

CALIFORNIA COASTAL COMMISSION

SOUTH CENTRAL COAST AREA
89 SOUTH CALIFORNIA ST., SUITE 200
VENTURA, CA 93001
(805) 585 - 1800

W 8b, 8c

Filed: 11/7/05
49th Day: 12/26/05
180th Day: 5/6/06
270th Day: 8/4/06
Staff: Deanna Phelps
Staff Report: 6/28/06
Hearing Date: 7/12/06
Commission Action:

**STAFF REPORT: REGULAR CALENDAR**

APPLICATION No.: 4-04-074 and 4-04-076

APPLICANT: Hillel Laks

AGENT: Mike Barsocchini

PROJECT LOCATION: 3533 & 3535 Encinal Canyon Road, Malibu (Los Angeles Co.)

PROJECT DESCRIPTIONS: These applications are for proposed development on two separate, contiguous parcels owned by the applicant. Access is proposed to be provided to each parcel along the same private road from Encinal Canyon Road.

CDP Application 4-04-074 (3535 Encinal Canyon Road)

The applicant is proposing to construct a two-story, 5,281 sq. ft. single-family residence with attached 672 sq. ft. garage, septic system, driveway, turnaround, retaining walls, removal of two existing unpermitted structures, and 3,230 cu. yds. of grading (1,299 cu. yds. cut; 1,931 cu. yds. fill; 632 cu. yds. import). The applicant is also proposing to extend and improve an existing off-site access road, including retaining walls, 5,293 cu. yds. of grading (3,421 cu. yds. cut; 1,872 cu. yds. fill; 1,549 cu. yds. export), paving, and pruning/encroachment within the protected zone of fourteen oak trees within an oak riparian corridor.

CDP Application 4-04-076 (3533 Encinal Canyon Road)

The applicant is proposing to construct a two-story, 4,577 sq. ft. single-family residence with attached 702 sq. ft. garage, septic system, driveway, turnaround, retaining walls, and 4,418 cu. yds. of grading (4,292 cu. yds. cut; 126 cu. yds. fill; 4,166 cu. yds. export).

	<u>CDP 4-04-074:</u>	<u>CDP 4-04-076:</u>
Lot Area:	7.7 acres	11.1 acres
Building Coverage:	3,500 sq. ft.	2,700 sq. ft.
Paved Area:	6,200 sq. ft.	5,473 sq. ft.
Landscaped Area:	6,500 sq. ft.	3,400 sq. ft.
Ht. Abv. Fin. Grade:	35 ft.	35 ft.

IMPORTANT PROCEDURAL NOTE: *The Permit Streamlining Act deadline for Commission action has been extended and the final deadline for action on this application is August 4, 2006. Therefore, the Commission must act on CDP Application Nos. 4-04-074 and 4-04-076 at the July 2006 hearing.*

SUMMARY OF STAFF RECOMMENDATION

Staff recommends **DENIAL** of the subject permit applications. The applicant proposes to construct two single-family residences on two separate, contiguous parcels (Lots 2 and 3) located within a small residential enclave off Encinal Canyon Road in the Santa Monica Mountains. The proposed project sites are situated near stream corridors that are delineated as Environmentally Sensitive Habitat Areas (ESHA) on Malibu/Santa Monica Mountains Land Use Plan resource maps. In addition, the stream corridor and associated hillside slopes in the vicinity of the proposed projects contain relatively undisturbed, large contiguous areas of oak woodland, coastal sage scrub, and chaparral vegetation that is also considered ESHA.

It is important to note that the applicant owns a third vacant parcel (Lot 1), contiguous with the subject parcels, in which a single-family residence had been proposed under a separate permit application not addressed in this staff report. Staff discovered that Lot 1 was reconfigured with three other vacant parcels through a lot line adjustment (LLA) in 1982 that was not permitted by the Coastal Commission. The coastal permit application (4-04-075) for development on Lot 1 was withdrawn in June 2006 by the applicant, as the applicant wished to first resolve the lot line adjustment issue through a separate CDP application.

As part of the subject permit applications, the applicant proposes to provide access to the subject parcels by widening and improving the paved, existing portions of a private access road, as well as extend the road across Lot 1, an illegally configured parcel. A vacant parcel adjoining Lot 1, which was also reconfigured by the LLA, appears to have been left with a future development area that would result in significant adverse impacts to ESHA, given the location of Encinal Canyon Creek ESHA and other site constraints. Given that the lot configurations of the parcels involved in the LLA will likely have to be redesigned in order to minimize ESHA impacts, approval of the road extension across the unpermitted parcels would be inconsistent with the Chapter 3 policies of the Coastal Act, because it would foreclose options for reconfiguring the parcels. The proposed access road alignment will not minimize impacts to ESHA, including the impacts to oak trees along the proposed road alignment, and in regards to future development on illegally configured parcels. As such, the proposed development would not minimize impacts to ESHA or water quality as required by Sections 30231 and 30240 of the Coastal Act.

LOCAL APPROVALS RECEIVED: Los Angeles County Department of Regional Planning Approval-in-Concept, including Conditional Use Permit and Oak Tree Permit No. 96-150-(3) for 3533, 3535, and 3575 Encinal Canyon Road; Los Angeles County Environmental Review Board evaluation; Los Angeles County Fire Department approval of access and turnaround areas; Los Angeles County Fire Department approval of Preliminary Fuel Modification Plans; Los Angeles County Department of Health Services, Conceptual Approvals for Private Septic Systems.

SUBSTANTIVE FILE DOCUMENTS: Malibu/Santa Monica Mountains Land Use Plan (LUP); "Biological Resources Report for 3533, 3535, and 3575 Encinal Canyon Road" prepared by Rachel Tierney Consulting, dated June 22, 2005; "Oak Tree Report for 3533, 3535, and 3575 Encinal Canyon Road" by Tree Life Concern Inc., dated August 16, 1996; "Addendum to Oak Tree Report" by Tree Life Concern Inc., dated July 9, 2000; "Preliminary Soils and Engineering Geologic Investigation Report" prepared by California Geosystems Inc., dated December 27, 1988; "Geologic and Geotechnical Engineering Update Report" by RJR Engineering Group, dated July 10, 1996; "Geotechnical Update Report" prepared by RJR Engineering Group, dated July 11, 2004; "Supporting Geology Report for On-site Sewage Disposal Systems" prepared by RJR Engineering Group, dated September 4, 2002.

I. STAFF RECOMMENDATION

A. CDP Application No. 4-04-074 (Laks)

The staff recommends that the Commission adopt the following resolution:

MOTION I: *I move that the Commission approve Coastal Development Permit 4-04-074 pursuant to the staff recommendation.*

Staff Recommendation of Denial:

Staff recommends a **NO** vote. Failure of this motion will result in denial of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution to Deny the Permit:

The Commission hereby denies a coastal development permit for the proposed development on the ground that the development will not conform with the policies of Chapter 3 of the Coastal Act and will prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit would not comply with the California Environmental Quality Act because there are feasible mitigation measures or alternatives that would substantially lessen the significant adverse impacts of the development on the environment.

