roosting habitat for the pale big-eared bat (caves, abandoned buildings), as well as for California mastiff bat and spotted bat (rugged, rocky areas with crevices) appear to be somewhat limited in the study area.
- Los Angeles pocket mouse—the status of this species in the region is uncertain. None was captured during live-trapping surveys. There have been very few recent reports of this species west of the San Gabriel Valley and no known records from the Newhall area. The Los Angeles pocket mouse is unlikely to occur on the West Ranch.

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SENSITIVE PLANT SPECIES POTENTIALLY OCCURRING ON THE WEST RANCH

Scientific Name ¹	Common Name	Status ² Fed/State/CNPS	Growth Form ³	Flowering <u>Period</u>	Habitat	Local <u>Distribution</u>	Likelihood of occurrence on the West Ranch
Astragalus brauntonli	Braunton's milk vetch	C2//1B	PH	FebJune	Chaparral; limestone soils. 500-1500 ft.	Current records from vicinity of Thousand Oaks and Oak Park.	Low
Calystegia pelrsonii	Peirson's morning- glory	C2/-/4	PH -	May-June	Coastal sage scrub; dry slopes.	Northern base of San Gabriel Mtns. to Castaic Lagoon region.	Occurs on West Ranch; grassland-sparse coastal sage scrub interfaces
Centrostegia leptoceras	Slender-horned spineflower	FE/CE/1B	АН	April-June	Coastal sage scrub; sandy places, alluvial terraces. Below 2500 ft.	Historic occurrence in Newhall area, Presumed extinct in L.A. County.	Very unlikely
Chorizanthe parryi var. fernandina	San Fernando Valley spineflower	C3A/-/1A	АН	April-June	Coastal sage scrub; dry sandy places below 2500 ft.	Historic occurrence in the project area. Now presumed extinct.	Very unlikely
Delphinium parryi ssp. blochmaniae	Dune larkspur	//1B	PH	April-May	Chaparral; clayey soils derived from Conejo volcanics; sand dunes.	Occurrence records from vicinity of Conejo Pass.	Unlikely
Dudleya multicaulis	Many-stemmed dudleya	C2/-/1B	РН	May-June	Coastal sage scrub, grasslands; rocky or clayey substrates. Below 2000 ft.	Known from locations both west and east of Simi Valley.	Unlikely
Dudleya blochmaniae ssp. blochmaniae	Blochman's dudleya	//1B	PH	May-June	Coastal sage scrub; dry stony places; clayey and serpentine soils.	Coastal mountains, San Luis Obispo Co. to San Diego.	Unlikely
Harpagonella palmeri var. palmeri	Palmer's grappling . hook	//2	AH	March-April	Coastal sage scrub, grasslands; open places with clay soils below 1500 ft.	Historic occurrence in Los Angeles Co.	unlikely

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(continued)

Scientific Name ¹	Common Name	Status ² Fed/State/CNPS	Growth <u>Form³</u>	Flowering <u>Period</u>	Habitat	Local Distribution ⁴	Likelihood of occurrence
Hemizonia minthornii	Santa Susana tarplant	C2/CR/1B	5	July-Oct.	Chaparral, coastal sage scrub; Cretaceous sandstone outcroppings.	Santa Susana and Santa Monica mountains.	Unlikely
Mahonia nevinii	Nevin's barberry	C1/CE/1B	S	March-April	Coastal sage scrub; sandy and gravefly places below 2000 ft.	Two populations in upper San Francisquito Canyon.	Unlikely
Perideridia pringlei	Pringle's yampah	C3C//4	PH	April-June	Coastal sage scrub.	Northern Los Angeles, Kern, and Ventura counties.	Somewhat likely to occur in most areas of coastal sage scrub

¹ Scientific and common names follow Munz (1974) and Smith and Berg (1988).

² Status information:

Federal (USFWS, 1991 and 1992):

- FE = Federally listed, endangered—by the Director of the U.S. Fish and Wildlife Service (USFWS) pursuant to the Federal Endangered Species Act of 1973, as amended (ESA).
- FT = Federally listed, threatened—by the Director of the U.S. Fish and Wildlife Service (USFWS) pursuant to the Federal Endangered Species Act of 1973, as amended (ESA).
- PE = Taxa already proposed to be listed as endangered.
- PT = Taxa already proposed to be listed as threatened.

