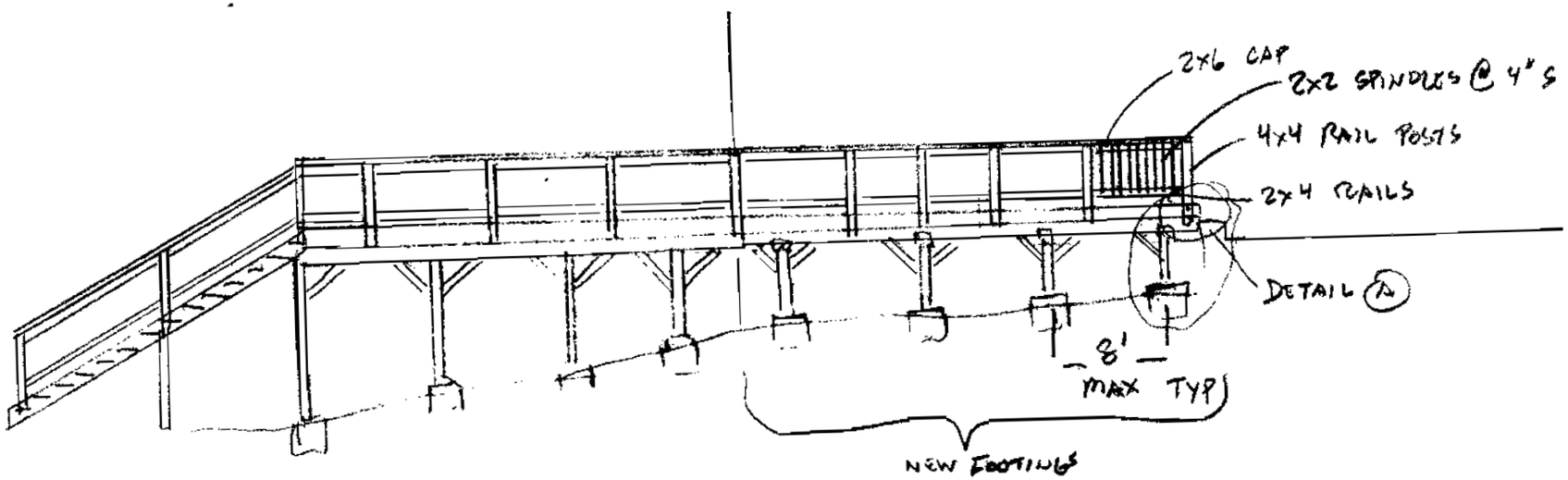

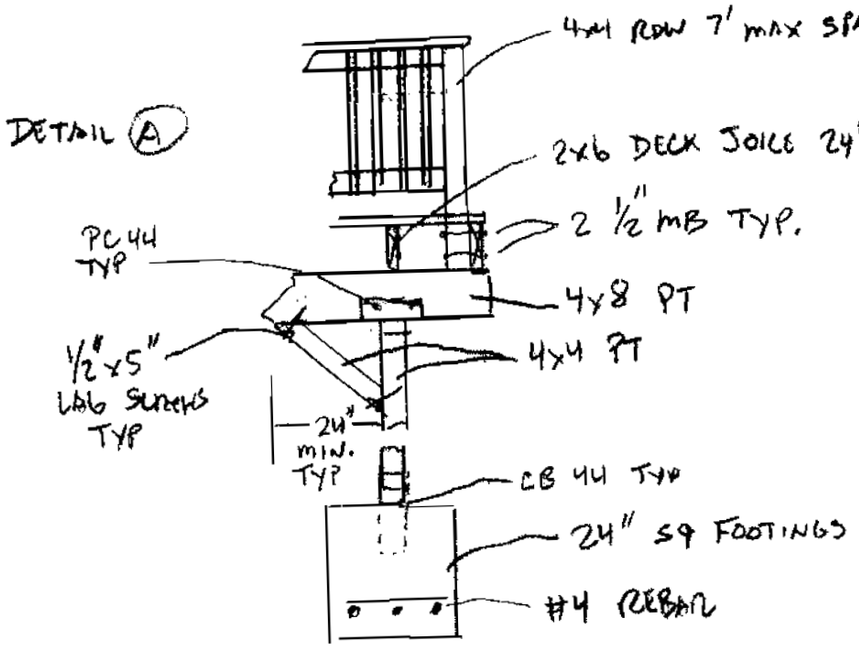

COUNTY OF VENTURA
PLANNING DIVISION
APPROVED
Date 1/24/06
Permit No. 06-103
Planner Authorizing

BIOTIC SURVEY

FOR A PROPOSED 80 ACRE

SUBDIVISION NEAR LOCKWOOD VALLEY,

VENTURA COUNTY, CALIFORNIA

Prepared for:
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January 25, 2000
Amended June 22, 2001

Peter Woodman
The findings of this report are valid through January 25, 2002.

INTRODUCTION

This report is a biological assessment of habitat values for several vertebrate species on an 80 acre parcel in the Cuddy Creek drainage, Ventura County, California. Olivo Enterprises is seeking to subdivide approximately 80 acres into 4 parcels of approximately 20 acres each.

This assessment was undertaken to supplement a Biological Resources Initial Study completed by BioResource Consultants (1998). The RMA identified several environmental concerns to be addressed before the proposed project could be further pursued. Those concerns that lie within the scope of this biological assessment are:

1. The presence of habitat potentially suitable for the southern rubber boa (Charina bottae umbratica), Tehachapi white-eared pocket mouse (Perognathus alticolus inexpectatus), Cooper's hawk (Accipiter cooperi), and possibly other animal and plant species with special status;

2. The potential cumulative impact of development on native habitat that may occur with the approval of this project.

However, several other sensitive species may potentially be found on the project site and they are also listed and discussed.

The purpose of this report is twofold: to provide an assessment of habitat suitability for species in the area that have federal or state, or other special status; and to assess the potential impacts of the proposed development of the land on any of these species within the area. Also included are recommendations to minimize impacts on these species.

PROJECT DESCRIPTION

The 80 acre parcel is located in the Cuddy drainage approximately three miles southwest of the town of Lake of the Woods, in Northwestern Ventura County, California in the W 1/2 of the SW 1/4 of Section 7, T8N, R21W (Figure 1). The Assessors Parcel Number is 004-010-090 and the Tentative Parcel Map No. is 4932.

Olivo Enterprises has proposed to subdivide 82.89 acres into four approximately 20 acre parcels (Figure 2). Access to the parcels will be along existing roads. These roads will be improved. Home sites are proposed to be adjacent to existing access roads but actual siting is at the buyers discretion. The region is currently zoned OS-20. The proposed use is single-family residential and recreational which will not require a zoning change. Water will be supplied by a community system and individual septic tank/leach field systems will be utilized for sewage disposal. Water supply is addressed in Appendix 4, a letter from Jeffrey French, Civil Engineer for the project.

METHODS

Background Investigations

Investigation for this report included obtaining background information of the property, creating a list of potential species of concern that may occur on the property, and conducting a field survey of the property.

We spoke with the renter that lives on the property and the landowner that lives adjacent to the property.

The species list was created from many literature sources: a California Natural Diversity Data Base search of state and federally listed and other sensitive species occurrences in the area; California Department of Fish and Game lists of endangered, threatened, and rare plants and animals of California (1998a, 1998b, 1998c) and Amphibian and Reptile Species of Special Concern in California (Jennings and Hayes 1994); California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (Skinner and Pavlik 1994); A Flora of Kern County, California (Twisselmann 1967); Mammals of the Pacific States (Ingles 1965); Western Reptiles and Amphibians (Stebbins 1985); Birds of Southern California (Garrett and Dunn 1981); Field Guide to the Birds of North America (National Geographic 1983); and A Guide to Wildlife Habitats of California (Mayer and Laudenslayer 1988). The special status species discussed in this report were included if they are known to use one or more of the habitat types found on the parcel, within a specific elevational range, and are thought to occur in the region. Habitats on the property include: an ephemeral drainage, pinyon-juniper woodland, and rabbitbrush-sagebrush scrub.

Vertebrate Surveys

Peter Woodman conducted initial vertebrate surveys from 0600 to 1230 and from 1800 to 2200 on May 28, 1999 and from 0600 to 1800 on May 29, 1999. The weather was warm, clear, and sunny with a slight afternoon breeze on both days. Additional surveys were conducted from 1400 to 0200 April 1 and 2, 2000 and form 1600 to 0200 on July 8 and 9, 2000. Temperatures in April ranged from 7 to 21 degrees Celsius, with 0 to 10 mph winds and mostly clear skies. In July temperatures ranged from 10 to 25 degrees Celsius, with 0 to 15 mph winds and 0 to 30% cover with cumulus.

During the surveys, all areas of the property were visited on foot. Spotlighting was conducted along the ephemeral creek and through oak-leaf litter for salamanders, toads, and snakes on the nights of May 28, April 1, and July 8. There are no rocky outcrops on the property. A tape of owls that may be in the vicinity was played each night from several locations on the property. Calls for northern saw-whet (*Aegolius acadicus*), northern pygmy (*Glaucidium gnoma*), flammulated (*Otus flammeolus*), western screech (*Otus kennecottii*), common barn (*Tyto alba*), spotted (*Strix occidentalis*), and great horned owls (*Bubo virginianus*) were played in this order. All vertebrates encountered on the site were identified.

Trapping for small mammals was conducted from November 10 to November 20, 2000. One hundred thirty Sherman live traps were placed in four lines on the property (Figure 3). We attempted to sample each habitat and aspect on the property. Because of the low night temperatures the traps were checked at 2200, 0200, and daybreak (approximately 0630). The traps were left open during the day and were also checked at approximately 1630. Temperatures ranged from –12 to 7 degrees Celsius. Winds were generally calm but ranged from 0 to 15 mph. Skies were generally clear except November 10 and 11 when there were 10 to 80% cumulus clouds.

Plant Survey

David Silverman conducted all vascular plant surveys except the 28 August 2000 survey, which was conducted by P. Woodman. Surveys were conducted 29 May 1999, and on 22 May, 15 June, 7 July, and 28 August 2000.

Each vascular plant taxon identifiable at the site was recorded and the different vegetation units or plant communities were described. Conditions for plant identification were good relative to the seasonal potential. Rainfall levels were insufficient during the previous winter-spring season however, to produce a high diversity of annual and geophytic growth. Notes were also taken of the general landscape and vegetative communities. Photographs were taken of the different areas on the parcel.

Lichen Survey

Charis C. Bratt conducted the survey for lichens on November 8, 2000. Approximately six hours was spent on the site. Special attention was paid to the vicinity of the proposed building sites.