B. CDP Application No. 4-04-076 (Laks)

The staff recommends that the Commission adopt the following resolution:

MOTION II: *I move that the Commission approve Coastal Development Permit 4-04-076 pursuant to the staff recommendation.*

Staff Recommendation of Denial:

Staff recommends a **NO** vote. Failure of this motion will result in denial of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution to Deny the Permit:

The Commission hereby denies a coastal development permit for the proposed development on the ground that the development will not conform with the policies of Chapter 3 of the Coastal Act and will prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit would not comply with the California

Environmental Quality Act because there are feasible mitigation measures or alternatives that would substantially lessen the significant adverse impacts of the development on the environment.

II. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

A. Project Description and Background

The applicant proposes to construct two single-family residences on two separate, contiguous parcels located within a small residential enclave off Encinal Canyon Road in the Santa Monica Mountains, approximately 1.2 miles north of the Pacific Ocean (**Exhibits 1 and 2**). For ease of reference, these parcels are referred to as Lots 2 and 3 hereafter. Due to the related nature of the two coastal permit applications, proposed development on each parcel will be addressed in one staff report.

The applicant owns a third parcel (4472-028-031), contiguous with the subject parcels, in which a single-family residence had been proposed under a separate permit application not addressed in this staff report. This parcel is hereafter referred to as Lot 1 (**Exhibit 4**). The coastal permit application (4-04-075) for development on Lot 1 was withdrawn in June 2006 by the applicant. Staff discovered that Lot 1 was reconfigured through a lot line adjustment in 1982 that was not permitted by the Coastal Commission and the applicant wished to first resolve that issue through a separate CDP application.

The subject properties, Lots 2 and 3, are situated between two ridges within the Encinal Canyon watershed. Site elevations range from 900 to 1170 feet above sea level. The proposed development areas are located on the eastern-most portion of the parcels and on the west trending hillside slope of a small ridge. The west fork of Encinal Canyon Creek, a U.S. Geological Survey (USGS) blue-line stream, bisects both parcels and is situated downslope to the west of the proposed building sites. The east fork of Encinal Canyon Creek is located downslope to the east of the subject parcels. These streams are lined by riparian and oak woodland vegetation that is delineated as Environmentally Sensitive Habitat Area (ESHA) on Malibu/Santa Monica Mountains Land Use Plan (LUP) resource maps (**Exhibit 3**).

The proposed development sites are located downslope of a small ridge and the residences would not be visible from any public roads or viewing areas. Charmlee Wilderness Park, public park land managed by the City of Malibu, lies on the other side of the ridge west of the subject parcels. The proposed development sites are not visible from Charmlee park land or associated public trails. Vacant land and three large-lot single family residences are located in the vicinity of the project sites. The three neighboring residences lie to the south and east of the subject parcels, two of which share an existing, 15 to 20-foot wide, paved private access road that meanders west from Encinal Canyon Road (**Exhibit 4**).

To clearly address what is proposed on each parcel, the project descriptions and environmental setting are provided below for each separate application.

1. CDP APPLICATION NO. 4-04-074 (Lot 2; 3535 Encinal Canyon Road):

The applicant is proposing to construct a two-story, 5,281 sq. ft. single-family residence with attached 672 sq. ft. garage, septic system, driveway, turnaround, retaining walls, removal of two existing unpermitted structures, and 3,230 cu. yds. of grading (1,299 cu. yds. cut; 1,931 cu. yds. fill; 632 cu. yds. import) on Lot 2 (**Exhibits 4 and 5**). The applicant proposes a development area (not including the road or driveway turnaround) of 10, 417 sq. ft. In order to provide access to the subject parcel, the applicant is also proposing to extend, improve, and widen to 24 feet an existing off-site access road, including retaining walls, 5,293 cu. yds. of grading (3,421 cu. yds. cut; 1,872 cu. yds. fill; 1,549 cu. yds. export), and paving. Where the access road crosses the east fork of Encinal Canyon Creek, there is an existing corrugated metal pipe culvert/Arizona-type stream crossing. No improvements are proposed for the stream crossing. The proposed road widening will impact the protected zones of fourteen oak trees within the oak-riparian ESHA canopy along the east fork of Encinal Canyon Creek and on the ridge within Lot 1.

The west fork of Encinal Canyon Creek bisects the property approximately 200 feet west of the proposed building site (**Exhibit 3**). The streambed spans approximately 3 feet and is flanked with non-native species extending down from the terraced orchard. A concrete box culvert stream crossing, of an approximately 3-foot span, 5-foot height, and 6-foot length, exists in a portion of the streambed. Vegetation on the subject parcel west of the stream consists of undisturbed mixed chaparral/oak woodland. However, vegetation on the subject parcel east of the stream consists of highly disturbed mixed chaparral/oak woodland that has been largely displaced by an approximately 0.5-acre terraced orchard containing avocado, lemon, macadamia, and ornamental trees. Mature oak trees, as well as native western sycamore trees, are interspersed among the orchard vegetation. Staff review of 1977 aerial photographs indicate that the subject site east of Encinal Canyon Creek was disturbed by vegetation removal, terracing, and grading that pre-date the Coastal Act. In addition to the existing terraced orchard, the site currently contains a water well, 10,000-gallon water tank, small tool shed, and a 675 sq. ft. dilapidated miniature house structure. The applicant proposes to remove the small tool shed and 675 sq. ft. dilapidated miniature house structure from the site, and retain the existing terraced orchard, water well, and water tank.

2. CDP APPLICATION NO. 4-04-076 (Lot 3; 3533 Encinal Canyon Road):

The applicant is proposing to construct a two-story, 4,577 sq. ft. single-family residence with attached 702 sq. ft. garage, septic system, driveway, turnaround, retaining walls, and 4,418 cu. yds. of grading (4,292 cu. yds. cut; 126 cu. yds. fill; 4,166 cu. yds. export) on Lot 3 (**Exhibits 4 and 6**). This project includes a development area of 7,361 sq. ft. The applicant proposes to utilize the access road proposed in CDP application No. 4-04-074 discussed above.

The subject parcel, Lot 3, lies immediately north of Lot 2. The proposed building site is situated in the far southeast corner of the parcel approximately 50 feet from the proposed residence on Lot 2. The proposed building site has been previously disturbed according to 1977 aerial photographs, and currently contains fringe coast sage scrub vegetation interspersed with non-native grasses and eucalyptus trees. A few oak trees lie just east of the subject parcel boundary near the proposed development area. The remainder of the subject parcel contains mixed chaparral and coast sage scrub vegetation that is considered to be part of a large, undisturbed block of habitat. The west fork of Encinal Canyon Creek bisects the property and is situated downslope approximately 400 feet to the west of the building site.

