

TITLE PAGE

Establishment Record for
American Canyon Research Natural Area
within
Los Padres National Forest
San Luis Obispo County, California.

1 Vegetation types follow Holland (1986). Tree names are in accordance with Little (1979), and all other plant names follow Munz (1968).

SIGNATURE PAGE

for

RESEARCH NATURAL AREA ESTABLISHMENT RECORD

American Canyon Research Natural Area

Los Padres National Forest

San Luis Obispo County, California

The undersigned certify that all applicable land management planning and environmental analysis requirements have been met and that boundaries are clearly identified in accordance with FSM 4063.21, Mapping and Recordation and FSM 4063.41 5.e(3) in arriving at this recommendation.

Prepared by _____ Date _____
Ayn J. Martin, Range Conservationist, Pacific Southwest Forest and Range
Experiment Station, and Pacific Southwest Region

Recommended by _____ Date _____
Keith Guenther, District Ranger, Santa Lucia Ranger District

Recommended by _____ Date _____
Art J. Carroll, Forest Supervisor, Los Padres National Forest

Recommended by _____ Date _____
Paul F. Barker, Regional Forester, Pacific Southwest Region

Recommended by _____ Date _____
Ronald E. Stewart, Station Director, Pacific Southwest Forest and
Range Experiment Station

A. INTRODUCTION

The American Canyon Research Natural Area (ACRNA) is selected to represent Coulter Pine (*Pinus coulteri*) Forest and Northern Mixed Chaparral¹ in the South Coast Ranges physiographic province. The area was proposed by the Forest Supervisor of the Los Padres National Forest, and an Ecological Survey was completed on the area in 1989 (Schettler 1989). The area was recommended for establishment by the Region 5 Research Natural Area Committee in that same year. Unless otherwise noted, information contained in this Establishment Record was taken from the Ecological Survey of the American Canyon Research Natural Area (Schettler 1989).

Aside from Coulter Pine Forest and Northern Mixed Chaparral, the ACRNA also contains Valley Needlegrass (*Stipa pulchra*) Grassland, and Central Coast Live Oak (*Quercus agrifolia*) Riparian Forest, as well as seven plant species of limited distribution listed by the California Native Plant Society (CNPS). One of these seven species, *Sidalcea heckmani*, is listed as sensitive by the Forest; none known to occur within the ACRNA is Federally or State listed.

All lands within the ACRNA are under the jurisdiction of the Los Padres National Forest, and fall within the Congressionally designated Machesna Mountain Wilderness (Map 1).

1) Land Management Planning

The ACRNA is included in Los Padres National Forest Land and Resource Management Plan (U.S.D.A. Forest Service 1988). It is included within the Research Natural Area (RNA) Management Area (Management Area #66), which comprise the eight separate units of currently established, candidate and proposed RNAs on the Forest.

B. OBJECTIVES

The objectives for establishment of the ACRNA are to preserve representatives of Coulter Pine Forest, Northern Mixed Chaparral, and associated communities within the South Coast Ranges physiographic province. Establishment of the ACRNA will conserve genetic diversity through protection from serious environmental disruptions. The ACRNA will serve as a reference area for the study of succession and for comparing results from manipulative research, as well as provide onsite educational opportunities, serve as a baseline for measuring long-term ecological changes, and provide opportunities for monitoring the effects of resource management techniques and practices.

C. JUSTIFICATION FOR ESTABLISHMENT

The ACRNA is the only RNA in the Pacific Southwest Region to target Coulter Pine Forest in the South Coast Ranges physiographic province. Two other areas target this type in the Transverse Ranges physiographic province: Fisherman's Camp Candidate Research Natural

Area, and Cahuilla Mountain Research Natural Area, both on the San Bernardino National Forest.

An uncommonly undisturbed area within the Machesna Mountain Wilderness, the 1500-acre (607-ha) ACRNA provides an adequate combination of accessibility and remoteness to ensure the protection of unmodified RNA values. Plant diversity is notably high, and the area contains at least seven plants listed by the CNPS as rare, threatened, endangered, or of limited distribution. One of these plants, Sidalcea heckmanii, is a Forest sensitive species. The unit also contains a representative area of Valley Needlegrass Grassland, formerly extensive throughout the valleys of California, but now much reduced (Holland 1986). Further, the ACRNA contains an area representative of Central Coast Live Oak Riparian Forest. Although this is not a target element for the ACRNA, Central Coast Live Oak Riparian Forest is currently unrepresented in an established RNA in the South Coast Ranges physiographic province. Establishment of the ACRNA will help preserve a wide spectrum of unique vegetation types of scientific interest and importance within the Pacific Southwest Region.