The taxa in Categories 1 and 2 are considered by the USFWS as candidates for possible addition to the List of Endangered and Threatened Wildlife. The USFWS encourages their consideration in long-range environmental planning, such as in environmental impact analysis under the National Environmental Policy Act of 1969 (implemented at 40 CFR parts 1500-1508).

C1 = Taxa for which the USFWS has on file enough substantial information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened species. Proposed rules have not yet been issued because this action is precluded at present by other listing activity. Development and publication

(continued)

of proposed rules on Category 1 taxa are anticipated, however, and the USFWS encourages other Federal agencies to give consideration to such taxa in environmental planning.

C2 = Taxa for which information now in the possession of the USFWS indicates that proposing to list as endangered or threatened is possibly appropriate, but for which conclusive data on biological vulnerability and threat are not currently available to support proposed rules. The USFWS emphasizes that these taxa are not being proposed for listing by this notice, and that there are no current plans for such proposals unless additional supporting information becomes available. Further biological research and field study usually will be necessary to ascertain the status of taxa in this category. It is likely that many will be found not to warrant listing, either because they are not threatened or endangered or because they do not qualify as species under the definitions of the ESA. The USFWS hopes that this notice will encourage necessary research on vulnerability, taxonomy, and/or threats for these taxa.

Taxa that once were considered for listing as threatened or endangered but are no longer under such consideration are included in Category 3. Taxa in Category 3 are not current candidates for listing. Such taxa are further divided into three subcategories to indicate the reason(s) for their removal from consideration:

- C3A = Taxa for which the USFWS has persuasive evidence of extinction. If rediscovered, such taxa might acquire high priority for listing. At this time, however, the best available information indicates that the taxa in this subcategory, or the habitats from which they were known, have been lost.
- C3B = Names that, on the basis of current taxonomic understanding (usually as represented in published revisions and monographs), do not represent distinct entities meeting the ESA's definition of "species"; it also includes vertebrate populations that do not meet this definition. Such supposed taxa could be reevaluated in the future on the basis of new information.
- C3C = Taxa that have proven to be more abundant or widespread than previously believed and/or those that are not subject to any identifiable threat. If further research or changes in habitat indicate a significant decline in any of these taxa, they may be reevaluated for possible inclusion in Categories 1 or 2.

State (CDFG, 1991 and 1992):

Plant taxa are designated as endangered, threatened or rare by the Fish and Game Commission of the State of California. A state candidate species is one which the Fish and Game Commission has formally noticed as being under review by the CDFG for addition to the state list pursuant to Section 1904 (Native Plant Protection Act of 1977) and Sections 2074.2 and 2075.5 (California Endangered Species Act of 1984) of the Fish and Game Code. The legal protection afforded listed plants under the NPPA involves provisions that prohibit the taking of plants from the wild and a salvage requirement for landowners. If a landowner has been informed of the presence of a listed species on the property, the CDFG must be notified at least ten days in advance of any land use change that might affect the species or its habitat, thereby affording the CDFG an opportunity to conduct a salvage operation. Candidate species are also protected from taking under NPPA.

- CE = State listed, endangered
- CT = State listed, threatened
- CR = State listed, rare
- SCE = State candidate for listing as endangered
- SCT = State candidate for listing as threatened
- SCR = State candidate for listing as rare

(concluded)

CNPS (Smith and Berg, 1988):

The CDFG has a policy of regarding all plant species on Lists 1A, 1B and 2 of the CNPS "Inventory of Rare and Endangered Vascular Plants of California" (Smith and Berg, 1988) as meeting the definitions of Section 1901, Chapter 10 (Native Plant Protection) of the Fish and Game Code and, therefore, eligible for state listing. The CDFG usually requests the inclusion of Lists 1A, 1B and 2 taxa in EIRs as necessary. Plants on CNPS Lists 3 and 4 which have no federal or state sensitivity status are not included in Table 1.