ENVIRONMENTAL SETTING

Regional Setting

Lockwood Valley trends east to west and lies south of the Emigdio Mountain range. Notable landmarks in the area include Mount Pinos, Mount Abel, and the Tehachapi Mountains. Much of the region is within Los Padres National Forest. However, the valley floor and area around Lockwood Valley Road is primarily privately owned.

Natural vegetative communities in the immediate area of the study, as described by Holland (1986), are predominantly big sagebrush scrub on the valley floor grading into Mojavean pinon woodland with juniper on the slopes. The scrub is dominated by Great Basin sagebrush (*Artemisia tridentata*) and rabbitbrush (*Chrysothamnus nauseosus*).

The site is associated with a foothill ridge that divides Amargosa Creek to the west and a series of ephemeral streams to the east. The western and southern portions of the site are generally steep hills. The eastern and northern portions had a low slope and are more amenable to construction of homes. Elevations on the site range from 5500 to 5800 feet.

Human Impacts

Lockwood Valley Road is approximately 400 feet from the southeast corner. A sand and gravel operation is located approximately 0.5 miles south. The north edge of the property is fenced with 3-strand barb-wire and borders Los Padres National Forest. A mobile home is in the northeastern parcel (Figure 4). A couple currently rent the mobile home. An existing home is adjacent to the southeastern boundary of the site. Land immediately to the west is undeveloped private property but low-density homes are located approximately one mile southwest. Several roads were graded many years ago. There are at least two mining assessment cuts in the southwestern portion of the property. There is an old airplane runway in the northeastern portion of the property. It is mostly revegetated with rubber rabbitbrush and great basin sagebrush but it is still easily seen.

At least five wells have been drilled looking for water (Figure 4). Metal culverts have been placed in the creek for the roads. The current landowner has a small trailer and several buildings on the site.

Geology

Much of the surficial geology appeared to be associated with ancient and active fault zones, including hills and uplands of uplifted clays, colluvium, sediments, and flood stream debris. Landforms associated with the site include a series of spur ridges with northern and eastern exposures, and moderately sloped fans that merge with a sandy flat. Much of the sandy flat was once used as a landing field. Around the flat are low hills and terraces. A well-developed ephemeral creek drains the site northwest to southeast and joins Cuddy Creek south of the site. In general, the terrain is more open to the east of the site and more rugged to the west of the site.

Soils relating to vegetation varied on the site. The flats in the northern and eastern portions of the property are sandy and primarily granitic in parent material. Soils in flats were weakly to moderately loamy. Other soils on the site include loose clay deposits along the ridgeline near the south edge of the property. Much of the hill landforms on the site had weakly rocky slopes of well-rounded claystones, rhyolites, metavolcanics, and other volcanics. The wash at the western end was had the most coarse soil on the site and included areas of complex cobbles and riverbed materials of granitic and igneous rocks. The slopes and upper alluvial fans of the site had climax organic components with well-developed leaf litters, but the soils underneath were mostly inorganic in texture, only moderately loamy at best. The lowermost north-facing slopes along the wash had the richest soils on the site.

Flora

The floristic composition in the region is characteristic of the short-conifer, oak chaparral and sagebrush habitats of the West Transverse Ranges subregion (WTR) of the California Floristic Province (CA-FP). Several plants observed on the site, are characteristic of these habitats in the WTR region. Scrub Oak (*Quercus berberidifoliai*) is common on hills and slopes throughout the site and is characteristic of this region. Other characteristic plants of this region that are occasional on the site include: Parry Manzanita (*Arctostaphylos parryana*), Our Lord's Candle (*Yucca whipplei*), Linear-leaved Goldenbush (*Ericameria linearfolia*), Interior Bush Lupine (*Lupinus excubitus var. austromontanus*), Cupleaf Ceanothus (*Ceanothus greggii var. vestitus*), Flannel bush (*Fremontodendron californicum*) and California Juniper (*Juniperus californicus*).

While the specific plant associations and species observed on the site are Californian in composition, the dominant vegetation covers on the site however, are generally typical of the plant formations associated with Great Basin plant communities. Pinyon Pine (*Pinus monophylla*) and Big Sagebrush (*Artemisia tridentata* ssp. *tridentata*), two species highly characteristic of the Great Basin, dominate the two major plant communities of the site. Other plants observed at the site that are typical of the Great Basin region include Mormon Tea (*Ephedra viridis*), Cheatgrass (*Bromus tectorum*) and Rubber Rabbitbrush (*Chrysothamnus nauseosus* ssp).

Survey Conditions

Conditions for plant growth, detection and identification in California for 1999 and 2000 were generally poor to fair, in comparison to the botanical yield of other years with optimal rainfall conditions. Rainfall levels in both years were insufficient during the previous winter and spring season to produce a high diversity of annual growth on the site. Timing of the surveys was good for determination of most annual and herbaceous perennials that were detectable. Weather conditions during the surveys were excellent for plant identification, with occasional cloudy periods that stimulated blooming

Plant Communities and Associations

In general, two major plant communities are present on the site (Figure 5). The majority of the site, especially in the hills, is an intermediate mixture of pinyon pine woodland and scrub oak chaparral. The northeastern portion of the site is primarily sagebrush scrub with occasional isolates of woodland or chaparral. Transitional or successional plant associations occur between the major plant communities and in previously disturbed areas.

Plant Habitats of the Site

Pinyon-Oak Woodland

Approximately half of site consists of hill slopes consistently dominated by Singleleaf Pinyon Pine (*Pinus monophylla*) and mostly include Scrub Oak (*Quercus berberidifoliai*) as the dominant understory or cover scrub (Table 1, Figures 6 to 9). Other scrubs are occasional, especially where slope and geology limit oak growth, including California Juniper (*Juniperus californica*), Parry Manzanita (*Arctostaphylos parryana*) and Birch-leaved Mountain Mahogany (*Cercocarpus betuloides*). In some areas of the hills, wolf moss lichens were common on Pinyon trunks. Where the slopes are not too steep, organic litter persists. Annuals plants were sparse in these areas and

On steeper slopes with northern aspects, the oaks are dense, with few other plants underneath. Western Violet (*Viola purpurea* var. *mohavensis*), *Penstemon grinellii*, Tarweed (*Madia minima*), and *Phacelia curvipes* are occasional in this sparse understory. Phlox-leaved Bedstraw (*Galium andrewsii*) forms distinctive green spiny mats underneath Pinyon pines. On the steep slopes and ridges with loose clay soils, pines and oaks were more limited in density. Interior Bush Lupine (*Lupinus excubitus* var. *austromontanus*) is locally common in these areas. Other plants observed on the site that are characteristic of these zones of shifting soils include Pincushion (*Chaenactis santolinoides*), Penstemon (*Penstemon grinellii*), *Galium* spp., and Bread-root (*Pediomelum californicum*).

The scrub oak understory is less developed on the slopes with southern or xeric aspects. Other shrubs and perennials diversify the understory of these slopes, including Our Lord's Candle (*Yucca whipplei*), Mormon tea (*Ephedra viridis*), Linear-leaved Goldenbush (*Ericameria linearfolia*), Interior Bush Lupine (*Lupinus excubitus var. austromontanus*). Herbaceous perennials and annuals were more diverse on the south-facing slopes. These included Deer-vetch (*Lotus procumbens*), Fleabane (*Erigeron breweri*), Wallflower (*Erysimum* sp.), Rock-cress (*Arabis pulchra* var. *gracilis*), Bush Wooly-star (*Eriastrum densifolium var. austromontanum),* Pursh Wooly-pod (*Astragalus purshii var. tinctus*), Mohave Cryptantha (*Cryptantha mohavensis*), Comb-bur (*Pectocarya setosa*), and Bird's Beak (*Cordylanthus* sp.).

Vegetation at the base of the north and east-facing slopes, especially those adjacent to the wash, is more diverse. On these lower slopes, the cover is also dominated by pines and oaks, but the understory includes more scrubs, subshrubs and herbaceous perennials. Snowberry (*Symphoricarpos rotundifolius*) and Honeysuckle (*Lonicera subspicata*) were very characteristic of these areas, along with *Penstemon rostriflorus*. Ponderosa Pine (*Pinus ponderosa*) is scattered in some of these areas.

In general, the climax stands of Pinyon-Oak Woodland had few detectable annuals during the survey. Herbaceous perennials and annuals in the hills of the site were most diverse along the limited roads and previous disturbances.

Table 1. Plant Communities or Series applicable to vegetation observed on the property proposed for subdivision by Olivo Enterprises in Ventura County, California (* vegetation types that are weakly applicable or with matching associates to the site).

Holland (1986 [includes Global and State Rankings])	**Sawyer and Keeler-Wolf (1995)**	**Characteristic Site Species**	**Other Characteristic Plant Taxa**
Great Basin Pinyon Woodland (72122) G3 S3.2. Mojavean Pinyon Woodland (72210) G4 S4.	Singleleaf pinyon series (304)	Singleleaf Pinyon Pine (*Pinus monophylla*)	*Ephedra viridis, Juniperus californicus, Artemisia tridentata, Eriogonum umbellatum, Astragalus purshii, Penstemon rostriflorus*
Mojavean Juniper Woodland and scrub *(72220) G4 S4. Peninsular Juniper Woodland and scrub *(72320) G3 S3. Cismontane Juniper Woodland and scrub *(72400) G2 S2.1.	California juniper series * (304)	Singleleaf Pinyon Pine (*Pinus monophylla*)	*Juniperus californicus, Artemisia tridentata, Yucca whipplei, Ephedra spp., Ericameria linearfolia, Eriogonum fasciculatum, Chrysothamnus nauseosus*
Semi-desert Chaparral (37400) G3 S3.2. Flannel bush Chaparral (37J00) G3 S3.3.	Cupleaf ceanothus-fremontia-oak series*(146)	Scrub Oak (*Quercus berberidifoliai*)	*Fremontodendron californicum, Ceanothus greggii, Cercocarpus betuloides, Yucca whipplei, Arctostaphylos parryana, Juniperus californicus*
Scrub Oak Chaparral (37900 *in part*) G3 S3.3.	Scrub oak series (194)	Scrub Oak (*Quercus berberidifoliai*)	*Pinus monophylla, Arctostaphylos parryana, Juniperus californicus, Cercocarpus betuloides*
Big Sagebrush (35210) G4 S4.	Big sagebrush series (100)	Big Sagebrush (*Artemisia tridentata*)	*Chrysothamnus nauseosus, Eriogonum fasciculatum, Pinus monophylla, Rhamnus californica, Ephedra viridis, Lupinus excubitus, Ceanothus spp., Bromus tectorum*
Mojave Desert Wash scrub* (63700) G3 S2.1.	Scalebroom series* (193)	Tarragon (*Artemisia dracunculus*)	*Lepidospartum squamatum, Sambucus mexicana, Lonicera subspicata, Senecio flaccidus var. monoensis, Lupinus excubitus*
Great Basin Grassland* (43000) G1 S1.1. Non-native Grassland* (42200) G4 S4.	Cheatgrass series* (44)	Cheatgrass (*Bromus tectorum*)	*Achnatherum hymenoides, Poa secunda, Lessingia* spp., *Elymus elymoides, Centurea solstitialis, Sisymbrium* spp., *Erodium cicutarium*