D. PRINCIPAL DISTINGUISHING FEATURES

The ACRNA is characterized by the presence of Coulter Pine Forest, Northern Mixed Chaparral, Central Coast Live Oak Riparian Forest, and Valley Needlegrass Grassland. Seven plant species found within the area are listed by the CNPS as rare, threatened, endangered, or of limited distribution; one of these is a Forest sensitive species. Geology of the area consists of Upper Cretaceous and Lower Tertiary conglomerates, sandstones, and shales of marine origin. Soils are of the Millsholm-Exchequer-Stonyford Families Association. Most of the vegetation in the ACRNA burned in 1939. The patches left untouched by this fire had burned in previous fires in 1921 and 1926.

E. LOCATION

- 1) The ACRNA is located on the Santa Lucia Ranger District of the Los Padres National Forest.
- 2) The approximate center of the unit is at 35°18'45" North latitude, and 120°15'00" West longitude.
- 3) Boundary description (a certified copy of the legal boundary description of this area can be found in the forward section of this document):

American Canyon RNA

An area entirely within the Machesna Mountain Wilderness, Santa Lucia Ranger District, Los Padres National Forest. The location is within Township 30 South, Range 16 East, Mount Diablo Meridian, in San Luis Obispo County, California, as shown on the attached map entitled "American Canyon RNA", said map being made part of this description. It is a composite of portions of two Forest Service Primary Base Series maps, "La Panza,

California" (244-3C) and "Poza Summit, California" (245-4C). Geographic coordinates (North American Datum, 1927) are approximate and are scaled from these maps.

American Canyon RNA is more particularly bounded and described as follows:

BEGINNING at Point "A" (35° 19' 31" N; 120° 14' 16" W) along the northerly boundary of the Machesna Mountain Wilderness, said point being located one hundred feet (100') southwestwardly from the intersection of recreational trail 16E01 with the said boundary, thence:

- 1) southeastwardly, parallel to and distant one hundred feet (100') southwestwardly from the said recreational trail 16E01, to Point "B" (35° 18' 48" N; 120° 13' 28" W);
- 2) westwardly, along the top of a ridge and passing through a summit, elevation 3784, and descending gradually along a spur to the junction of the stream threads of two minor branches of American Canyon at Point "C" (35° 18' 53" N; 120° 14' 52" W);
- 3) westwardly, and downstream along the stream thread of a branch of American Canyon to its junction with the stream thread of American Canyon at Point "D";
- 4) westwardly, ascending in a direct line to a summit, elevation 3610, at Point "E";
- 5) westwardly, along the top of a ridge and passing through a summit, elevation 3782, to the boundary of the Machesna Mountain Wilderness at Point "F" (35° 18' 55" N; 120° 16' 03" W);
- 6) northwestwardly, northeastwardly, and southeastwardly, along the boundary of the Machesna Mountain Wilderness, to Point "A", the Point of BEGINNING.

******* END OF DESCRIPTION *******

I hereby certify that the foregoing boundary description, **American Canyon RNA**, was prepared by me.

FRANK A. FETSCHER, PLS Date
Forest Land Surveyor
Los Padres National Forest

4) The 1500 acre (607 ha) ACRNA is located in the inner Coast Ranges of northeastern San Luis Obispo County.

5) Elevations range from 2800 feet (854 m) at the bottom of American Canyon, to 3784 feet (1153 m) on the southeastern boundary of the area (Map 2).