- 1A = Plants presumed extinct in California. The CNPS emphasizes the word "presumed" as opposed to an unequivocal term.
- 1B = Plants rare, threatened, or endangered in California or elsewhere.
- 2 = Plants rare, threatened, or endangered in California, but more common elsewhere.
- 3 = Plants about which additional information on distribution, endangerment, and taxonomic validity are needed—under review by the CNPS.
- 4 = Plants of limited distribution with vulnerability or susceptibility to threat which appears low at the present time-monitored by CNPS,

³ Growth Form: AH = annual herb; PH = perennial herb; S = shrub; SS = succulent shrub; T = tree

Local distribution information has been obtained from the following sources: species' range distribution from Munz, 1974; Michael Brandman Associates, 1991; CNPS (Smith and Berg, 1988); Dames & Moore, in-house database, 1991; CNDDB, 1990; and the results of the rare plant surveys conducted in 1991 and 1992 by Dames & Moore,

PLANT SPECIES OBSERVED DURING 1992 FIELD SURVEYS

Scientific Name	Common_Name	Growth Form ¹
Adenostoma fasciculatum	chamise	S
Agrotis alba*	redtop	PG
Amaranthus albus*	tumbleweed	AH
Ambrosia acanthicarpa	annual burweed	AH
Ambrosia psilostachya	western ragweed	PH
Amsinckia intermedia	fiddleneck	AH
Anemopsis californica	yerba mansa	PH
Artemisia californica	California sagebrush	S
Artemisia tridentata ssp. parishii	Great Basin sagebrush	S
Asclepias fascicularis	narrow-leaved milkweed	PH
Astragalus trichopodus var. trichopodus	Santa Barbara locoweed	PH
Arriplex semibaccata*	Australian saltbush	PH
Atriplex lentiformis ssp. breweri	quail brush	S
Atriplex canescens	four-winged saltbush	S
Avena barbata*	slender wild oats	AG
Avena fatua*	wild oats	AG
Baccharis glutinosa	mulefat	S
Baccharis pilularis consanguinea	coyote bush	S
Brassica geniculata*	short-pod mustard	PH
Brassica nigra*	black mustard	AH
Brickellia californica	California brickellia	S
Bromus tectorum*	downy brome	AG
Bromus rubens*	red brome	AG
Bromus mollis*	soft-chess brome	AG
Bromus diandrus*	rip-gut brome	AG
Calandrinia ciliata vas menziesii	red maids	AH
Calochortus clavatus ssp. clavatus	club-haired mariposa lily	PH
Calystegia peirsonii	Peirson's morning glory	PH
Camissonia bistorta	southern sun cups	AH
Camissonia boothii	Booth's evening primrose	AH
Castilleja affinis	indian paint brush	PH
Cercocarpus betuloides	birch-leaf mountain-mahogany	S
Chenopodium californicum	California goosefoot	PH
Chenopodium ambrosioides*	Mexican-tea	AH
Cirsium vulgare*	bull thistle	BH
Claytonia perfoliata	miner's lettuce	AH
Convolvulus arvensis*	field bindweed	PV
Convza canadensis*	horseweed	AH
Corethrogyne filaginifolia	cudweed-aster	PH
Crassula erecta	Erect crassula	AH
Croton californicus	California croton	PH
Cryptantha intermedia	common cryptantha	AH
Cucurbita palmata	covote melon	PV
Cucurbita foetidissima	calabazilla	PV
		4 * ·

TABLE 2 (continued)

Scientific Name Common Name Growth Form1 Cuscuta californica California dodder PH Datura meteloides itmsonweed PH Descurainia pinnata western tansy mustard AΉ Dichelostemma puchellum blue dicks AH Distichlis spicata salt grass PG Dudleya lanceolata lance-leaved dudleya PH Eleocharis sp. spikerush PH Elymus condensatus giant wild rye PG Emmenanthe penduliflora whispering bells AH Encelia californica bush sunflower S Eremocarpus setigerus dove weed AH Eriodictyon crassifolium verba santa S Eriogonum fasciculatum California buckwheat S Eriogonum elongatum elongate buckwheat PH Erodium cicutarium* red-stem filaree AH Ervsimum capitatum wall flower AH Eschscholzia californica California poppy AH Eucalyptus spp.* eucalyptus Т Eucrypta chrysanthemifolia common eucrypta AH Festuca myuros rat-tail fescue AG Gilia angelensis Angeles gilia AH Haplopappus squarrosus sawtooth goldenbush S Haplopappus venetus ssp. vernonioides coast goldenbush S Heteromeles arbutifolia toyon S telegraph weed Heterotheca grandiflora AH Hordeum leporinum* hare barley AG Juglans californica California walnut т Keckiella cordifolia heart-leaved penstemon S Lasthenia chrysostoma common goldfield AH Lavia sp. tidy tips AH Lepidospartum squamatum scalebroom S Leptodactylon californicum pricky phlox S Lolium perenne ssp. multiflorum* Italian ryegrass AG Lotus corniculatus* bird's-foot lotus PH Lotus scoparius deerweed S Lupinus hirsutissimus stinging lupine AH Lupinus bicolor annual lupine AH Lupinus succulentus succulent lupine AH Malva parviflora* cheeseweed AH Marah fabaceus California manroot ΡV Marrubium vulgare* horehound PH Medicago polymorpha* annual bur-clover AH Melica imperfecta small-flowered melica PG Melilotus indicus* yellow sweet clover AH Mirabilis californica wishbone bush PH Nicotiana glauca* tree tobacco S Opunita basilaris var. ramosa beavertail cactus S coast cholla S Opuntia prolifera