Proposed Access Road

In the vicinity of the project area there is an existing, paved private access road that originates at Encinal Canyon Road east of the subject parcels and meanders approximately 0.2 miles in a western direction, then crosses the east fork of Encinal Canyon Creek, and climbs a small ridge to a fork at the southern property line of Lot 1 (**Exhibit 4**). The west road fork continues westerly approximately 400 feet to an existing residence. From the fork north is a rough, unpaved, gravel pathway that follows the ridgeline north, to a terminus on Lot 1. The applicant's agents have provided easement information that indicates that five properties, including Lot 1, have easement rights to the access road, through documents recorded in 1975. This includes those properties between Encinal Canyon Road and the northern property line of Lot 1. Additionally, the applicant's agent has provided information that the applicant granted an easement from Lot 1 to Lots 2 and 3 (all owned by the applicant) in 2005. Given the pattern of development in the vicinity and the location of the access road terminus on Lot 1, no other property owners besides the applicant utilize the access road or easement across Lot 1. As described previously in this report, the applicant proposes to provide access to the subject parcels by widening and improving the paved, existing portions of the access road, as well as extend the road north through Lot 1 (**Exhibit 4**). The applicant's oak tree report states that to facilitate the proposed new access road improvements, ten (10) oak trees will require pruning, and the protected zone of four (4) oak trees will be encroached upon. The road widening is required by the Los Angeles County Fire Department in order to provide its standard width for fire truck and emergency vehicle access to the project sites. The existing road extends through the oak riparian woodland within the east fork of Encinal Creek. The road widening plan includes the construction of retaining walls that will encroach into the protected zone of several oak trees. Additionally, branches of several trees overhang the existing and/or the proposed road alignment and must be pruned to provide the required "open to the sky" clearance for fire vehicles. Staff would note that although the applicant's oak tree consultant differentiates between impacts to oak trees from pruning versus encroachment, in reality, pruning of oak tree branches to provide the required clearance for fire vehicles is necessary because the road is encroaching into the protected zone and the branches overhang the road. As such, the proposed project will impact fourteen (14) oak trees.

As proposed access road improvements cross neighboring properties within the applicant's easement, all affected property owners of record were notified on March 16, 2006 by staff and invited to join as co-applicants in the subject permit applications pursuant to Coastal Act Section 30601.5. No requests were received. However, telephone calls from two affected property owners were received by staff in response to the invitation. Both property owners requested additional information regarding proposed improvements and expressed concern regarding the environmental impacts of proposed access road improvements in the oak woodland and riparian areas.

Unpermitted Lot Line Adjustment

In consideration of the subject permit applications, it is important to note the facts pertaining to Lot 1 and the unpermitted lot line adjustment described below, as development on Lot 1 is proposed to facilitate access to Lots 2 and 3.

On May 5, 1982 Los Angeles County Department of Regional Planning approved Tentative Parcel Map No. 14831 for a lot line adjustment, subject to conditions, that reconfigured vacant Lot 1 and three vacant neighboring parcels under separate ownership (**Exhibit 8**). Subsequently, the Tentative Parcel Map and a Certificate of Compliance (with final parcel map requirements waived) was granted and recorded in 1983. The parcel reconfiguration can be outlined and quantified as follows.

Pre-LLA APN and Area	Post-LLA APN and Area	Approximate Area Change
4472-028-027 2.4 acres	4472-028-031 (Lot 1) 3.9 acres	+ 1.4 acres
4472-028-018 5.0 acres	4472-028-032 4.0 acres	- 1.0 acres
4472-028-020 3.2 acres	4472-028-033 2.0 acres	- 1.2 acres
4472-028-025 4.8 acres	4472-028-034 5.6 acres	+ 0.8 acres

Parcels -031 and -034 increased in size by the addition of portions of the adjoining parcels (-032 and -033). Lot 1, owned by the subject applicant and over which an access road is proposed, acquired a 1.4-acre portion of adjoining parcel -018 (now -032). As conditions of approval of the LLA by the County, flood hazard and slope easement areas were delineated on the recorded parcel map. As such, two 100-foot wide flood hazard areas associated with Encinal Canyon Creek bisect parcels -032, -033, and -034. In addition, a 50-foot slope easement is situated along the eastern-most edge of parcels -032 and -033 next to Encinal Canyon Road. The parcels involved in the LLA remain vacant, except for parcel -034, which contains a single family residence.

Lot line adjustments are considered a form of land division that constitute development under the Coastal Act and require a coastal development permit. The owners of the four LLA parcels failed to secure a coastal development permit at the time of the LLA. Now, each of the four parcels is under new, separate ownership. As stated previously, the

applicant has withdrawn a separate CDP application for residential development on Lot 1 in order to first resolve the unpermitted lot line adjustment through a separate CDP application. However, no such application has been received by the Commission to date.

Past Commission Actions

The Commission has approved development on an adjacent parcel to the south. In 1983 the Commission approved CDP 5-83-515 (Ropella) for a single family residence with septic system, water well, private access road, brush clearance, grading terraces, and construction of bridges at 3565 Encinal Canyon Road (Parcel -034) subject to special conditions regarding revised plans, hillside revegetation, and open space easement. The permit was issued December 16, 1983. The CDP application was reviewed and approved after the parcel was reconfigured by the LLA described above, although the LLA was not addressed in the CDP staff report. It does appear, based on staff's review of the lot line adjustment map, aerial photos, and site visit, that the reconfigured Parcel -034 resulted in a development area that minimized ESHA impacts. In that case, the development area is located on the east side of the west fork of Encinal Creek, so it was not necessary for the access driveway to cross that stream, and the development was located further away from the riparian canopy (**Exhibit 10**).

B. Environmentally Sensitive Habitat and Water Quality

Section **30230** of the Coastal Act states that:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section **30231** states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section **30240** states:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

Section 30107.5 of the Coastal Act, defines an environmentally sensitive area as:

"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

Section 30231 of the Coastal Act requires that the biological productivity and the quality of coastal waters and streams be maintained and, where feasible, restored through, among other means, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flows, maintaining natural buffer areas that protect riparian habitats, and minimizing alteration of natural streams. In addition, Sections 30107.5 and 30240 of the Coastal Act state that environmentally sensitive habitat areas must be protected against disruption of habitat values. Therefore, when considering any area, such as the Santa Monica Mountains, with regard to an ESHA determination one must focus on three main questions:

- 1) Is a habitat or species rare?
- 2) Is the habitat or species especially valuable because of its special nature or role in the ecosystem?
- 3) Is the habitat or species easily disturbed or degraded by human activities and developments?

The Coastal Commission has found that the Mediterranean Ecosystem in the Santa Monica Mountains is itself rare, and valuable because of its relatively pristine character, physical complexity, and resultant biological diversity. Therefore, habitat areas that provide important roles in that ecosystem are especially valuable and meet the second criterion for the ESHA designation. In the Santa Monica Mountains, coastal sage scrub and chaparral have many important roles in the ecosystem, including the provision of critical linkages between riparian corridors, the provision of essential habitat for species that require several habitat types during the course of their life histories, the provision of essential habitat for local endemics, the support of rare species, and the reduction of erosion, thereby protecting the water quality of coastal streams. For these and other reasons discussed in **Exhibit 9**, which is incorporated herein, the Commission finds that large contiguous, relatively pristine stands of coastal sage scrub and chaparral in the Santa Monica Mountains meet the definition of ESHA. This is consistent with the Commission's past findings on the Malibu LCP¹.

¹ Revised Findings for the City of Malibu Local Coastal Program (as adopted on September 13, 2002) adopted on February 6, 2003.

Further, woodlands that are native to the Santa Monica Mountains, such as oak woodlands, are important coastal resources. Native trees prevent the erosion of hillsides and stream banks, moderate water temperatures in streams through shading, provide food and habitat, including nesting, roosting, and burrowing to a wide variety of wildlife species, contribute nutrients to watersheds, and are important scenic elements in the landscape. In the Santa Monica Mountains, coast live oak woodland occurs mostly on north slopes, shaded ravines and canyon bottoms. Besides the coast live oak, this plant community includes hollyleaf cherry, California bay laurel, coffeeberry, and poison oak. Coast live oak woodland is more tolerant of salt-laden fog than other oaks and is generally found nearer the coast². Coast live oak also occurs as a riparian corridor species within the Santa Monica Mountains.