Sagebrush Scrub

In the northern portion of the site, Big Sagebrush (*Artemisia tridentata*) is the dominant plant cover on the flats, open washes and disturbed areas, especially in the area of the former landing field (Figures 10-15). Rabbitbrush (*Chrysothamnus nauseosus*) and Grape Soda Lupine (*Lupinus excubitus* var. *austromontanum*) are frequent among the sagebrush. Other occasional shrubs in the Sagebrush areas include Coffeeberry (*Rhamnus californica*), *Ceanothus* spp., *Ephedra* spp., and Buckwheats (*Eriogonum* spp.). The majority of Sagebrush Scrub on the site is associated with areas of former disturbances. Most of the associated herbaceous plants are typical of post disturbance succession and include Tumble mustard (*Sisymbrium spp.*), Ragweed (*Ambrosia acanthicarpa*), *Stephanomeria virgata*, annual buckwheat (*Eriogonum* sp.), *Lessingia* spp., Filaree (*Erodium cicutarium*), Cheatgrass (*Bromus tectorum*), Morning Glory (*Calystegia malacophylla*), California Poppy (*Eschscholtzia californica*), *Phacelia* spp., and Nightshade (*Solanum xanti*). Along the washes and lower slopes, the Sagebrush is more frequently associated with plants typical of the climax vegetation on the site.

Foothill Transition

Among the flats of Sagebrush Scrub are alluvial outcrops in the form of small hills, ridges, terraces, washbanks, lower slopes and road berms. These features are isolated among the sagebrush in the flats and are transitional landforms between the sagebrush-dominated flats and pine-oak cover of the slopes and ridges. The characteristic vegetation of these features is transitional in composition. These areas have occasional pines (*Pinus monophylla* and *P. ponderosa*) and Scrub Oak, along with California Juniper, Buckthorns, *Ephedra* spp., Buckwheats (*Eriogonum nudum, E. umbellatum*). Subshrub and herbaceous plant diversity on the site is highest in these intermediate areas and includes Phlox-leaved Bedstraw, Golden Yarrow (*Eriophyllum confertiflorum*), *Elymus* spp., *Poa* spp., *Festuca* sp., *Penstemon* spp., *Lomatium* spp., Indian paintbrush (*Castilleja applegatei)*, Rock-cress (*Arabis pulchra*), and Bird's Beak (*Cordylanthus sp.*).

Some of the lower slopes of the hills in the central and eastern portions of the site have transition areas where the chaparral cover is sparse, and includes similar areas cleared of pines and scrubs. These openings have variable, usually weak covers of grasses and herbaceous plants. The dominant plant is often Cheatgrass. Some of the uncommon shrubs of the site are scattered in these areas. Other plants associated with theses lower slope zones include Bluegrass (*Poa secunda*), Ricegrass (*Achnatherum hymenoides*), Squirreltail (*Elymus elymoides*), Yellow Star Thistle (*Centaurea sostitialis*), Tumble Mustard (*Sisymbrium* spp.), Blazing Star (*Mentzelia montana*), Tansy Mustard (*Descurainia pinnata*), Popcorn Flower (*Plagiobothrys arizonicus*), and Thistle (*Cirsium* sp.).

Ephemeral Drainage

At the northwestern end of the site, an ephemeral creek and wash drains the western part of the site and adjacent foothills on USFS lands. Vegetation in the wash and other drainages is moderately distinct at the western end of the site, but becomes sandy and open as the drainages enter the sandy flats to the east. Some of the characteristic plants of the washes include Blue Elderberry (*Sambucus mexicana*), Tarragon (*Artemisia dracunculus*), Beardless Wildrye (*Leymus triticoides*), Snowberry (*Symphoricarpos rotundifolius*), Wash groundsel (*Senecio flaccidus* var. *monoensis*), and Goosefoot (*Chenopodium* spp.). Other plants of the washes and washlets include Big Sagebrush, Interior Bush Lupine, Chaparral Milkweed (*Asclepias eriopoda*) and an occasional Scalebroom *(Lepidospartum squamatum*).

Lists of all plant, lichen, and animal species identified during the surveys are found in Appendices 1, 2, and 3, respectively.

STATUS OF SENSITIVE WILDLIFE SPECIES

Regulatory Status

Under the Federal Endangered Species Act of 1973, as amended, and the California Endangered Species Act of 1984 (CESA), as amended, formally listed species are protected by law. The Federal Register (USFWS 1998) and the CDFG (1998) publication "Special Animals" identify species proposed for formal listing, which may or may not attain threatened or endangered status, depending on further study of those species. Wildlife agencies and other conservation organizations recognize many species as "species of special concern", which under the California Environmental Quality Act, Section 15380, gives them legal protection.

In California, the right to develop land is subject to regulation by public agencies that have discretionary control over project approval. The National Environmental Policy Act of 1969 and California Environmental Quality Act of 1970 (CEQA) require project applicants to disclose, consider and avoid or reduce impacts to listed species. In addition, CEQA can provide protection to species not yet listed under CESA but is deserving of such status. Section 15380 of the CEQA guidelines states that a species not yet listed can be considered to be rare or endangered if the species can be shown to meet the criteria for State listing. In general, CDFG recognizes that CNPS List 1 contains plants that would qualify for listing and CDFG requests their inclusion in environmental documents.

Thirty-three species of sensitive plants and animals were identified has having potential of being resident or visitants to the project site. The sensitive species and their legal status are listed in Table 2 and discussed below.

Sensitive Species Accounts

Tehachapi Slender Salamander (*Batrachoseps stebbensii*)

Stebbins (1985) discusses populations of Tehachapi slender salamander as being scattered through the Caliente Creek drainage and Piute Mountains south to the vicinity of Ft. Tejon. Records in the CNDDB indicate that habitat typically is on north-facing slopes where rock outcrops are present. Stebbins also states that habitat may consist of dense oak woodland with dense ground cover of leaf litter, affording protection from summer desiccation.

No Tehachapi slender salamanders were observed during the field surveys nor does the project site contain favorable habitat. Although there is good growth of scrub oak and pinyon woodland with its associated leaf litter and duff, there are no rock outcrops.

Yellow-blotched Salamander (*Ensatina eschscholtzii crocreator*)

Yellow-blotched salamanders occur in a wide variety of habitats, although there are relatively few records of it. It is restricted to Kern and Ventura Counties, California. Stebbins (1954) notes that they are largely canyon dwellers, occupying north-facing slopes where there is a considerable layer of leaf litter. Jennings and Hayes (1994) note that the associated plants include blue oak (*Quercus douglassii*), Jeffrey pine (*Pinus jeffereyi*), and white fir (*Abies*

Table 2. Official status of species, results of parcel survey, determined potential impact of project on species for subdivision proposed by Olivo Enterprises, Ventura County, California.

	Federal[1]	State[1]	Forest Service[2]	Survey Result - Potential Impact[3]
Tehachapi slender salamander	SC	T		NF- Unlikely
Yellow-blotched salamander	SC	SC	SE	NF- Unlikely
Arroyo southwestern toad	E	SC		NF- Unlikely
Southern rubber boa	SC	T	SE	NF- Unlikely
California condor	E	E		NF- No
Swainson's hawk		T (nesting)	SE	NF- No
Northern goshawk	SC	SC	SE	NF- No
Sharp-shinned hawk		SC		NF- Possible
Cooper's hawk		SC		NF- Possible
California spotted owl	SC	SC	SE	NF- No
Southwestern willow flycatcher	E (nesting)	E (nesting)	SE	NF- No
California horned lark		SC		NF- Unlikely
Loggerhead shrike	SC	SC	SE	NF- Unlikely
Least Bell's vireo	E (nesting)	E (nesting)		NF- No
Yellow warbler		SC(nesting)	SE	NF- No
San Diego black-tailed hare	SC	SC		F- Possible
Mt. Pinos lodgepole chipmunk	SC		SE	NF- Unlikely
Tehachapi white-eared pocket mouse	SC	SC	SE	NF- Unlikely
Pale-yellow layia	SR	SR	SE	NF- Possible
Mt. Pinos larkspur	SR	SR		PF- Possible
Unexpected larkspur		S		PF- Possible
Southern mountain buckwheat	PT	S	S	F- Possible
Mt Pinos gilia		S		F- Possible
Spring lessingia	S	S		NF- Unlikely
Flax-like monardella	SR	SR	S	NF- Unlikely
Big bear valley woolypod	SR	S		NF- Unlikely
Heart-leaved thorn-mint		S		NF- Unlikely
Mt. Pinos onion		S		F- Possible
Jepson wooly sunflower		S		NF- Unlikely
Silky lupine		S		NF- Possible
Adobe yampah		S		NF- Unlikely
Transverse range phacelia		S		PF- Possible
Pine-green gentian		S		NF- Possible

[1] E = Endangered, PE = Proposed Endangered, T = Threatened, SR = Species at Risk, SC =Special Concern

[2] S = Sensitive, SE = Species of Special Emphasis

[3] NF = Not Found, F = Found, PF = Possibly Found

concolor) at higher elevations. They can survive in more arid environments, typically in canyons where species such as canyon live oak (*Quercus chrysolepis*), California scrub oak (*Quercus dumosa*), and deerbrush (*Ceonothus* spp.) provide leaf litter for maintaining surface moisture. Although there is good growth of scrub oak and pinyon woodland with its associated leaf litter and duff, there are no canyons or rock outcrops.

No yellow-blotched salamanders were seen during our surveys nor did there appear to be appropriate habitat as there were not areas with substantial surface debris. T. Rado (pers. comm.) has seen this species in the Mt. Pinos region and they were closely associated with dense oak woodland and conifer forest with numerous rock outcrops. Ground cover consisted of leaf litter, decomposing wood, and rocks. The project site does not contain favorable habitat for the yellow-blotched salamander.

Arroyo Southwestern Toad (*Bufo microscaphus californicus*)

Arroyo southwestern toads frequent a specialized habitat. It includes the availability of exposed (with little vegetation), low-flow pools for breeding; stable, sandy terraces; and moderately well-developed, but scattered shrub and tree overstory (Jennings and Hayes 1994). Much of the life history data was collected within the Los Padres National Forest (Sweet 1991, 1993). Their presence within the region of this parcel has declined sharply due to a variety of causes, from loss of habitat to introduction of exotic species.