6) The ACRNA is approximately an hour from San Luis Obispo (Map 1). The best access is via U.S. Highway 101 north from San Luis Obispo (or south from Paso Robles) to State Highway 58. Follow highway 58 east approximately 3 miles (5 km) to Pozo Road (County Route A3089). Turn southeast onto Pozo Road. At approximately 19 miles (31 km), at an intersection approximately 1.5 miles northeast of Pozo, Pozo Road makes a right angle turn to the east, changing designation to County Route M3093. Continue on M3093 east and northeast approximately 8 miles (13 km) to its intersection with Forest Service Road 29S18. Follow Road 29S18 approximately 3 miles (5km) east past Queen Bee campground and Chester Spring to Forest Service Road 30S17.2 (shown on Forest map as 30S14). Turn south on Road 30S17.2 (4-wheel drive), and follow this route for approximately 1.5 miles (2 km) to the northern boundary of the Machesna Mountain Wilderness, which is also the northern boundary of the ACRNA. A former bulldozer trail, now overgrown, provides foot access from the northern boundary of the area (beginning to the west of the end of Road 30S17.2) down into American Canyon. The southern edge of the ACRNA is within a few hours' hike from vehicle access.

An alternative route is similar to the above, except it follows County Route M3093 east for only about 6 miles (10 km). The route turns southeast onto trail 16E01 (a designated ORV road), and follows this trail approximately 2.5 miles (4 km) to the northwestern corner of the RNA. This trail skirts the northern boundary of the unit (and the Machesna Mountain Wilderness) for about 2 miles (3 km), after which it continues southeast as a foot and horse trail along the eastern boundary of the ACRNA.

F. AREA BY COVER TYPE

<u>SAF (Eyre 1980) TYPE</u>	<u>CODE</u>	<u>ACRES</u>	<u>HECTARES</u>
Unclassified	-	1485	601
California Coast Live Oak	255	<u>15</u>	<u>6</u>
TOTALS		1500	607

<u>KUCHLER (1966) TYPE</u>			
Chaparral	K-29	1473	596
California Oakwoods	K-26	15	6
Unclassified	-	<u>12</u>	<u>5</u>
TOTALS		1500	607

<u>HOLLAND (1986) TYPE</u>			
Coulter Pine Forest/ Northern Mixed Chaparral	84140/ 37110	1473	596
Central Coast Live Oak Riparian Forest	61220	15	6
Valley Needlegrass Grassland	42110	<u>12</u>	<u>5</u>
TOTALS		1500	607

G. PHYSICAL AND CLIMATIC CONDITIONS

The ACRNA is situated on the south slope of Pine Mountain, which is located in the La Panza Range, one of the inner South Coast Ranges (Map 2). The ACRNA encompasses the uppermost watershed of American Canyon, which ultimately drains into the Salinas River. The long curved summit of Pine Mountain defines its northern boundary, and the east-west ridgeline between San Jose peak and peak 3784 defines its southern boundary.

No permanent weather stations exist within the ACRNA. General climate in the region is Mediterranean. Average temperatures at San Luis Obispo, approximately 22 air miles (35 km) west of the ACRNA at 315 feet (96 m) elevation, range from 51 to 59°F (11 to 15°C) between November and April, and from 61 to 68°F (16 to 20°C) between May and October. At San Luis Obispo, most precipitation falls from November-April, and ranges from 1 to 4 inches (30 to 100 mm) per month. However, at Pozo Station, located 6 air miles (10 km) east-southeast of the ACRNA at 1465 feet (447 m) elevation, the main rainy season starts a month earlier (Map 1).

Table 1 summarizes 18 years of rainfall data for Pozo Station. Precipitation at Pozo Station fluctuates widely from year to year. Rainfall for 1977-78 was almost seven times that for the preceding year, and during the three years between 1986 and 1989, total rainfall was less than the mean for two average years combined.

Table 1: Rainfall data for Pozo Station, Los Padres National Forest, San Luis Obispo County, California. Rainfall is in inches (mm in parentheses).

<u>YEAR</u>	<u>TOTAL PRECIPITATION</u>	<u>PERCENT OF AVERAGE</u>
1971-72	13.86 (353)	64
1972-73	28.93 (736)	135
1973-74	22.51 (573)	105
1974-75	19.91 (507)	93
1975-76	14.77 (376)	69
1976-77	6.45 (164)	30
1977-78	44.37 (1129)	207
1978-79	22.84 (581)	106
1979-80	31.92 (812)	149
1980-81	19.11 (486)	89
1981-82	24.49 (623)	114
1982-83	36.15 (920)	169
1983-84	17.20 (438)	80
1984-85	12.68 (323)	59
1985-86	27.90 (710)	130
1986-87	10.60 (270)	49
1987-88	17.80 (453)	83
1988-89	12.90 (328)	60

SOURCE: Unpublished weather data on file at the Forest Supervisor's Office, Goleta, California.