The important ecosystem functions of oak woodlands and savanna are widely recognized³. These habitats support a high diversity of birds⁴, and provide refuge for many species of sensitive bats⁵. Typical wildlife in this habitat includes acorn woodpeckers, scrub jays, plain titmice, northern flickers, cooper's hawks, western screech owls, mule deer, gray foxes, ground squirrels, jackrabbits and several species of sensitive bats.

Therefore, because of their important ecosystem functions and vulnerability to development, the Commission finds that oak woodlands and savanna within the Santa Monica Mountains meet the definition of ESHA under the Coastal Act. This is consistent with the Commission's past findings on the Malibu LCP⁶.

Finally, the Commission has long recognized the importance of riparian habitat. Riparian woodlands occur along both perennial and intermittent streams in nutrient-rich soils. Partly because of its multi-layered vegetation, the riparian community contains the greatest overall biodiversity of all the plant communities in the area⁷. At least four types of riparian communities are discernable in the Santa Monica Mountains: walnut riparian areas, mulefat-dominated riparian areas, willow riparian areas and sycamore riparian woodlands. Of these, the sycamore riparian woodland is the most diverse riparian community in the area. In these habitats, the dominant plant species include arroyo willow, California black walnut, sycamore, coast live oak, Mexican elderberry, California bay laurel, and mule fat. Wildlife species that have been observed in this community include least Bell's vireo (a State and federally listed species), American goldfinches,

² NPS 2000. op. cit.

³ Block, W.M., M.L. Morrison, and J. Verner. 1990. Wildlife and oak-woodland interdependency. *Fremontia* 18(3):72-76. Pavlik, B.M., P.C. Muick, S. Johnson, and M. Popper. 1991. *Oaks of California*. Cachuma Press and California Oak Foundation, Los Olivos, California. 184 pp.

⁴ Cody, M.L. 1977. Birds. Pp. 223-231 in Thrower, N.J.W., and D.E. Bradbury (eds.). *Chile-California Mediterranean scrub atlas*. US/IBP Synthesis Series 2. Dowden, Hutchinson & Ross, Stroudsburg, Pennsylvania. National Park Service. 1993. A checklist of the birds of the Santa Monica Mountains National Recreation Area. Southwest Parks and Monuments Assoc., 221 N. Court, Tucson, AZ. 85701

⁵ Miner, K.L., and D.C. Stokes. 2000. Status, conservation issues, and research needs for bats in the south coast bioregion. Paper presented at *Planning for biodiversity: bringing research and management together*, February 29, California State University, Pomona, California.

⁶ Revised Findings for the City of Malibu Local Coastal Program (as adopted on September 13, 2002) adopted on February 6, 2003.

⁷ Ibid.

black phoebes, warbling vireos, bank swallows (State listed threatened species), song sparrows, belted kingfishers, raccoons, and California and Pacific tree frogs.

Riparian communities are the most species-rich to be found in the Santa Monica Mountains. Because of their multi-layered vegetation, available water supply, vegetative cover and adjacency to shrubland habitats, they are attractive to many native wildlife species, and provide essential functions in their lifecycles⁸. During the long dry summers in this Mediterranean climate, these communities are an essential refuge and oasis for much of the areas' wildlife.

Riparian habitats and their associated streams form important connecting links in the Santa Monica Mountains. These habitats connect all of the biological communities from the highest elevation chaparral to the sea with a unidirectional flowing water system, one function of which is to carry nutrients through the ecosystem to the benefit of many different species along the way.

Riparian habitats in California have suffered serious losses and such habitats in southern California are currently very rare and seriously threatened. In 1989, Faber estimated that 95-97% of riparian habitat in southern California was already lost⁹. Writing at the same time as Faber, Bowler asserted that, "[t]here is no question that riparian habitat in southern California is endangered."¹⁰ In the intervening 13 years, there have been continuing losses of the small amount of riparian woodlands that remain. Today these habitats are, along with native grasslands and wetlands, among the most threatened in California.

In addition to direct habitat loss, streams and riparian areas have been degraded by the effects of development. For example, the coast range newt, a California Species of Special Concern has suffered a variety of impacts from human-related disturbances¹¹. Human-caused increased fire frequency has resulted in increased sedimentation rates, which exacerbates the cannibalistic predation of adult newts on the larval stages.¹² In addition impacts from non-native species of crayfish and mosquito fish have also been documented. When these non-native predators are introduced, native prey organisms are exposed to new mortality pressures for which they are not adapted. Coast range newts that breed in the Santa Monica Mountain streams do not appear to have adaptations that permit co-occurrence with introduced mosquito fish and crayfish¹³.

⁸ Walter, Hartmut. Bird use of Mediterranean habitats in the Santa Monica Mountains, Coastal Commission Workshop on the Significance of Native Habitats in the Santa Monica Mountains. CCC Hearing, June 13, 2002, Queen Mary Hotel.

⁹ Faber, P.A., E. Keller, A. Sands and B.M. Massey. 1989. The ecology of riparian habitats of the southern California coastal region: a community profile. U.S. Fish and Wildlife Service Biological Report 85(7.27) 152pp.

¹⁰ Bowler, P.A. 1989. Riparian woodland: An endangered habitat in southern California. Pp 80-97 in Schoenherr, A.A. (ed.) Endangered plant communities of southern California. Botanists Special Publication No. 3.

¹¹ Gamradt, S.C., L.B. Kats and C.B. Anzalone. 1997. Aggression by non-native crayfish deters breeding in California newts. *Conservation Biology* 11(3):793-796.

¹² Kerby, L.J., and L.B. Kats. 1998. Modified interactions between salamander life stages caused by wildfire-induced sedimentation. *Ecology* 79(2):740-745.

¹³ Gamradt, S.C. and L.B. Kats. 1996. Effect of introduced crayfish and mosquitofish on California newts. *Conservation Biology* 10(4):1155-1162.

These introduced predators have eliminated the newts from streams where they previously occurred by both direct predation and suppression of breeding.

Therefore, because of the essential role that riparian plant communities play in maintaining the biodiversity of the Santa Monica Mountains, because of the historical losses and current rarity of these habitats in southern California, and because of their extreme sensitivity to disturbance, the native riparian habitats in the Santa Monica Mountains meet the definition of ESHA under the Coastal Act.

For any specific property within the Santa Monica Mountains, it is necessary to meet three tests in order to assign the ESHA designation. First, is the habitat properly identified, for example as coastal sage scrub or chaparral? Second, is the habitat undeveloped and otherwise relatively pristine? Third, is the habitat part of a large, contiguous block of relatively pristine native vegetation?