Surveys as per USFWS protocols were not conducted after consulting with Kirk Waln, biologist for USFWS, who stated that additional surveys would not be necessary.

No arroyo southwestern toads were seen during the surveys. The specialized habitat required by this species is not present on this property. Specifically, there is no perennial water, nor are there any pools in the ephemeral creek.

Southern Rubber Boa (*Chorina bottae umbratica*)

Stewart (1988), reviewing the biology of southern rubber boas, indicates that favored habitats contain conifer forest with Jeffrey pine, yellow pine (*Pinus ponderosa*), sugar pine (*Pinus lambertiana*), white fir, and incense cedar (*Callocedrus decurrens*). Rock outcrops are critical components of their habitat because they provide hibernacula during cold winter months, and a microhabitat preventing desiccation during dry summer months. Elevation ranges from sea level to 10,000 ft. Stewart (1988) also states that populations of rubber boas, which are located discontinuously through the Mt. Pinos region, may actually be intergrades between *Chorina bottae umbratica* and *Chorina bottae bottae*.

No southern rubber boas were seen during the surveys. The project site does not contain favorable habitat for the southern rubber boa. Although there is good growth of scrub oak and pinyon woodland with its associated leaf litter and duff, there are no rock outcrops.

California Condor (*Gymnogyps californianus*)

California condors are cliff-nesting scavengers. They have been foraging and roosting in and around the Mt. Pinos area in recent years (LPNF 1994). The major source of disturbance for condors is human activity, such as foot travel close to nesting or roosting areas.

No condors were seen during the surveys. Although they may potentially forage in the area, it is my determination that the proposed action will pose little or no potential disturbance to this species or its habitat, especially since USFWS has shifted their center of activity west of the Mt. Pinos area.

Southwestern Willow Flycatcher (*Empidonax trailii*)

Southwestern willow flycatchers are found in brushy fields, and willows and thickets along streams. Although once common, it is now found only in the Sierra (LPNF 1991b). Loss of riparian habitat and cowbird nest parasitism are cited as major reasons for this reduction (Erlich et al. 1988, LPNF 1991b).

No willow flycatchers were seen during the surveys, although they would only be present in the area during migration. They may use the area for foraging during migration. There are no records of occurrence in this area.

California Horned Lark (*Eremophila alpestris actia*)

California horned larks are found from San Diego north through the coastal valleys, inland to the southern central valley. Loss of habitat, especially in the Los Angeles basin are among the reasons for their decline. They are typically found in grassland habitats.

California horned larks were not seen on the property, although they no doubt use the sagebrush habitat for foraging.

Least Bell's Vireo (*Vireo bellii pusillus*)

The least Bell's vireo is usually found in moist, dense vegetation along riparian zones. It nests in willows, vines, or other low-growing vegetation along water courses. Recreational use along riparian corridors can have a detrimental effect on the species (LPNF 1991b); also a common cowbird host (Erlich et al. 1988).

No least Bell's vireos were seen during the surveys, although they would only be present in the area during migration. They may use the area for foraging during migration. There are no records of occurrence in this area.

Northern Goshawk (*Accipiter gentilis*)

The northern goshawk nests and forages mainly in heavily wooded areas, feeding on birds (mostly ground-dwelling) and small mammals. Human interference and loss of habitat are seen as the most significant disturbances to this species. There is a known goshawk nest on Mt. Abel, and a nest on Mt. Pinos was last used in 1992 (LPNF 1994).

Goshawks were not seen during the surveys. Given their habitat, it is unlikely they breed on or near the site.

Sharp-shinned Hawk (*Accipiter striatus*)

The Sharp-shinned Hawk nests and forages mainly in heavily wooded areas, feeding on birds and small mammals. Human interference and loss of habitat are seen as the most significant disturbances to this species.

Sharp-shinned Hawks were not seen or heard during the surveys. They may breed on or near the site. They probably use the site for foraging.

Cooper's Hawk (*Accipiter cooperi*)

The Cooper's Hawk nests and forages mainly in dense to patchy wooded areas, feeding on small birds and mammals. Human interference and loss of habitat are seen as the most significant disturbances to this species.

Cooper's Hawks were not seen or heard during the surveys. They may breed on or near the site. They probably use the site for foraging.

Swainson's Hawk (*Buteo swainsoni*)

Swainson's hawk is generally found in open, shrubby (opposed to grassy) country with scattered trees for perches. A previous Forest Service survey nearby (LPNF 1991b) did not turn up any of these hawks.

No Swainson's hawks were seen, although they likely had migrated through by the time of the surveys. It is possible they could be found in the area, but there is no suitable breeding habitat on the parcel.

California Spotted Owl (*Strix occidentalis occidentalis*)

The California spotted owl breeds in heavily wooded areas, including steep canyons, using platforms in trees and on cliffs. Smaller mammals are their main food source. The LPNF (1994) reports known residents in Quatal Canyon and the Tecuya Mountains, and potential habitat on Mt. Pinos and Mt. Abel. In winter they often migrate to lower elevations. There are no known spotted owls in the immediate vicinity of the parcel.

No California spotted owls were seen or heard during the surveys. The parcel surveyed does not contain their preferred habitat.

Yellow Warbler (*Dendroica petechia*)

The yellow warbler also occurs along riparian systems, often including willow, cottonwood, sycamore, and alder. Like the willow flycatcher, loss of riparian habitat and cowbird nest parasitism have contributed to their decline (Erlich et al. 1988, LPNF 1991b).

No yellow warblers were seen during the surveys, although they would only be present in the area during migration. They may use the area for foraging during migration. There are no records of occurrence in this area.

Loggerhead Shrike (*Lanius ludoviciana*)

Loggerhead shrikes are year-round residents and like to hunt in open fields where raised perches are available. Declines in population have been attributed to loss of feeding areas (pastures), nest trees (LPNF 1991b), and pesticides (Erlich et al. 1988).

No loggerhead shrikes were observed during the survey. They probably breed throughout the region. Even if they breed in the area, the development would probably not have a negative impact on nesting habitat in the region. There could be a loss of the sagebrush area as a foraging ground.

San Diego black-tailed hare (*Lepus californicus* ssp. *bennettii*)

San Diego black-tailed hares are found in the coastal areas from San Diego to approximately San Luis Obispo west of the coastal mountains. They are found in open grassland and sagebrush scrub habitats. Declines in population have been attributed to loss of habitat.

San Diego black-tailed hares were observed on the study site in the sagebrush area. It is not likely they use the more heavily forested portions of the site.

Tehachapi White-eared Pocket Mouse (*Perognathus alticolus inexpectatus*)

Williams (1986) indicates that the Tehachapi white-eared pocket mouse generally frequents grassy flats where desert shrubs predominate, as well as in fallow grain fields. The official records of occurrence in the area are few and scattered. The closest record to this parcel is in the Mt. Pinos area. Recorded elevations are 3500-6000 ft. Habitats where the Tehachapi white-eared pocket mouse has been documented include a fallow grain field, a grassy flat surrounded by yellow pine forest, arid annual grassland, and desert scrub. Habitat descriptions for this mouse do not exclude the parcel from being potentially suitable.

Trapping for Tehachapi white-eared pocket mouse was conducted from November 10 to 21, 2000. One hundred thirty traps were set as described in the methods section of this report for 11 nights (1430 trap-nights). Six species were trapped: Pacific kangaroo rat (*Dipodomys agilis*), deer mouse (*Peromyscus maniculatus*), pinyon mouse (*Peromyscus truei*), brush mouse (*Peromyscus boylii*), dusky-footed woodrat (*Neotoma fuscipes*), and Merriam's chipmunk (*Tamias merriami*). No Tehachapi pocket mice were captured.

Mt. Pinos Lodgepole Chipmunk (*Tamias speciosus* ssp. *callipeplus*)

Mt. Pinos lodgepole chipmunk is an isolated subspecies of the lodgepole chipmunk found in timbered areas above 5000 ft (LPNF 1994). Jeffery pine forest and adjacent chaparral with some downed material is required. A great deal of debris favors Merriam's chipmunk. There is a stable population of Mt. Pinos lodgepole chipmunks on the nearby Los Padres National Forest in their expected habitat.

Mt. Pinos lodgepole chipmunks were not seen during the surveys, and their presence here is doubtful. Merriam's chipmunks ([*Eutamias merriami*] identified as Merriam's chipmunk by the orange coloration on the underside of its tail) were trapped on the hills and washes of the property. Several chipmunks were seen in during both the spring, 1999 and summer, 2000 surveys but could not be positively identified. The presence of the Mt. Pinos chipmunk on this property is possible in the forested portion.

During trapping in 2000 Merriam's chipmunks were trapped on 28 occasions. Mt. Pinos lodgepole chipmunks were not trapped or seen during the trapping program.

Pale-yellow Layia (*Layia heterotricha*)

An annual herb blooming in March through June, the pale-yellow layia is a California endemic, endangered throughout its range, with only a few known scattered locations. It is found in cismontane and pinyon-juniper woodlands, and valley and foothill grasslands; where alkaline or clay soils are found.

Biological Consulting, during a survey in 1997 several miles south on clay soils. The soils on this site are sandy to gravelly, only moderately loamy, at best.

Mt. Pinos Larkspur (*Delphinium parryi* var. *purpureum*)

Jepson (1993) states that the Mt. Pinos larkspur occurs in Kern and Ventura counties in sagebrush scrub and dry chaparral between 3000 and 7200 feet. Twisselmann (1967) reports that it inhabits pinyon pine woodland in the Mt. Pinos region east to Cuddy Valley. A larkspur was found during the winter survey but the dried stalks that remained could not be identified. No live larkspurs were found during the other surveys. This species could very well be on the project site.

Unexpected Larkspur (*Delphinium inopinum*)

Jepson (1993) and Twisselmann (1967) report that this species is found on rocky outcrops and ridges in open conifer forests. It is known from the Mt. Pinos region. A larkspur was found during the winter survey but the dried stalk that remained could not be identified. No larkspurs were found during the survey. Appropriate habitat is found on the site along the ridgetops on the west border.

Southern Mountain Buckwheat (*Eriogonum kennedyi* var. *austromontanum*)

Southern mountain buckwheat occurs within the Yellow Pine Forest in the Mt. Pinos area, from 5700 to 6300 feet elevation. Two varieties are found in the region, *E. k.* var. *kennedyi* and *E. k.* var. *austromontanum*. *E. k.* var. *kennedyi* is common and is not sensitive, however, *E. k.* var. *austromontanum* is a variety of limited distribution, endemic to the Mt. Pinos region, and is a CNPS List 1b species.