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TABLE 2 (continued)

Scientific Name	Common Name	Growth Form ¹
Opuntia littoralis var. littoralis	coastal prickly pear	S
Orthocarpus purpurascens	purple owl's clover	AH
Paeonia californica	California peony	PH
Penstemon centranthifolius	scarlet bugler	PH
Perezia microcephala	sacapellote	PH
Phacelia cicutaria	caterpillar phacelia	AH
Phacelia ramosissima var. suffrutescens	branching phacelia	PH
Pholistoma auritum	fiesta flower	AH
Plagiobothrys nothofulvus	popcom flower	AH
Platanus racemosa	California sycamore	T
Platystemon californicus	cream cups	AH
Pluchea sericea	arrowweed	S
Polypogon monspeliensis*	rabbit's-foot grass	AG
Populus fremontii	Fremont's cottonwood	Ť
Prunus ilicifolia	holly-leaved cherry	S
Quercus agrifolia	coast live oak	Т
Quercus lobata	vallev oak	Т
Raphanus sativus*	wild radish	AH
Rhamnus crocea	redberry	S
Rhus laurina	laurel sumac	S
Rhus trilobata	squaw bush	S
Rosa californica	California wild rose	S
Rumex acetosella*	sheep sorrel	PH
Rumex crispus*	curly dock	PH
Salix laevigata	red willow	Ť
Salix lasiolepis	arroyo willow	Т
Salix hindsiana	sandbar willow	S
Salsola iberica*	Russian thistle	AH
Salvia columbariae	chía	AH
Salvia mellifera	black sage	S
Salvia leucophylla	purple sage	S
Salvia apiana	white sage	S
Sambucus mexicana	Mexican elderberry	S
Schinus molle*	Peruvian pepper-tree	Т
Schismus barbatus*	Mediterranean schismus	AG
Scirpus californicus	California bulrush	PH
Senecio douglasii	bush groundsel	S
Silybum marianum*	milk thistle	AH
Sisymbrium irio	London rocket	AH
Solanum xantii	purple nightshade	S
Sonchus oleraceus*	sow-thistle	AH
Stellaria media	common chickweed	AH
Stipa pulchra	purple needlegrass	PG
Tamarix sp.*	tamarisk	S
Toxicodendron diversilobum	poison cak	\$
Trifolium tridentatum	tomcat clover	AH
Typha domingensis	slender cattail	PH
Urtica holosericea	stinging nettle	PH

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(concluded)

Scientific Name	Common Name	Growth Form ¹
Viola pedunculata Xanthium strumarium*	Johnny-jump-up cocklebur	AH AH
Yucca whipplei	our Lord's candle	\$
Zauschneria cana	California fuchsia	PH

¹ Growth form: AG = annual grass; AH = annual herb; PG = perennial grass; BH = biennial herb; PH = perennial herb; PV = perennial vine; S = shrub; T = tree.

Introduced or naturalized species.