H. VALUES

1) Flora

Appendix A lists all plant species encountered during the ecological survey by Schettler (1989). Plant diversity is high, and the vegetation in general is relatively undisturbed. The dominant vegetation type is a sparse Coulter Pine Forest of dispersed, generally evenaged stands of

varying size and density over an impenetrable Northern Mixed Chaparral understory (Map 3). Small porteros covered with Valley Needlegrass Grassland are scattered on south-facing slopes within the Coulter Pine Forest/Northern Mixed Chaparral type. Central Coast Live Oak Riparian Forest is limited to the riparian corridors.

a) Coulter Pine Forest/Northern Mixed Chaparral (Holland (1986) codes 84140/37110)

Coulter Pine Forest is the target community type for the ACRNA. Coulter pine is widely distributed in the Peninsular and Transverse Ranges of Southern California, and in the Coast Ranges from San Francisco Bay south (Griffin and Critchfield 1972). At the ACRNA, Coulter Pine Forest is found in combination with Northern Mixed Chaparral. This combination of vegetation types is not unusual, occupying 55 percent of the Coulter pine stands in the Los Padres National Forest between Santa Barbara and Santa Margarita (Borchert 1985).

The Coulter pine overstory ranges from a few scattered individual trees to dense stands shading out the understory. Coulter pine is completely missing from 20-25 percent of the community, where chaparral dominates. For a study on cone serotiny in Coulter pine, Borchert (1985) sampled two Coulter pine stands within the ACRNA. A stand along trail 16E01 slightly east of road 30S14 (site "PM") contained a density of 936 trees/acre (2313 trees/ha), a basal area of 0.44 ft²/acre (0.1 m²/ha), and a shrub cover of 77 percent. The area sampled had burned in 1939 (Map 5), and was characterized by an even-aged structure of pines in the 30-35 year age class (Figure 1, site "PM"). Minnich (1978, 1980) also noted high levels (90%) of fire-caused pine mortality in Coulter pine/chaparral stands in the eastern Transverse Ranges.

The second stand sampled by Borchert (1985) within the ACRNA was located near the western edge of the ACRNA, and contained unusually old trees (site "PMS"). Fires burned this area in 1921 and 1939, but most of the trees survived. Although there exist pulses of new recruits, the majority of the pines on this site were 125-145 years old. The isolated 80 and 100-year-old trees suggest that stands relatively protected from stand-converting fires may exhibit pulsed regeneration at an advanced age (Figure 1, site "PMS"). Density of this stand was 242 trees/acre (598 trees/ha), basal area was 137 ft²/acre (31.4 m²/ha), and shrub cover was 96 percent.

Figure 1: Age-frequency histograms for Coulter Pine/Chaparral on two sites

within the American Canyon Research Natural Area (Borchert 1985).

Although Coulter pine is not considered a closed-cone pine, Borchert (1985) found a range of serotiny in the eleven stands he sampled in the region. South of the ACRNA, in Miranda Canyon south of the Cuyama River, all cones opened after 4 years of age. In contrast, within the ACRNA, 52 percent of the cones sampled 6 years or older were closed, representing the highest degree of serotiny in the eleven stands sampled.

Coulter pine does not self-prune, hence its lower branches form a continuous "ladder" for fire to reach the tree canopy from the underlying chaparral. In southern California fire suppression activities have created extensive tracts of old, highly flammable vegetation subject to catastrophic fires (Minnich 1983). It is known that fire promotes the regeneration of Coulter pine (Vale 1979), and rejuvenates chaparral. The pine needs mineral soil for optimum germination, and the serotiny of the pines in this basin means that seeds are made available by fire. Pine seedlings establish quickly, are drought-adapted, and trees may begin to produce seed by 10 to 15 years of age (Minnich 1980). Further, Borchert (1985) found that trees in excess of 100 years appeared especially susceptible to insect and disease attack as well as to wind breakage. Consequently, excessive periods of protection from fire may be detrimental to stand persistence.