Due to the important ecosystem role of coastal sage scrub, chaparral oak, and riparian habitat in the Santa Monica Mountains (detailed in **Exhibit 9**) and the fact that the undisturbed habitat on the sites is part of a larger contiguous area of habitat, including a full range of habitat types from oak and riparian woodland to coastal sage scrub and chaparral on the upper canyon slopes, the Commission finds that the coastal sage scrub, chaparral, oak woodland, and riparian habitat on and surrounding the subject site meets the definition of ESHA under Section 30107.5 of the Coastal Act. The Commission also considers the policies and provisions of the Malibu/Santa Monica Mountains LUP as guidance in considering development proposals. In this case, the LUP ESHA Map does not designate the coastal sage scrub or chaparral habitat on the proposed project site as ESHA. However, as provided under Policy 57 of the Malibu/Santa Monica Mountains LUP: "any undesignated areas which meet the criteria and are identified through the biotic review process or other means..." are also designated as ESHA. Based on the site specific biological analysis, the Commission determines that the coastal sage scrub and chaparral habitat on the property meets the criteria and is therefore designated as ESHA. Finally, as previously noted, the proposed project sites include the west fork of Encinal Canyon Creek, a U.S. Geological Survey (USGS) blue-line stream, and the proposed road improvements cross the east fork of Encinal Canyon Creek. The stream corridors of these two forks of Encinal Canyon Creek are delineated as Environmentally Sensitive Habitat Areas (ESHA) on Malibu/Santa Monica Mountains LUP resource maps. In addition, the stream corridor and associated hillside slopes in the vicinity of the proposed projects contain relatively undisturbed oak woodland vegetation that is also considered ESHA.

While the project parcels contain ESHA, the easternmost portion of the parcels where development is proposed contain historically disturbed vegetation not considered ESHA. As per the applicant's submitted "Biological Resources Report", prepared by Rachel Tierney Consulting, dated June 22, 2005, the proposed development area of Lot 2 contains highly disturbed mixed chaparral/oak woodland that has been largely displaced by a historic terraced orchard containing avocado, lemon, macadamia, and ornamental trees. The proposed development area of Lot 3 contains fringe coast sage scrub

vegetation interspersed with non-native grasses and eucalyptus trees. So, the proposed residences on subject Lots 2 and 3 are sited on the area of the site that would have the fewest impacts to ESHA. However, the required fuel modification areas would extend into undisturbed ESHA areas.

As explained above, the project site and the surrounding area constitute an environmentally sensitive habitat area (ESHA) pursuant to Section 30107.5. Section 30240 of the Coastal Act requires that “environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.” Section 30240 restricts development on the parcel to only those uses that are dependent on the resource. The applicant proposes to construct single-family residences on the parcels, which would result in the loss of ESHA habitat area and vegetation within those areas where fuel modification would be required for fire protection purposes. As single-family residences do not have to be located within ESHAs to function, the Commission does not consider single-family residences to be a use dependent on ESHA resources. Application of Section 30240, by itself, would require denial of the project, because the project would result in significant disruption of habitat values and is not a use dependent on those sensitive habitat resources.

However, the Commission must also consider Section 30010, and the Supreme Court decision in *Lucas v. South Carolina Coastal Council* (1992) 505 U.S. 1003, 112 S.Ct. 2886. Section 30010 of the Coastal Act provides that the Coastal Act shall not be construed as authorizing the Commission to exercise its power to grant or deny a permit in a manner which will take private property for public use. Application of Section 30010 may overcome the presumption of denial in some instances. The subject of what government action results in a “taking” was addressed by the U.S. Supreme Court in *Lucas v. South Carolina Coastal Council*. In *Lucas*, the Court identified several factors that should be considered in determining whether a proposed government action would result in a taking. For instance, the Court held that where a permit applicant has demonstrated that he or she has a sufficient real property interest in the property to allow the proposed project, and that project denial would deprive his or her property of all economically viable use, then denial of the project by a regulatory agency might result in a taking of the property for public use unless the proposed project would constitute a nuisance under State law. Another factor that should be considered is the extent to which a project denial would interfere with reasonable investment-backed expectations.

The Commission interprets Section 30010, together with the *Lucas* decision, to mean that if Commission denial of the project would deprive an applicant’s property of all reasonable economic use, the Commission may be required to allow some development even where a Coastal Act policy would otherwise prohibit it, unless the proposed project would constitute a nuisance under state law. In other words, Section 30240 of the Coastal Act cannot be read to deny all economically beneficial or productive use of land because Section 30240 cannot be interpreted to require the Commission to act in an unconstitutional manner.

The Commission has found, in past permit actions, that in order to provide a landowner with an economically viable use of their property, that development may be permitted within ESHA if siting and design alternatives and mitigation measures are incorporated that minimize ESHA impacts to the maximum extent feasible. The Commission has required measures, including but not limited to, restricting residential development within ESHA to a maximum development area (including all graded slopes, but excluding roads and turnaround areas) of 10,000 sq. ft., requiring the clustering of all structures within the development area, and other measures such as revegetation of disturbed areas, and mitigation for the removal of ESHA in order to minimize or mitigate impacts. In this case, the applicant is proposing to site the two residences within disturbed areas of the site although the required fuel modification will extend into ESHA. The proposed development areas are 10,417 sq. ft. for Lot 2 and 7,361 sq. ft. for Lot 3.

As stated previously, in order to provide access to the subject parcels, the applicant is proposing to extend, improve, and widen an existing off-site access road of which the applicant holds an access easement. The existing access road originates at Encinal Canyon Road east of the subject parcels and meanders approximately 0.2 miles in a western direction, crosses the east fork of Encinal Canyon Creek, and climbs a small ridge to the southern property line of applicant-owned Lot 1. As per Los Angeles County Fire Department access requirements, the applicant proposes to widen this length of the existing access road from 15-20 feet to a proposed 24 feet. At the Lot 1 southern property line, another access road forks to the west towards a neighboring existing residence. Additionally, from the southern property line of Lot 1, a rough graded pathway exists that extends north along the ridgeline to its terminus on Lot 1 (**Exhibit 7**). The applicant proposes to grade and pave a road extension to the north edge of Lot 1 and west to subject Lots 2 and 3, as indicated on Exhibit 4.

The applicant submitted an Oak Tree Report for 3533, 3535, and 3575 Encinal Canyon Road, prepared by Tree Life Concern Inc., and dated August 16, 1996. An addendum to the Oak Tree Report, dated July 9, 2000, was also submitted. The reports identified forty (40) oak trees in the vicinity of proposed development on Lots 1, 2, and 3 and the proposed access road. In consideration of the proposed new access road improvements, the report indicates that ten (10) of these oak trees will require pruning, and the protected zone of four (4) oak trees will be encroached upon. Oak tree nos. 23, 24, and 25 located on the lower portion of Lot 1 are three of the trees that are indicated to be encroached upon by the proposed extension of the access road (**Exhibit 4**). The fourth oak tree (no. 5) is located next to the existing portion of the access road nearer Encinal Canyon Road. Proposed road widening will encroach upon its dripline by 4 feet. As previously noted, although the applicant's oak tree consultant differentiates between impacts to oak trees from pruning versus encroachment, in reality, pruning of oak tree branches to provide the required clearance for fire vehicles is necessary because the road is encroaching into the protected zone and the branches overhang the road. As such, the proposed project will impact fourteen (14) oak trees.

Encroachments into the protected zone of an oak tree can result in significant adverse impacts. An article entitled "Oak Trees: Care and Maintenance" prepared by the Forestry Department of the County of Los Angeles states:

Oaks are easily damaged and very sensitive to disturbances that occur to the tree or in the surrounding environment. The root system is extensive but surprisingly shallow, radiating out as much as 50 feet beyond the spread of the tree leaves, or canopy. The ground area at the outside edge of the canopy, referred to as the dripline, is especially important: the tree obtains most of its surface water and nutrients here, as well as conducts an important exchange of air and other gases.