SENSITIVE WILDLIFE SPECIES POTENTIALLY OCCURRING ON THE WEST RANCH

Scientific Name	Common Name	Status Federal/State ¹	<u>Habitat</u>	Local Distribution ²
AMPHIBIANS AND REPTILES				
Scaphlopus hammondl	Western spadefoot toad	FR/SSC	Vernal pools, ephemeral waterbodies.	Observed in a Potrero Canyon pond and in Via Pond (April, May 1992).
Clemmys marmorata pallida	Southwestern pond turtle	C2/SSC	Ponded water in permanent streams with dense vegetation.	Potential occurrence in the Santa Clara River. Unlikely, but possible occurrence at Via Pond.
Phrynosoma coronaium frontale	California horned lizard	-/SSC	Coastal sage scrub, chaparral; sandy washes.	Individual observed near Red Rock Canyon (May 1992).
Piırynosoma coronatum blainvillei	San Diego horned lizard	C2/SSC	Coastal sage scrub, chaparral; sandy washes.	Past occurrence in Placerita Canyon and other arcas in Los Angeles County which are now mostly urbanized. Study area is in zone of intergradation between <i>P. c. frontale</i> and <i>P. c.</i> blainvillei.
Cnemidophorus Ilgris multiscutatus	Coastal western whiptail	C2/	Scrub and wash habitats with scattered open areas.	Several western whiptails observed in coastal sage scrub and Great Basin scrub on West Ranch. Could potentially have been this sensitive subspecies.
Anniella puichra puichra	Silvery legless lizard	/\$\$C	In friable soils and under leaf litter in a variety of shrub and woodland habitats.	Potential to occur in areas with sandstone-derived soils within scrub, or oak woodland habitats, such as Upper Potrero Canyon.
Thamnophis hanmondii	Two-striped garter snake	C2/	Ponds, aquatic habitats	Two observed in Via Pond during surveys (May 1992). One observed in Salt Creek, within Rawhide Canyon (May 1992).
BIRDS				
Elanus caeruleus	Black-shouldered kite	/CP	Grassland, riparian arcas.	Uncommon resident of study area. One individual observed during survey. Recent observation of a pair in the Santa Clara River near the study area (May 1992).

TABLE 3 (continued)

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Scientific Name	Common Name	Status <u>Federal/State¹</u>	Habitat	Local Distribution ²
Accipiter cooperil	Cooper's hawk	-/SSC	Oak woodland; riparian; grassland.	Uncommon resident of study area. Report of 1992 nesting near study area along Santa Clara River. Observed during May 1992 survey in the project area.
Aquila chrysaetos	Golden eagle	-/CP	Grassland; agriculture.	Potential occurrence in areas with combination of grassland and scrub habitat. No observations during survey.
Falco mexicanus	Prairie falcon	-/\$\$C	Grassland, scrub habitats.	Rare winter migrant. Potential nesting habitat in exposed cliffs in areas such as near Bee Flat, Long Canyon, Salt Creek Canyon.
Athene cunicularia	Burrowing owl	-/SSC	Grassland, sparse scrubland; occupies ground squirrel burrows.	Rare resident of study area vicinity. No recent or historic records nearby. No observations during survey.
Lanius ludovicianus	Loggerhead shrik e	C2/55C	Chaparral, coastal sage sorub, grassland.	Relatively common resident in study area, primarily at interfaces between grassland and scrub habitats, and in open areas. Observed during the May 1992 survey.
Dendroica petechia	Yellow warbler	-/SSC	Riparian woodland; oak woodland; conifer forest.	Known summer resident along the Santa Clara River. Unlikely, but possible occurrence in oak/ cottonwood woodland on West Ranch.
Amphispiza beili beili	Bell's sage sparrow	-/ SS C	Dry coastal sage scrub; dense chaparral.	Potential to occur in study area, especially in chaparral areas in southern portion. None observed during survey.
Agelalus tricolor	Tricolored blackbird	C2/SSC	Breeds in freshwater marsh and other areas with cattails and bulrushes. Forages in agricultural fields, pastures.	Flocks observed in the study area in April and May 1992, primarily foraging in grazed grassland in Potrero Canyon and adjacent to Santa Clara River flood plain.
MAMMALS				
Plecotus townsendli pallescens	Pale big-cared bat	-/\$\$C	Many; roosts in caves and abandoned buildings.	Status unknown in study area. No known nesting or roosting habitat in the study area.
Eumops perotis californicus	California mastiff bat	C2/SSC	Many; rugged, rocky areas with crevices for roosting.	Status unknown in study area.