The chaparral component in general is species-poor, and is composed of chamise (*Adenostoma fasciculatum*) and Eastwood manzanita (*Arctostaphylos glandulosa*), with lesser amounts of big-berry manzanita (*A. glauca*), scrub oak (*Quercus dumosa*), and interior live oak (*Q. wislizenii* var. *frutescens*). Buck brush (*Ceanothus cuneatus*), hairy ceanothus (*C. oliganthus* var. *sorediatus*), wavyleaf ceanothus (*C. foliosus*), and mountain-mahogany (*Cercocarpus betuloides*) occur infrequently. Very little vegetation occurs beneath the chaparral plants, though Indian warrior (*Pedicularis densiflora*) is sometimes found. Cover varies with slope aspect and soil depth, predictably densest on north- and east-facing slopes. Overall cover ranges from 50 to 98 percent.

In general, chaparral is adapted to repeated fires. A dense cover of annual herbs may appear in chaparral areas during the first growing season after a fire, followed in subsequent years by perennial herbs, short-lived shrubs and the re-establishment of dominance by the original shrub species (Holland 1986). Most of the chaparral on the ACRNA is mature (50 years of age), having burned in the 1939 fire. Small portions along the north and northwest margin date from fires in 1921 and 1926 (Map 5). Fire intervals longer than 60 years tend to diminish species diversity in chaparral (U.S.D.A. Forest Service 1988).

b) Central Coast Live Oak Riparian Forest (61220)

Riparian corridors within the ACRNA are narrow, restricted in width by steep topography, yet they are relatively species rich. Tree-sized coast live oak and canyon oak (Quercus chrysolepis), and full-sized interior live oak are restricted to this type in the ACRNA. A surprising species found here is Mariposa-lily (Calochortus palmeri), an uncommon plant listed by CNPS (List 4-plants of limited distribution), which usually inhabits dry locations. On the ACRNA, it grows in or next to the streambed, and appears not to require drying out each year.

Other riparian species found in this community include Arnica discoides var. alata, Castilleja stanantha, Centaurium exaltatum (CNPS List 4), Delphinium nudicaule, Heterocodon rariflorum, Juniperus californica, Leptodactylon californicum, Monardella macrantha, Populus fremontii, P. trichocarpa, Psoralea orbicularis, Zigadenus venenosus, and a Horkelia which was keyed to H. bolanderi, but was suspected to be a new species (Schettler 1989).

c) Valley Needlegrass Grassland (42110)

This type is restricted to potreros that are mostly under one acre (0.4 ha) in size, and are located on old landslides. The largest potrero flanks the stream at the bottom of the bulldozer trail, and most lie between elevations of 2920 and 3000 feet (890 and 914 m) in an east-central cluster. One lies alongside the northwest ridge at about 3480 feet (1061 m) elevation (Map 3).

The Valley Needlegrass Grassland on the ACRNA is relatively depauperate in native bunchgrasses, but not so disturbed as to be described as Non-native Grassland (42200). While only moderate in species diversity for a native grassland community, this community contains some of the showiest wildflowers, such as Clarkia speciosa, plus the Forest sensitive Sidalcea hickmanii (CNPS List 1B), and the uncommon Malacothamnus niveus (CNPS List 4).

2) Fauna

No wildlife surveys have been done specifically for the ACRNA. Appendix B lists all bird and insect species observed in the area during the ecological survey by Schettler (1989). Where woolly yerba santa (Eriodictyon tomentosum) occurs, it appears to attract high numbers of nectaring butterflies while in bloom in May. Butterflies are also conspicuous along streams in spring.

At least one black bear (Ursus americanus¹) uses the riparian corridors for travel, and birds utilize the streams as a water source. In addition, animal species such as deer (Odocoileus hemionus), desert cottontails (Sylvilagus audubonii), gray squirrels (Sciurus carolinensis), gray foxes (Urocyon cinereoargenteus), gopher snakes (Pituophis melanoleucus), and a horned lizard (Phrynosoma sp.) have been observed within the ACRNA.

¹Nomenclature for mammals follows Whitaker (1980). Nomenclature for reptiles follows MacMahon (1985).

3) Geology

The geology of the ACRNA has a marine origin. It consists of conglomerates, arkosic sandstones, and shales of the Upper Cretaceous and Lower Tertiary that were uplifted along the La Panza Fault (southwest of the RNA) during the Pleistocene epoch (Dibblee 1976) (Map 4). The sandstones and shales are interbedded with the conglomerates, and the different components are most visibly exposed along the streams.