This publication goes on to state:

Any change in the level of soil around an oak tree can have a negative impact. The most critical area lies within 6' to 10' of the trunk: no soil should be added or scraped away. ... Construction activities outside the protected zone can have damaging impacts on existing trees. ... Digging of trenches in the root zone should be avoided. Roots may be cut or severely damaged, and the tree can be killed. ... Any roots exposed during this work should be covered with wet burlap and kept moist until the soil can be replaced. The roots depend on an important exchange of both water and air through the soil within the protected zone. Any kind of activity which compacts the soil in this area blocks this exchange and can have serious long term negative effects on the trees.

While no siting or design alternatives can eliminate or reduce impacts to eleven oak trees along the existing portion of the access road and within the oak riparian canopy of the east fork of Encinal Creek, there appear to be siting and design alternatives to avoid or reduce impacts to oak tree nos. 23, 24, and 25, as they are situated on the ridge in the area of the proposed access road extension on the applicant's Lot 1.

As previously described, Lot 1 (also owned by the applicant) was one of four parcels in an unpermitted LLA that resulted in 4 reconfigured parcels (**Exhibit 8**). While after-the-fact approval of the unpermitted LLA is not a part of the subject permit applications, development (road grading and paving) is proposed on the illegally configured Lot 1. Given that the road alignment could foreclose options for configuring the LLA, the Coastal Act consistency of the LLA must be considered in evaluating these applications. Staff has been notified that the applicant intends to submit a separate CDP application to resolve the Lot 1 LLA issue, however, no such application has been received to date. The Commission reviews land division applications to ensure that newly created or reconfigured parcels are of sufficient size, have access to roads and other utilities, are geologically stable and contain an appropriate potential building pad area where future structures can be developed consistent with the resource protection policies of the Coastal Act. In particular, the Commission has ensured that future development on new or reconfigured lots can minimize landform alteration and other visual impacts, as well as impacts to environmentally sensitive habitat areas.

In comparing the previous configuration with the configuration that resulted from the unpermitted LLA (**Exhibit 8**), it is apparent that an area of approximately 1.4 acres was

taken from the previously existing Parcel -018 and added to the southern end of Lot 1. As Parcel -018 previously existed, the lot contained both a portion within the east fork of Encinal Creek, as well as a portion of the less steep ridge between the two forks of the creek. Alternatives for siting development on the previously existing Parcel -018 would have included a development area on the western portion of that lot, on the ridge. That gently sloping, 1.4-acre ridgetop area is near the access road and an existing residence to the south. In this location, a residence would be clustered with the existing residence and the future potential residence on Lot 1. While the applicant has not provided detailed topographic, geologic, or other information that would be required in a land division CDP application, staff has reviewed available information, including aerial photographs of the project area, and visited the site on March 8, 2006. It appears, upon preliminary analysis by staff, that the 1.4-acre ridgetop area represents the preferred alternative location for a potential future development site for parcel -032 that would minimize impacts to ESHA and coastal resources.

However, the unpermitted LLA resulted in removing the ridge area of Parcel -018 (and adding it to Lot 1). Parcel -032, as a result, is much more constrained in terms of siting alternatives that are consistent with the Coastal Act. Given the location of the existing access road, Encinal Canyon Creek, and flood hazard and slope easement areas, there is a much smaller area where a future building pad area could be sited. Parcel -032 is bisected by both the access road and Encinal Canyon Creek and appears to only contain one small potentially feasible development area located between the designated flood hazard area along Encinal Creek and a slope easement along Encinal Road (**Exhibits 7 and 10**). All other areas of the parcel contain steep slopes and dense oak woodland riparian vegetation considered ESHA.

While the applicant has withdrawn the CDP application for development of a residence on Lot 1 at this time, construction of the road through Lot 1 to Lots 2 and 3 is still proposed. Approval of the road in the proposed alignment, as part of the subject applications, would limit the range of alternatives that can be considered for siting future development on Lot 1 and Parcel -032 and resolving the LLA. As previously described, it appears that development of Parcel -032 in its unpermitted configuration would result in significant adverse impacts to ESHA, given the location of Encinal Canyon Creek ESHA and other constraints on the site. Given that the lot configurations of the parcels involved in the LLA will likely have to be redesigned in order to minimize ESHA impacts, approval of the road extension across the unpermitted parcels would be inconsistent with the Chapter 3 policies of the Coastal Act, because it would foreclose options for reconfiguring the parcels. As a result, the current unpermitted configuration could remain and as discussed above, this configuration does not minimize impacts to ESHA, inconsistent with the Coastal Act. The applicant has not demonstrated that the road will minimize impacts to ESHA, including the impacts to oak tree nos. 23, 24, and 25 along the proposed alignment, or as part of future development on Lot 1 and Parcel -032. The road is an integral part of the subject applications for residences on Lot 2 and Lot 3, as there is no other means of accessing the project sites. As such, the Commission finds that the projects, as proposed, are not consistent with Sections 30231 or 30240 of the Coastal Act.

Staff has discussed the issue of the proposed new access road improvements that would bisect an illegally configured parcel with the applicant. The applicant's lawyer responded to staff, in a letter dated June 12, 2006, stating that the subject properties have an easement across the access road and that it is used by several other property owners. The letter goes on to state that "any reconfiguration of the four parcels involved in the 1982 lot line adjustment will not change the location or otherwise affect the easement rights of Dr. Laks for 3533 and 3535 Encinal Road nor any of the other property owners using the access road." The applicant's lawyer has provided easement information that indicates that four properties have easement rights to the access road, through documents recorded in 1975. This includes those properties between Encinal Canyon Road and the northern property line of Lot 1. Additionally, the applicant's agent has provided information that the applicant granted an easement from Lot 1 to Lots 2 and 3 (all owned by the applicant) in 2005. The applicant's agent has not demonstrated that any easement rights exist to other properties north of Lot 1. While it is true that any reconfiguration of the LLA parcels that may be required by the Commission will not automatically result in an adjustment of the location of the easement, the location of the easement can be modified by agreement of the easement holders and underlying property owners.

In conclusion, as discussed in detail above, the proposed project sites contain areas of coastal sage scrub, chaparral, oak, and riparian ESHA as well as areas that have been disturbed since before the effective date of the Coastal Act. With the inclusion of special conditions to minimize and mitigate significant adverse impacts to ESHA, development could be approved on Lots 2 and 3 to provide the applicant with an economically viable use of the property. However, the projects include the construction of an access road across the unpermitted Lot 1. Approval of this road at this time would foreclose options for reconfiguring the unpermitted parcels. As a result, the current illegal parcel configuration could remain and this configuration does not minimize impacts to ESHA, which is inconsistent with the Coastal Act.

As such, the Commission finds that the proposed project, including the access road, will not minimize impacts to ESHA or water quality, as required by Sections 30230, 30231 and 30240 of the Coastal Act.