Eriogonum kennedyi was found in the northwest corner of the project site adjacent (within 100 feet) to the ephemeral creek (Figure 16). It is likely the variety *E. kennedyi* var. *austromontanum* although many of the characteristics are intermediate between the two varieties. The plant will be treated as though it is *E. k.* var. *austromontanum*. Mitigation is proposed to protect the approximately 25 plants found on the site.

Mt. Pinos Gilia (*Gilia leptantha* var. *pinetorum*)

Mt. Pinos gilia is found on open, rocky, or sandy areas, generally with pines (Jepson 1993). Twisselmann (1967) states that it is occasional, sometimes locally common, in the Mt. Pinos region, mostly in the Jeffrey pine forest. It is a CNPS List 1b species that has a limited distribution.

Mt. Pinos gilia was found on the south-facing road berm in Parcel 2 as the road went up a small hill to the doublewide trailer that is currently rented (Figure 16). Although the identification of the subspecific status is somewhat tenuous, the species will be treated as though it is *Gilia leptantha* var. *pinetorum*. Approximately ten plants were found in the roadcut in 1999, none were found in 2000. To protect this population, mitigation is proposed in the recommendations.

Spring Lessingia (*Lessingia tenuis*)

Spring lessingia is found on dry, open slopes in Lower Coniferous Forest in Ventura and San Luis Obispo counties. It flowers in May to June. This species was not found on the site.

Flax-like Monardella (*Monardella linioides* var. *oblonga*)

Jepson (1993) states that flax-like monardella occurs in Tulare, Kern, and Ventura counties in Lower and Upper Coniferous Forest. Known occurrences are in the Frazier Mountain area, at over 6000 feet, and in the Mt. Pinos area, at over 7500 feet elevation. The project site is probably too low in elevation to provide appropriate habitat.

Big Bear Valley Woolypod (*Astragalus leucolobus*)

Jepson (1993) states that it occurs in dry, rocky areas among sagebrush or pines in the San Gabriel, San Bernardino, and San Jacinto Mountains. Elevational distribution ranges from 5500 to 8000 feet. The project site is not within the known geographical range.

Heart-leaved Thorn-mint (*Acanthomintha obovata* var. *cordata*)

Jepson (1993) reports that this species occurs in grassy areas, oak woodland, and chaparral in Ventura below 5000 feet. Skinner and Pavlik (1994) report that it is on clay soils in those habitats. There are no clay soils on the project site.

Mt Pinos Onion (*Allium howellii* var. *clokeyi*)

Jepson (1993) and Skinner and Pavlik (1994) report that it is found on open slopes in great basin shrub. Elevations range from 4200 to 6000 feet.

Mt. Pinos onion was common on the north-facing slopes on the site. More than 40 plants were seen on both slopes. A one-acre home site has been proposed within habitat for this species in Parcel 1 (Figure 2). The potential home site is on a low ridge at the end of an existing road. The road would have to be improved slightly and the site would have to be graded. Impacts would be restricted to one acre on the home site and less than one acre for road improvements. It is a CNPS List 4 species, thus it probably does not meet criteria for listing.

Jepson Wooly Sunflower (*Eriophyllum jepsoni*)

Jepson (1993) reports this species from dry oak woodlands from 600 to 3200 feet elevation. Skinner and Pavlik (1994) report it from Ventura County. The proposed subdivision is probably too high for this species.

Silky Lupine (*Lupinus elatus*)

Jepson (1993) reports it from dry forests and sagebrush flats (Twisselmann 1967) between 4900 and 10,000 feet elevation. Skinner and Pavlik (1994) report it from Ventura County. Habitat for this species may be present on the site.

Adobe Yampah (*Perideridia pringlei*)

Both Jepson (1993) and Skinner and Pavlik (1994) report this species from serpentine soils in grassy or woodland situations between 1000 and 6000 feet elevation. Habitat does not appear to be on the site as there are no serpentine soils.

Transverse Range Phacelia (*Phacelia exilis*)

Reported by Jepson (1993) to be on rocky or sandy slopes in coniferous forests between 3600 and 8800 feet elevation. The species is known from Lockwood Valley (Jepson 1993). A phacelia that was either *Phacelia exilis/mohavensis/austromontanus* was located on the site.

Both *P. exilis* and *P. mohavensis* are CNPS List 4 species. Mitigation is proposed in the Recommendations.

Pine Green Gentian (*Swertia neglecta*)

This species is reported to be in pinyon woodland (Skinner and Pavlik 1994) and open coniferous forests (Jepson 1993) between 4500 and 8200 feet elevation. It is known from Ventura County. Habitat may be present for this species on the project site.

CONCLUSIONS

The area around Lockwood Valley is potential habitat for 33 species with special status. However, many of these are known more from the Mount Pinos area or have special habitat requirements that may preclude them from using the project site. Although only one species with special status was found during our survey, not all species can be found during a single visit during a single season. The years of 1999 and 2000 were dry with below-average rainfall. Annual plants, especially, may have been missed due to the lack of rainfall.

Six of the 33 sensitive species were found (or potentially found) on the site: southern mountain eriogonum, Mt. Pinos gilia, Mt. Pinos onion, Transverse Range phacelia, Mt Pinos larkspur, and San Diego black-tailed hare. Several other species probably use the site for foraging, if not breeding (eg., Cooper's Hawk, Sharp-shinned Hawk, Horned Lark, and Loggerhead Shrike). Use of this site for four homes will probably not seriously impact these species negatively. No sensitive habitats (eg., wetlands, riparian habitat, limestone soils) occur on the site.

There are previous and current impacts on and adjacent to the property. One currently occupied home is on the property and one currently occupied home is adjacent to the east edge of the property. Roads were made many years ago. An old runway is in the sagebrush habitat near the east edge of the property.

We do not believe that this subdivision will seriously impact any of the sensitive species known from the Lockwood Valley/Mt. Pinos region. There are already occupied homes adjacent to the property. It is adjacent to the Lockwood Valley Road. There is a history of impacts to the site (eg. the old runway and the mining pits). Mitigation is proposed for the two List 1 plant species found on the property.

The home sites are proposed for the gently sloped portions of the parcels and are generally near to the existing roads. A zoning change will not be necessary for the subdivision.

RECOMMENDED PROJECT MITIGATION

This proposal is to subdivide the 82-acre property into four parcels of approximately 20 acres each (Figure 2). As proposed, dwelling sites would be located on the valley floor, primarily within great basin sagebrush/rabbitbrush habitat. The scrub oak/pinyon pine habitat should be minimally impacted. Access to the dwelling sites shall be along existing roads. One culvert has been placed in the creek for access to parcels 1 and 3, thus further modification of the creek will not be necessary.

However, it is impossible to predict what the buyers of the parcels will want to do with the land. Uses could range from leaving it mostly undeveloped, perhaps adding a dwelling in the field, to keeping cats, dogs, horses, cattle, chickens, or other agricultural animals.

The following mitigation is proposed to minimize impacts to sensitive resources and sensitive species that occur or may occur on the property.

As mitigation, the following recommendations are made:

1. No creek-bed alteration should occur. Repairs to the existing culverts should occur in compliance with state and federal streambed alteration regulations.

2. No development should take place within 100 feet of the creek in order to maintain the integrity of the water drainage and to minimize the risk of flooding.

3. Home sites and land-altering activities should minimize impact to soils and habitats. Live trees and shrubs, surface debris (e.g., downed branches and trees), boulders, and snags are important habitat components for many species and essential for soil stability. The few large pines on the valley floor should remain undisturbed.

4. In order to protect the population of *Eriogonum kennedyi* var. *austromontanum*. no development should take place within 150 feet of the western creek in Parcel 1 in which the sensitive plant occurs. The plant is found along that portion of the drainage that is within approximately 150 feet of the western edge of the property (Figure 16).

5. The population of *Gilia leptantha* ssp. *pinetorum* can be protected by not increasing the width of the existing road leading to the rental trailer that is currently in Parcel 2. The plants were found in the road berm only. A fence can be placed at the base of the berm to insure their protection.

6. A home site is proposed within the habitat for the Mt. Pinos Onion in Parcel 1. The proposed home site would be limited to one acre in size. An existing road (an old mine road) does access the site but the road would have to be refurbished. Road improvements would impact less than one acre. A Deed Restriction can be created to minimize the footprint within the habitat for the Mt. Pinos Onion.

7. Create a Deed Restriction to prevent impacts to habitat for the two List 1 species, Mt. Pinos gilia and buckwheat. Preventative measures can include fencing or other means to prevent degradation. Impacts to habitat for the three List 4 species can be minimized. Only one housing site is proposed for this area in Parcel 1. Impacts to the remainder of the habitat can be minimized through the use of house site location, signs, restriction of wood collection, clearing, preclude use of area by grazing animals, etc.

8. Water use for the three additional homes sites is addressed by Jeffrey French, Civil Engineer for the project, see Appendix 4.

REFERENCES

BioResource Consultants. 1998. Biological Resources Initial Study: California Environmental Quality Act Environmental checklist. Planning Department, County of Ventura, California.

California Department of Fish and Game, Natural Diversity Data Base. 1998b. Endangered and threatened animals of California. Calif. Dep. Fish and Game, Sacramento, CA.

California Department of Fish and Game, Natural Diversity Data Base. 1998c. Special animals of California. Calif. Dep. Fish and Game, Sacramento, CA.

California Native Plant Society. 2001. California Native Plant Society sensitive plants of California, 6th Edition. CNPS, Sacramento, CA. Obtained from CNPS.com

Garrett, K. and J Dunn. 1981. Birds of southern California: status and distribution. Los Angeles Audubon Society, The Artesian Press, Los Angeles, California. 408 pp.

Hickman, J. C. (ed.). 1993. The Jepson manual, higher plants of California. Univ. of Calif. Press, Berkely, CA.

Holland, R. 1986. Preliminary descriptions of the terrestrial natural communities of California. Calif. Dep. Fish and Game, Sacramento, CA.

Ingles, L. G. 1965. Mammals of the Pacific states. Stanford Univ. Press, Stanford, CA.

Jennings, M. R. 1988. Natural history and decline of native ranids in California. pp. 61-72 In: H. F. DeLisle, P. R. Brown, B. Kaufman, and B. McGurty (eds.), Proceedings of the conference on California herpetology. Southwestern Herpetological Society, Special Publication 4.

Jennings, M. R. and M. P. Hayes. 1994. Amphibian and reptile species of special concern in California. Calif. Dep. Fish and Game, Sacramento, CA.

Mayer, K. E. and W. F. Laudenslayer Jr. (eds.). 1988. A guide to wildlife habitats of California. Calif. Dep. Fish and Game, Sacramento, CA.