The La Panza Range is part of a block bounded by the Nacimiento Fault to the southwest, and the San Andreas Fault to the northeast. The beds dip gently south 20° and strike east-west.

4) Soils

The ACRNA lies entirely within soil mapping unit 29, and is characterized by the Millsholm-Exchequer-Stonyford Families Association (U.S.D.A. Forest Service [no date]). The mapping unit description is contained in Appendix C. The potreros of Valley Needlegrass Grassland are at least partially defined by landslides, being situated on remnant soils left after slopes have sloughed-off.

5) Lands

All lands within the ACRNA are under the jurisdiction of the Los Padres National Forest. No lands have been acquired, or have any outstanding rights. The area is entirely contained within the Congressionally designated Machesna Mountain Wilderness.

6) Cultural Sites

No archeological surveys have been done specifically for the ACRNA. The current Forest cultural resource inventories are heavily biased by the types and locations for which surveys have been undertaken. Wilderness and mid-slope areas have prominent gaps in cultural data (U.S.D.A. Forest Service 1988).

7) Fire History

Vegetation of the Los Padres National Forest is one of the most fire prone in the National Forest System. Most of these fires are man-caused, the balance are lightning-caused. Chaparral accounts for over 95 percent of the acres burned annually by wildfire, and fire hazard is greatest in decadent chaparral (U.S.D.A. Forest Service 1988). Map 5 illustrates the fire history of the ACRNA. Most of the area burned in 1939, except for the northwestern portion which burned in 1921, and a small area on the northern boundary which burned in 1926. Within each wildfire, fire intensities probably varied, allowing for vegetation of mixed aged classes in some areas.

I. IMPACTS AND POTENTIAL CONFLICTS

1) Mineral Resources

No locatable or leaseable mineral claims are located within the ACRNA, and no conflicts with mining interests are anticipated with its establishment (Anonymous [no date]). The area will be recommended for withdrawal from mineral entry upon establishment.

2) Grazing

The ACRNA is within the Avenales grazing allotment. Season grazing occurs in the small Blue Oak Woodland adjacent to the southeastern boundary of the area, but little or no grazing occurs in the RNA itself due to the difficulty of access, impenetrable chaparral, steep and rugged terrain, and the distance from water (Anonymous [no date], Schettler 1989). The lower portion of the riparian corridor is steep and boulder-filled, and does not provide access to cattle from below. Conflicts between grazing and protection of the ACRNA appear to be minimal, but measures to monitor and possibly reduce grazing use and impacts will be addressed in a management plan. No measures to expand grazing opportunities will be allowed following establishment of the ACRNA.

3) Timber

Coulter pine is not a commercial timber tree, and there has been no logging within the ACRNA in the past. None of the land within the ACRNA is classified as commercial forest land.

4) Watershed Values

Groundwater within the Los Padres National Forest as a whole is used for domestic purposes by private landowners and for administrative purposes. Local water agencies have expressed interest in developing Forest groundwater supplies due to increasing local demand. On the Forest as a whole, opportunities for water yield improvement will be pursued through coordinated resource management. However, all manipulative activities for this purpose will be prohibited on the ACRNA (U.S.D.A. Forest Service 1988). Establishment of the ACRNA will serve to maintain ground cover and protect the soil surface, facilitating the protection of water quality through the prevention of excessive sedimentation of streams.

5) Recreation Values

The Los Padres National Forest is a major supplier of wildland recreation opportunity for central and southern California (U.S.D.A. Forest Service 1988). However, recreational impact within the ACRNA is light. Use is generally confined to infrequent target shooters, and mountain bicyclists use trail 16E01 (an approved off-road-vehicle trail gated against

use by motorized vehicles), which lies just outside the northern and eastern boundaries of the area. There is no evidence of bicyclists extending use into the ACRNA. Measures to monitor recreational use and impacts, and to reduce such use if necessary, will be addressed in a management plan for the ACRNA.

6) Wildlife and Plant Values

Establishment of the ACRNA will protect wildlife and plant values dependent on, and useful of the ecosystems represented. Lack of grazing and recreation use within the RNA prevents localized damage to riparian habitat, and the over-utilization of wildlife food resources by livestock, while preventing the sedimentation and degradation of fisheries habitat through the maintenance of vegetative cover. However, if the area is entirely protected from wildfire or prescribed burning, wildlife habitat diversity may be lost through time (U.S.D.A. Forest Service 1988). The seven plant species listed by the CNPS, one being Forest sensitive, all occur either within the riparian communities, or the Valley Needlegrass Grassland. Establishment of the ACRNA will serve to protect these habitats for maintenance of rare and sensitive plant species.