C. Local Coastal Program

Section 30604 of the Coastal Act states:

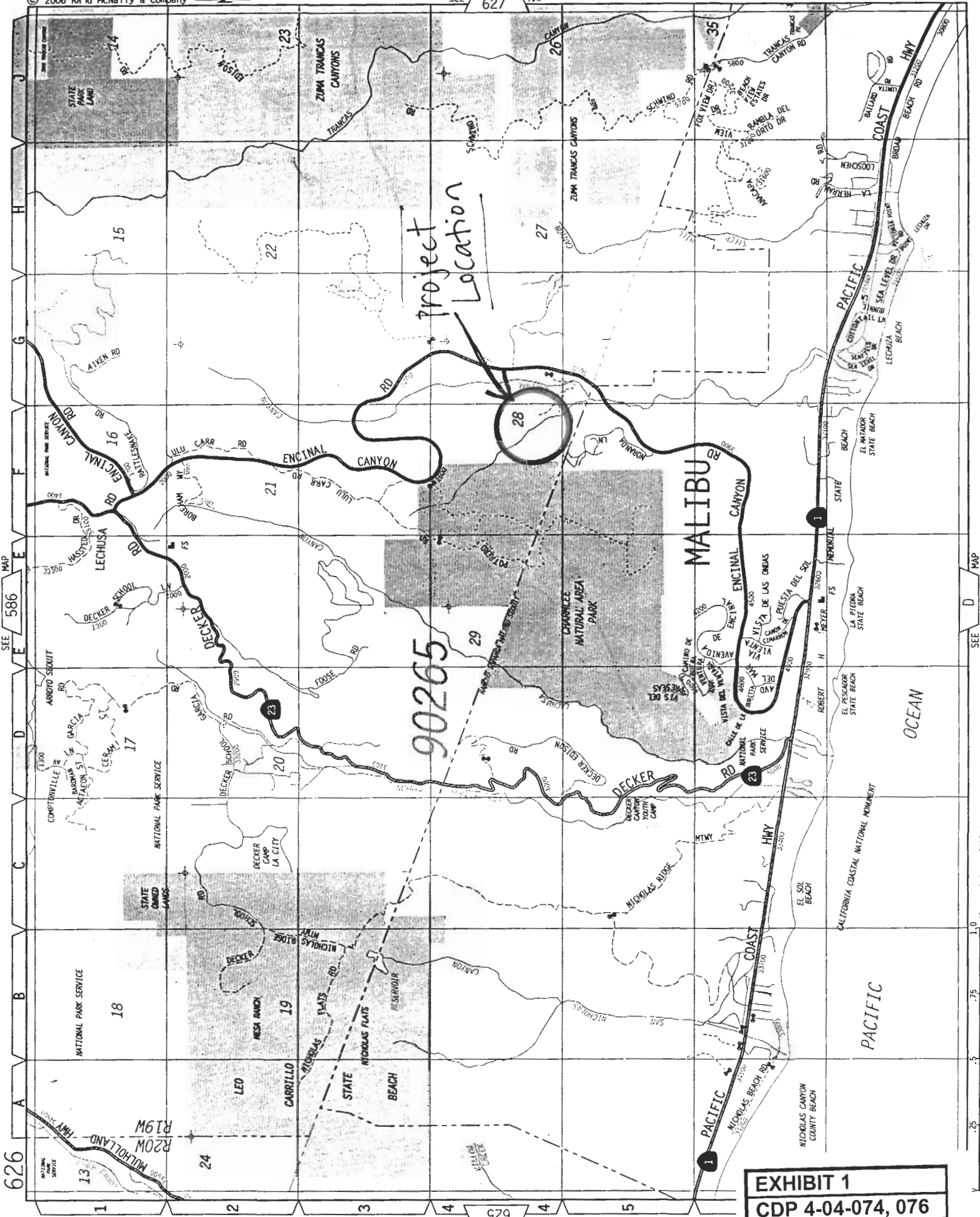
a) Prior to certification of the local coastal program, a coastal development permit shall be issued if the issuing agency, or the commission on appeal, finds that the proposed development is in conformity with the provisions of Chapter 3 (commencing with Section 30200) of this division and that the permitted development will not prejudice the ability of the local government to prepare a local program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200).

Section 30604(a) of the Coastal Act provides that the Commission shall issue a Coastal Development Permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program which conforms with Chapter 3 policies of the Coastal Act. The preceding sections provide findings that the proposed project will be in conformity with the provisions of Chapter 3 if certain conditions are incorporated into the projects and are accepted by the applicant. As conditioned, the proposed developments will not create adverse impacts and is found to be consistent with the applicable policies contained in Chapter 3. Therefore, the Commission finds that approval of the proposed developments, as conditioned, will not prejudice the County of Los Angeles' ability to prepare a Local Coastal Program for this area which is also consistent with the policies of Chapter 3 of the Coastal Act, as required by Section 30604(a).

D. CEQA

Section 13096(a) of the Commission's administrative regulations requires Commission approval of a Coastal Development Permit application to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect that the activity may have on the environment.

The Commission finds that the proposed projects, as conditioned, will not have significant adverse effects on the environment within the meaning of the California Environmental Quality Act of 1970. Therefore, the proposed projects, as conditioned, has been adequately mitigated and is determined to be consistent with CEQA and the policies of the Coastal Act.



Project Location

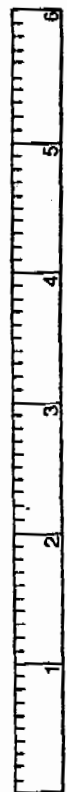
90265

EXHIBIT 1
CDP 4-04-074, 076
Vicinity Map

1.0 miles 1 in. = 2400 ft.

10-23-65 REVISED
 08/14/02
 1990055444
 150309803
 0806-84
 280519555-24
 8307-84
 251229-84
 8102022801-84
 8801206017001
 9112182202001-07
 95012149003001-07
 1990055444