National Geographic. 1983. Field guide to the birds of North America. Natl. Geographic Society, Washington D.C.

Rado, Ted. Personal Communication. Biological Consultant.

Skinner, M. W. and B. M. Pavlik (eds.). 1994. California Native Plant Society's inventory of rare and endangered vascular plants of California. CNPS Special Publication No. 5, Sacramento, CA.

Stebbins, R. C. 1954. Amphibians and reptiles of Western North America. McGraw Hill Book Comp., New York, NY.

Stebbins, R. C. 1985. Western reptiles and amphibians. Houghton Mifflin Press, Boston, MS.

Sweet, S. S. 1991. Ecology and status of the arroyo toad (Bufo microscaphus californicus) on the Los Padres National Forest of southern California, with management recommendation. Report to the USDA, Forest Service, Los Padres National Forest, Goleta, California, under Contract.

Sweet, S. S. 1993. Second report on the biology and status of the arroyo toad (Bufo microscaphus californicus) on the Los Padres National Forest of southern California, with management recommendation. Report to the USDA, Forest Service, Los Padres National Forest, Goleta, California, under Contract.

Twisselmann, E. C. 1967. A Flora of Kern County, California. Univ of San Francisco Press, San Francisco, CA.

U. S. Fish and Wildlife Service. 1998. The Federal Register.

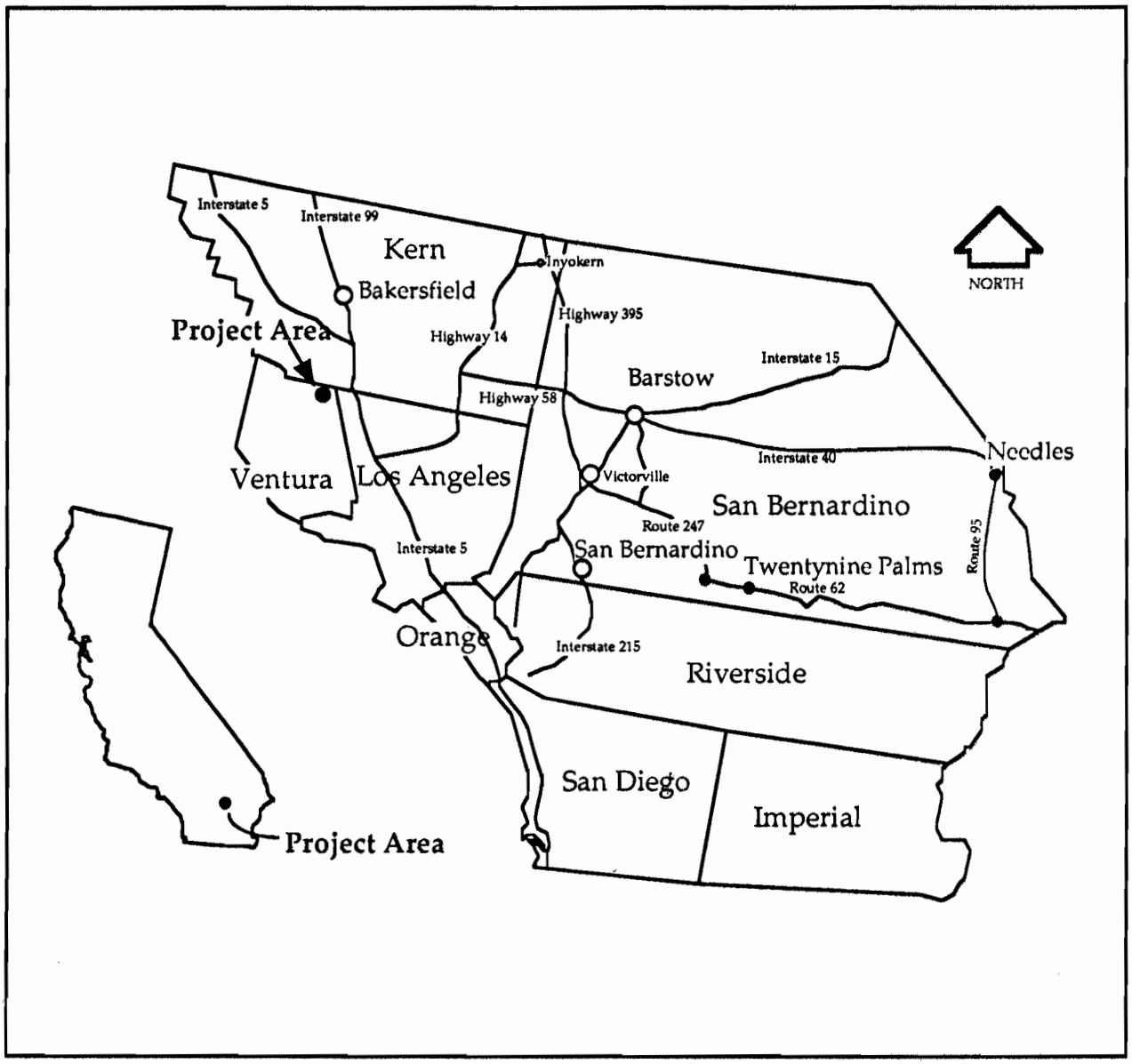

Figure 1. General location of the Olivo Enterprises property, near Lockwood Valley, Ventura County, California.

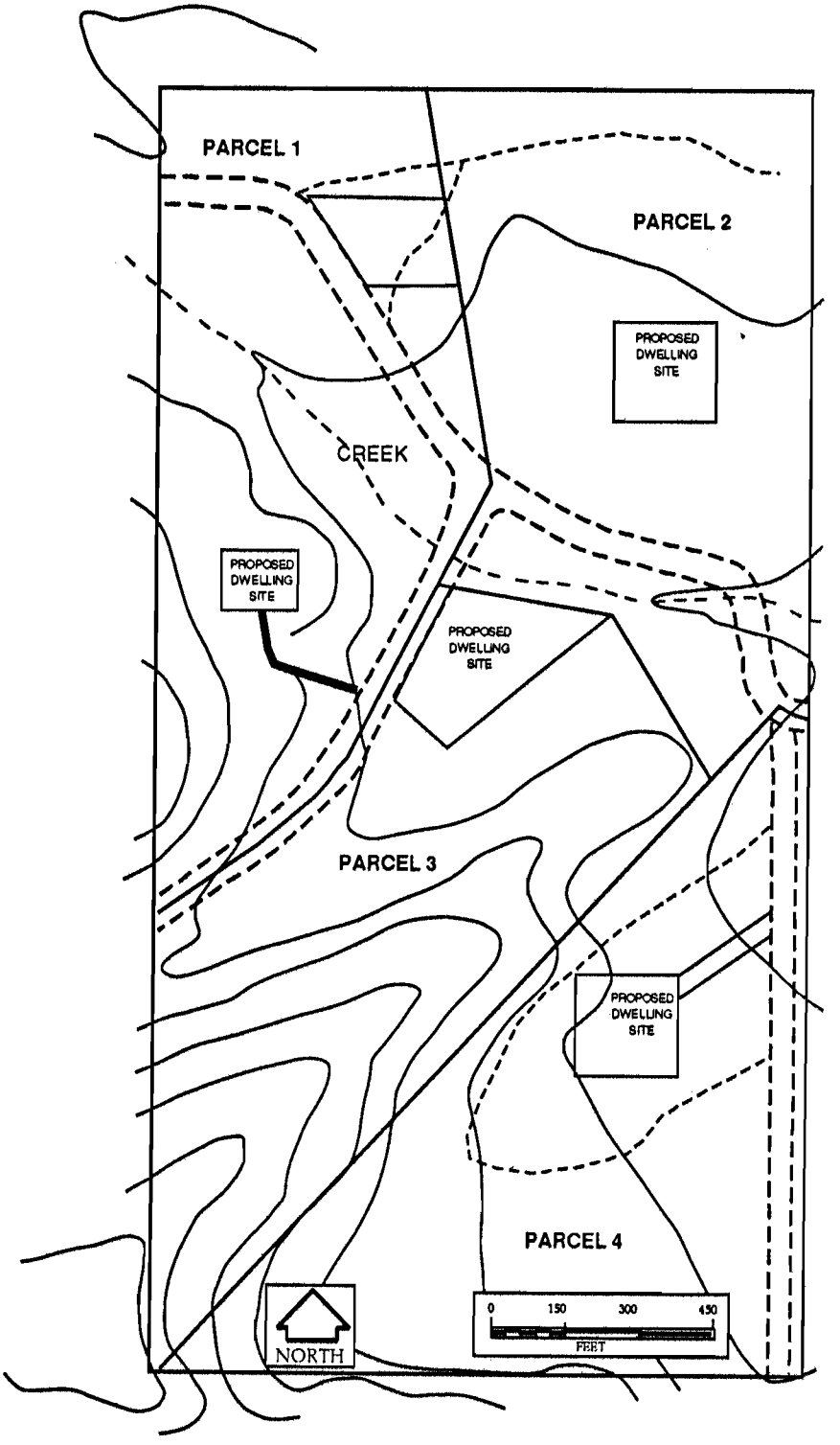

Figure 2. Proposed parcel, access road, and home locations of the Olivo Enterprises property near Lockwood Valley, Ventura County, California.