7) Special Management Area

Management objectives of the ACRNA are conducive to the purposes of the Machesna Mountain Wilderness, and no conflicts are anticipated between Wilderness management direction and protection of RNA values.

8) Transportation Plans

Current access into the ACRNA is adequate for RNA objectives, and follows management objectives for the Machesna Mountain Wilderness. No maintained trails exist within the ACRNA and none are planned. No additional roading is planned for the vicinity. Following establishment, no road or trail construction will be allowed within the ACRNA.

J. MANAGEMENT PRESCRIPTION

Appendix D contains management direction for the ACRNA as stated in the Los Padres National Forest Land and Resource Management Plan (U.S.D.A. Forest Service 1988). The management emphasis calls for protection of resource values for which the ACRNA is established, and management for non-destructive, non-manipulative research and study. Other uses are secondary to scientific use.

1) Management Plan

The Los Padres National Forest will prepare a Management Plan for the ACRNA in consultation with the Pacific Southwest Forest and Range Experiment Station. The plan will specify project prescriptions, practices, uses, and monitoring conducive to the objectives for establishment of the ACRNA.

K. ADMINISTRATIVE RECORDS AND PROTECTION

Responsibility for administration and protection, and for coordinating research for the ACRNA is with the District Ranger, Santa Lucia Ranger District, 1616 Carlotti Drive, Santa Maria, California, 93454. (805) 925-9538.

L. ARCHIVING

Responsibility for approving research lies with the Regional Forester in consultation with the Station Director. Responsibility for archiving data and reports from the ACRNA in a manner that will facilitate the exchange and transfer of information among Stations, scientists and land managers is with the Station Director, Pacific Southwest Forest and Range Experiment Station, 1960 Addison Street, P.O. Box 245, Berkeley, California, 94701. Plant specimens will be deposited at the herbarium of the University of California, Berkeley.

M. REFERENCES

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American Canyon Research Natural Area

APPENDICES

Appendix A: Flora

Appendix B: Insects and Birds

Appendix C: Soil Mapping Unit Description

Appendix D: Management Direction from the Los Padres National Forest Land and Resource Management Plan

APPENDIX A

FLORA

APPENDIX B
BIRDS AND INSECTS

APPENDIX C
SOIL MAPPING UNIT DESCRIPTION

APPENDIX D
MANAGEMENT DIRECTION

American Canyon Research Natural Area

Map 1
Location Within the Los Padres National Forest

- Research Natural Area Boundary / \ •
- State Highway N |
- County Route |
- Forest Service Road
- Trail (ORV)
- Weather Station

T. 30 S., R. 16 E.

American Canyon Research Natural Area
Map 2
Boundaries



Research Natural Area Boundary

Machesna Mountain Wilderness Boundary

Trail 16E01

Forest Service Road 30S14 (4-wheel drive)

T. 30 S., R. 16 E.

American Canyon Research Natural Area

Map 3
Vegetation Types

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<u>HOLLAND (1986)</u>	<u>SAF (Eyre 1980)</u>	<u>KUCHLER (1966)</u>
Coulter Pine Forest/ Northern Mixed Chaparral (84140/37110)	Unclassified	Chaparral (K-29)
Central Coast Live Oak Riparian Forest (61220)	Cal. Coast Live Oak (255)	Cal. Oakwoods (K-26)
Valley Needlegrass Grassland (42110)	Unclassified	Unclassified

American Canyon Research Natural Area

Map 4
Geology

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| | Basal Conglomerate

| | Lower Tertiary Sedimentary Rock

| | Upper Cretaceous Sedimentary Rock

from: Dibblee (1976)

T. 30 S., R. 16 E.

American Canyon Research Natural Area

Map 5
Fire History



Year of Burn Indicated |

T. 30 S., R. 16 E.

American Canyon Research Natural Area

Maps

Map 1: Location Within the Los Padres National Forest

Map 2: Boundaries

Map 3: Vegetation Types

Map 4: Geology

Map 5: Fire History