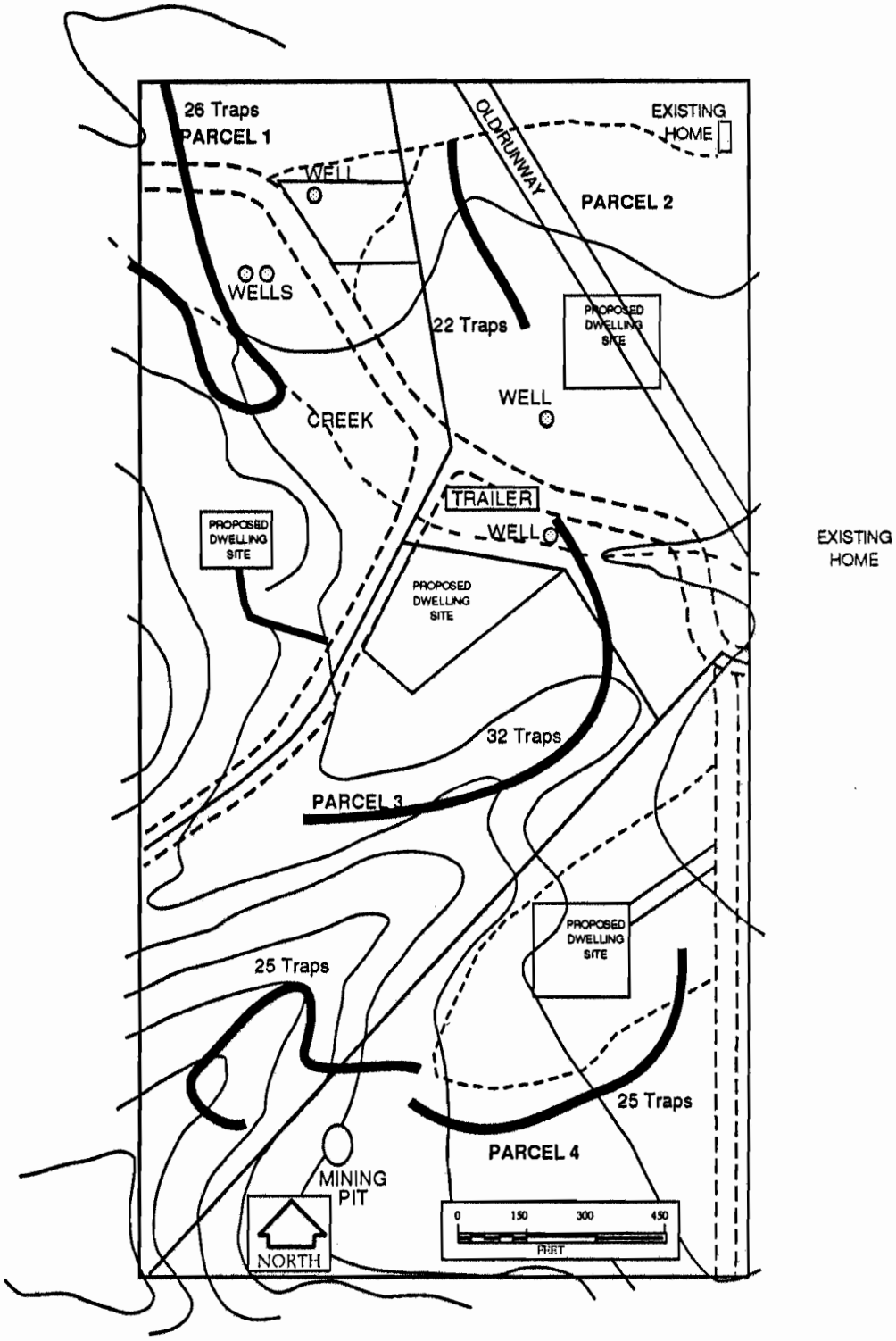

Figure 3. Locations of the small mammal trap lines on the Olivo Enterprises property near Lockwood Valley, Ventura County, California.

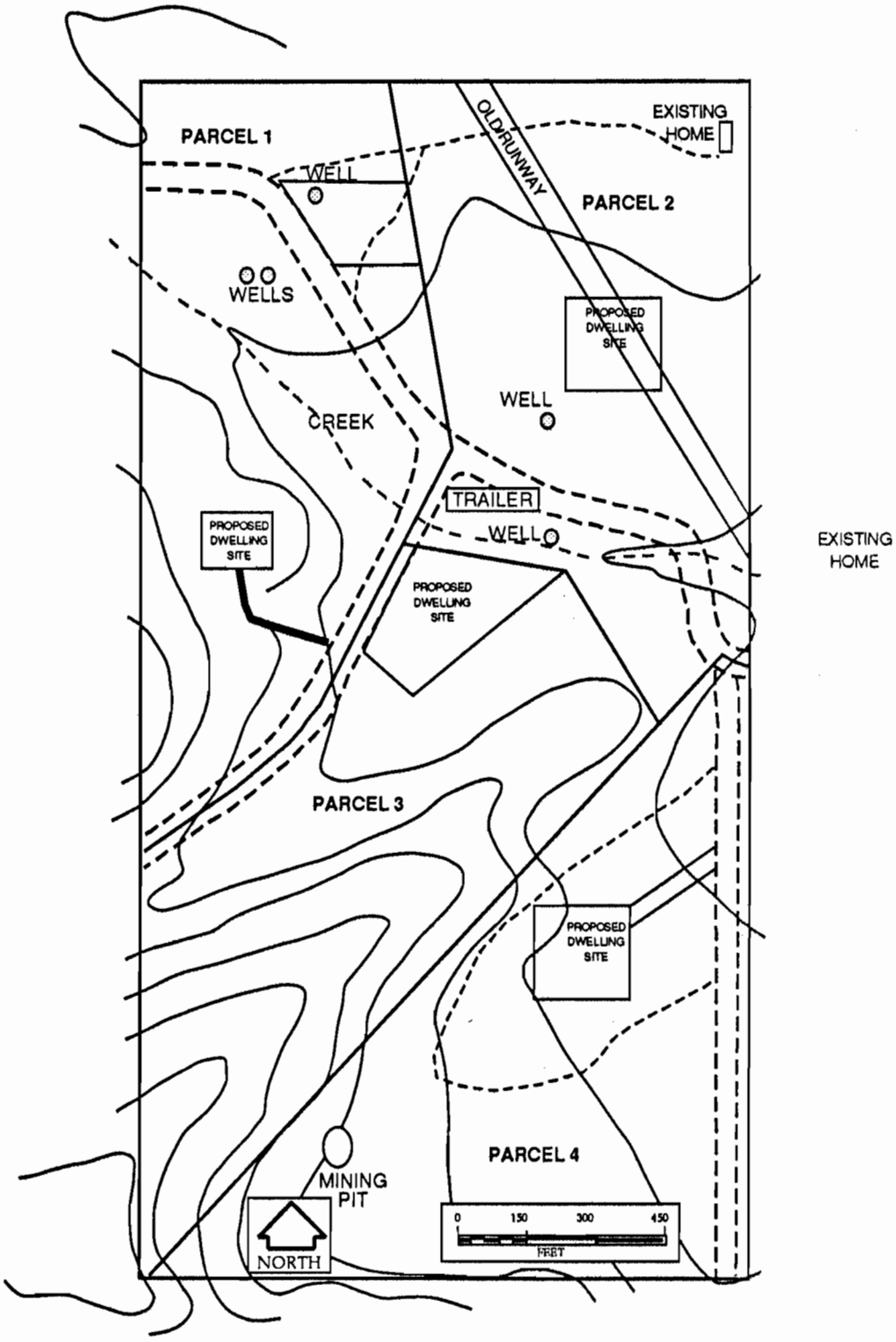

Figure 4. Existing impacts on the Olivo Enterprises property near Lockwood Valley, Ventura County, California.

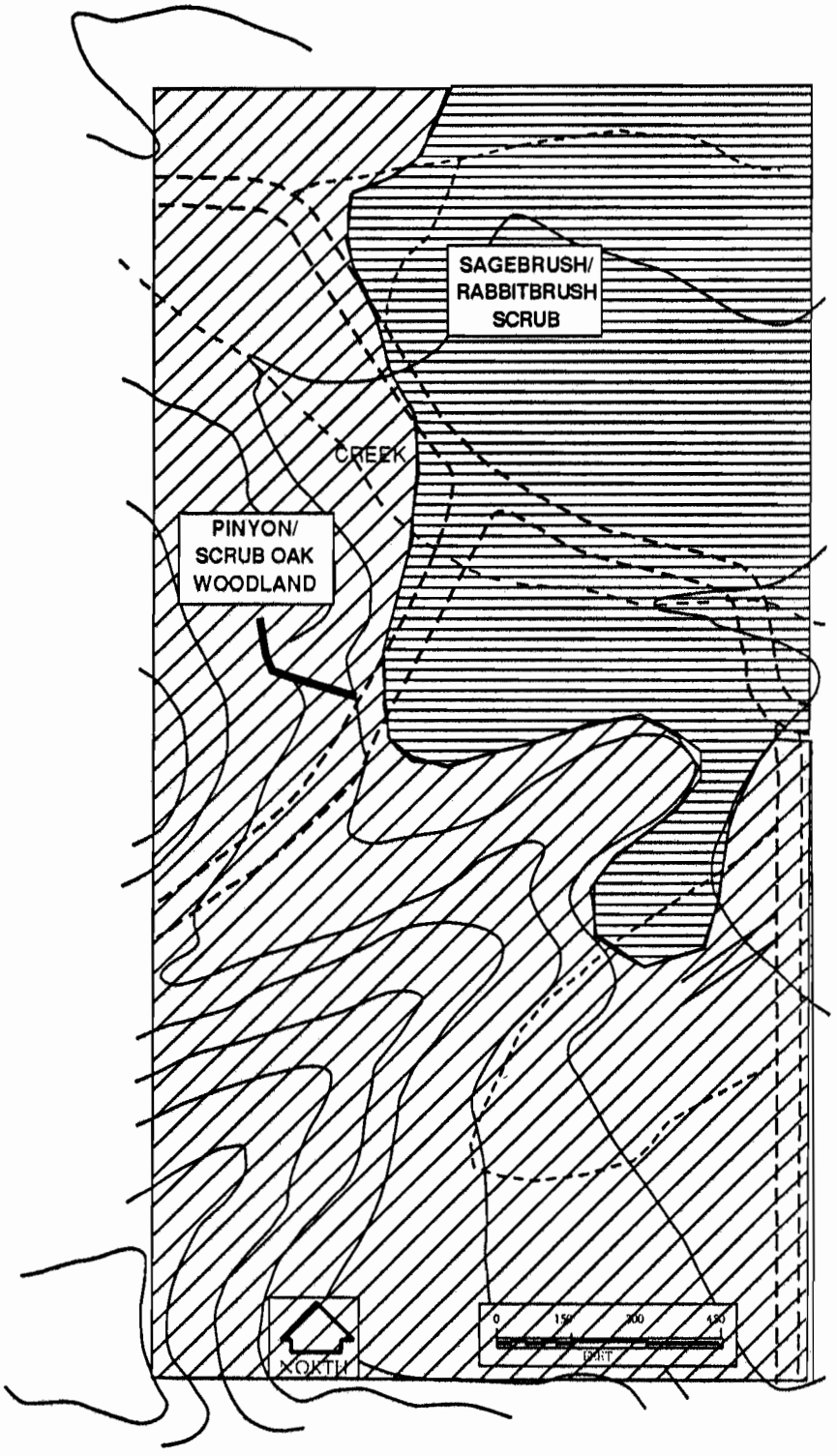

Figure 5. Vegetation map for the Olivo Enterprises property near Lockwood Valley, Ventura County, California.

Figure 6. General habitat of the woodland in the southeast quarter of the Olivo Enterprises property near Lockwood Valley, Ventura County, California.

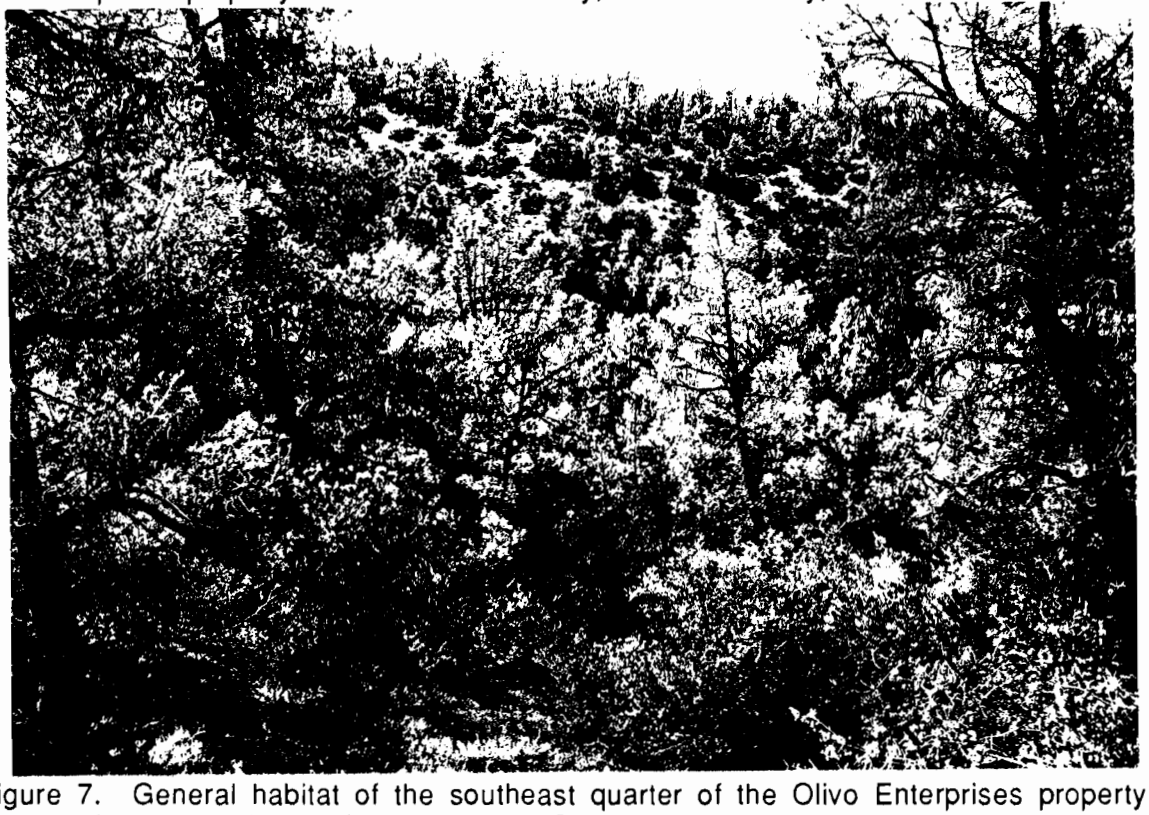

Figure 7. General habitat of the southeast quarter of the Olivo Enterprises property near Lockwood Valley, Ventura County, California. Photo looking northwest.

Figure 8. Pinyon/scrub oak woodland on the Olivo Enterprises property near Lockwood Valley, Ventura Co., California. Photo taken in the southwest quarter looking north.

Figure 9. Pinyon/scrub oak woodland on the Olivo Enterprises property near Lockwood Valley, Ventura County, California. Photo taken in the southwest quarter looking south.

Figure 10. General habitat in the sagebrush scrub on the Olivo Enterprises property near Lockwood Valley, Ventura County, California. Photo taken from the northeast

Figure 11. General habitat of the sagebrush scrub on the Olivo Enterprises property near Lockwood Valley, Ventura County, California. Photo taken from the northeast quarter looking south.

Figure 12. General habitat of the sagebrush scrub on the Olivo Enterprises property near Lockwood Valley, Ventura County, California. Photo taken from the northeast

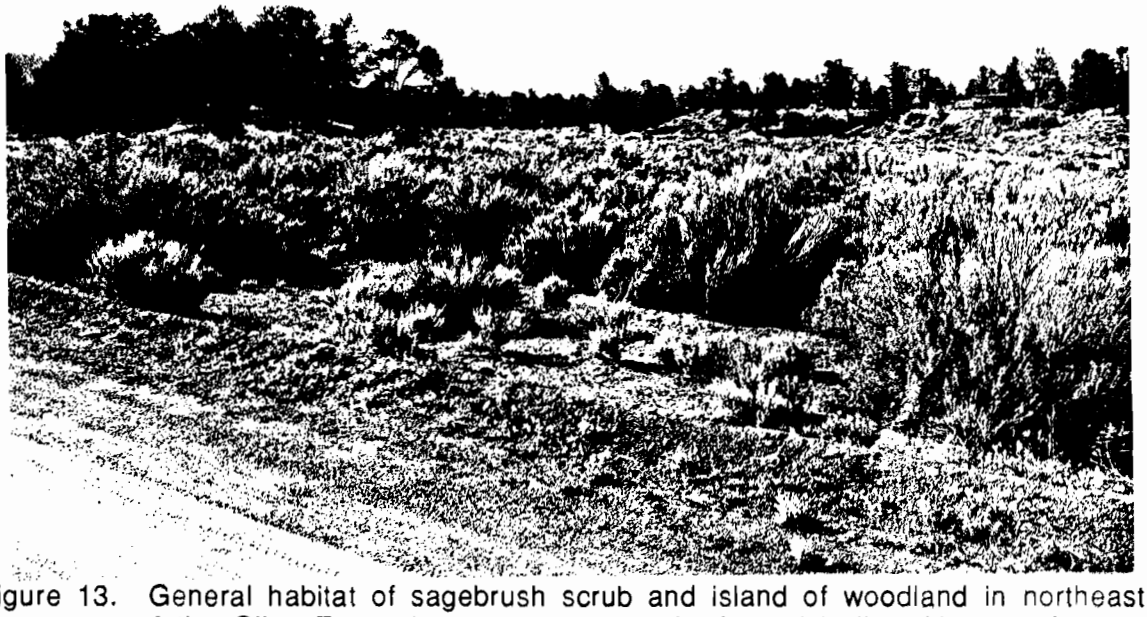

Figure 13. General habitat of sagebrush scrub and island of woodland in northeast quarter of the Olivo Enterprises property near Lockwood Valley, Ventura County, California. Photo looking north.

Figure 14. General habitat of northwest portion of the Olivo Enterprises property near Lockwood Valley, Ventura County, California. Photo looking northwest

Figure 15. General habitat and trailer on the Olivo Enterprises property near Lockwood Valley, Ventura County, California. Photo taken near the center of the property looking southeast.

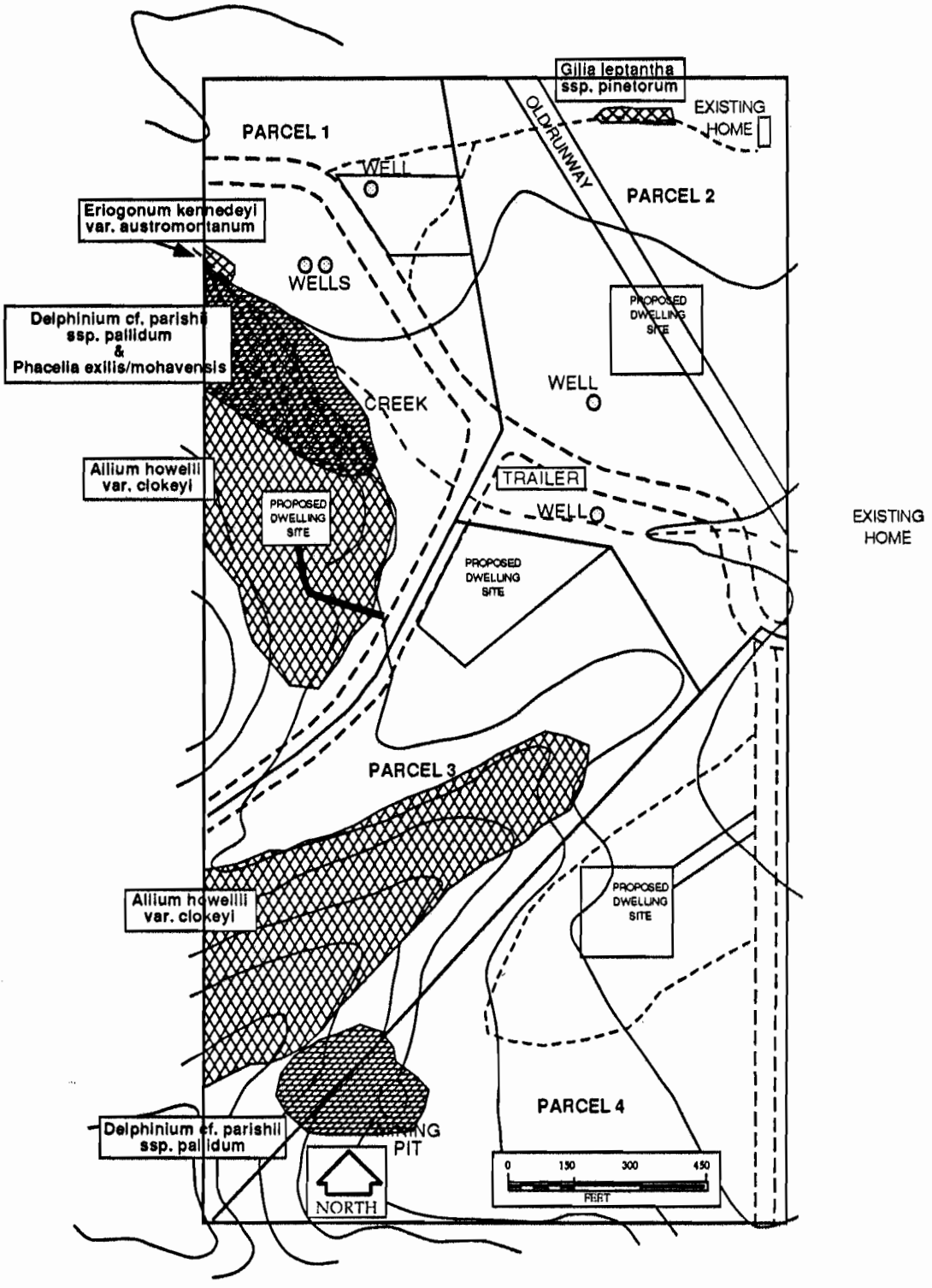

Figure 16. Locations of sensitive plant species found on the Olivo Enterprises property near Lockwood Valley, Ventura County, California.