SCALE IN 1/10 OF AN INCH

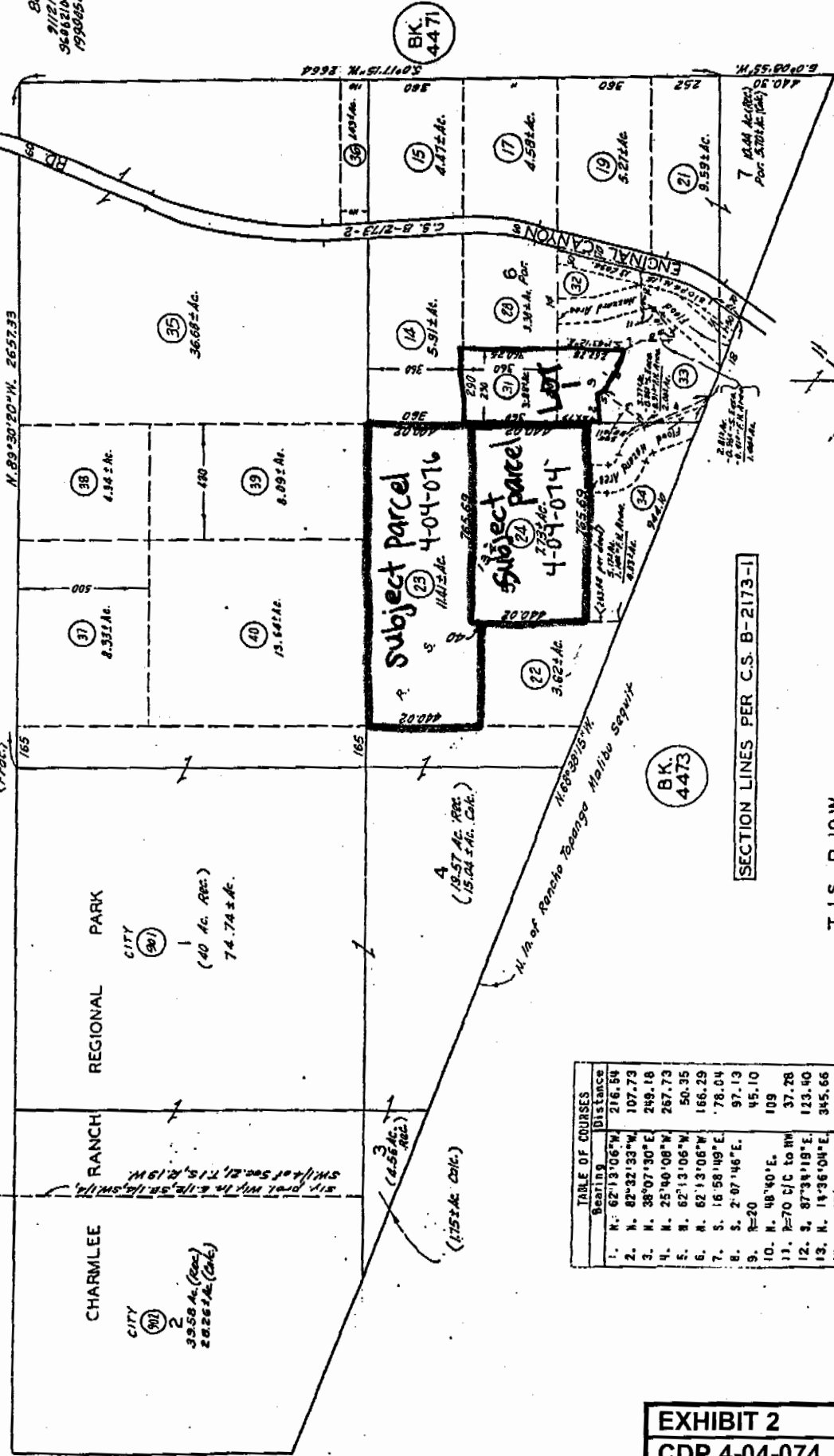


1-800-345-7334

2000

2 28
 - 400'

SEC. 28
 (frac.)

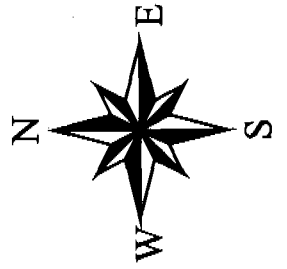


SECTION LINES PER C.S. B-2173-1

T. 1 S., R. 19 W.

TABLE OF COURSES	
Bearing	Distance
1. N. 62°13'06"W	216.84
2. N. 82°32'33"W	107.73
3. N. 38°07'30"E	249.18
4. N. 25°40'08"W	267.73
5. N. 62°13'06"W	50.35
6. N. 62°13'06"W	166.29
7. S. 16°58'49"E	78.04
8. S. 2°07'46"E	97.13
9. R=20	45.10
10. N. 48°40'E	109
11. R=70 C/C to RW	37.28
12. S. 87°34'19"E	123.50
13. N. 14°36'04"E	345.66
14. N. 87°34'19"W	380.35
15. S. 14°36'04"W	91.82
16. R=570	217.58
17. S. 35°28'20"W	121.20
18. N. 68°38'58"W	202.24

EXHIBIT 2
 CDP 4-04-074, 076
 Parcel Map



Blueline Streams
Parcels
ESHAS

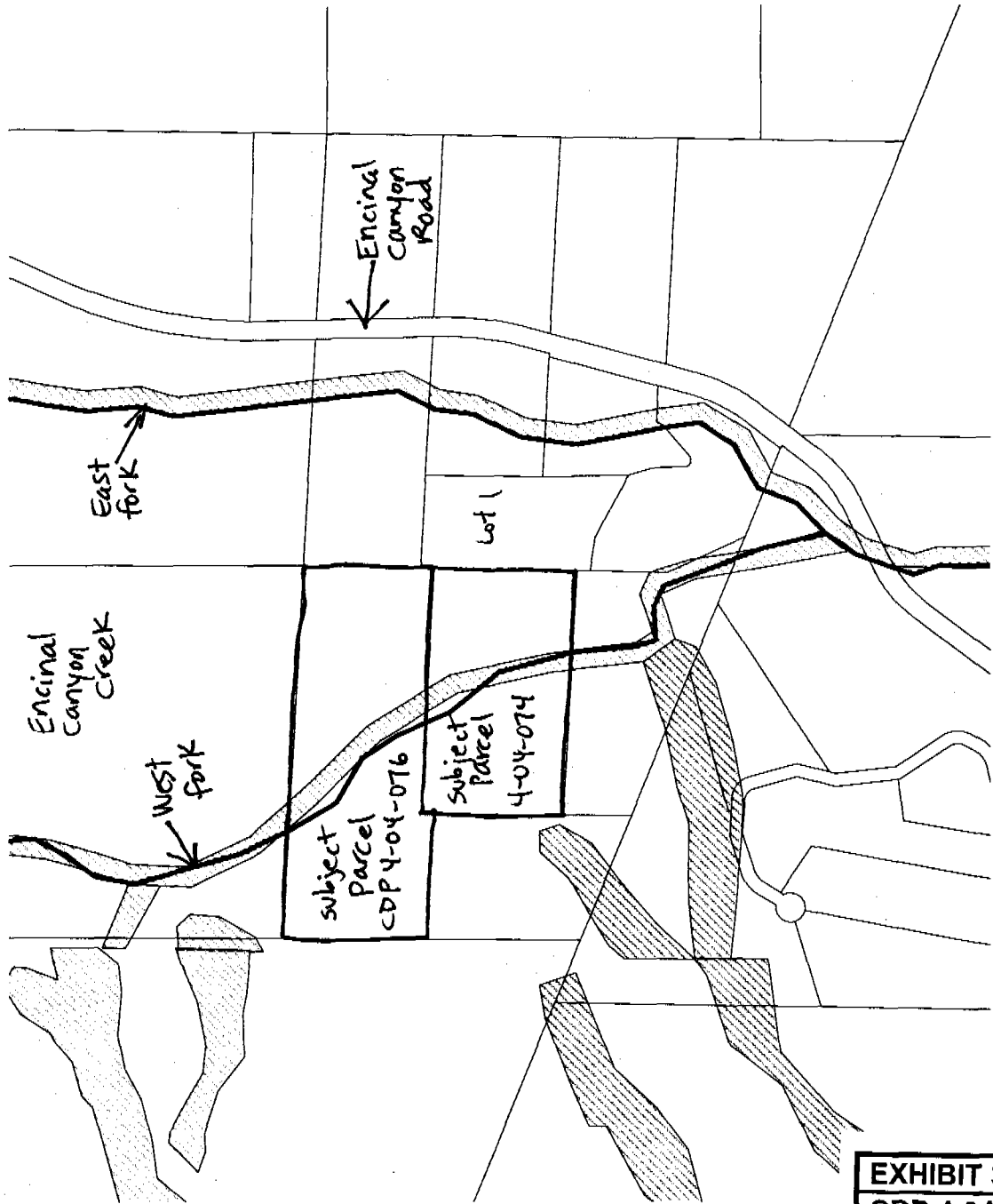


EXHIBIT 3
CDP 4-04-074, 076
ESHA Map

DATE	DESCRIPTION
JULY 15, 2009	BY
AUGUST 18, 2009	BY
SEPTEMBER 15, 2009	BY
OCTOBER 15, 2009	BY
NOVEMBER 15, 2009	BY
DECEMBER 15, 2009	BY

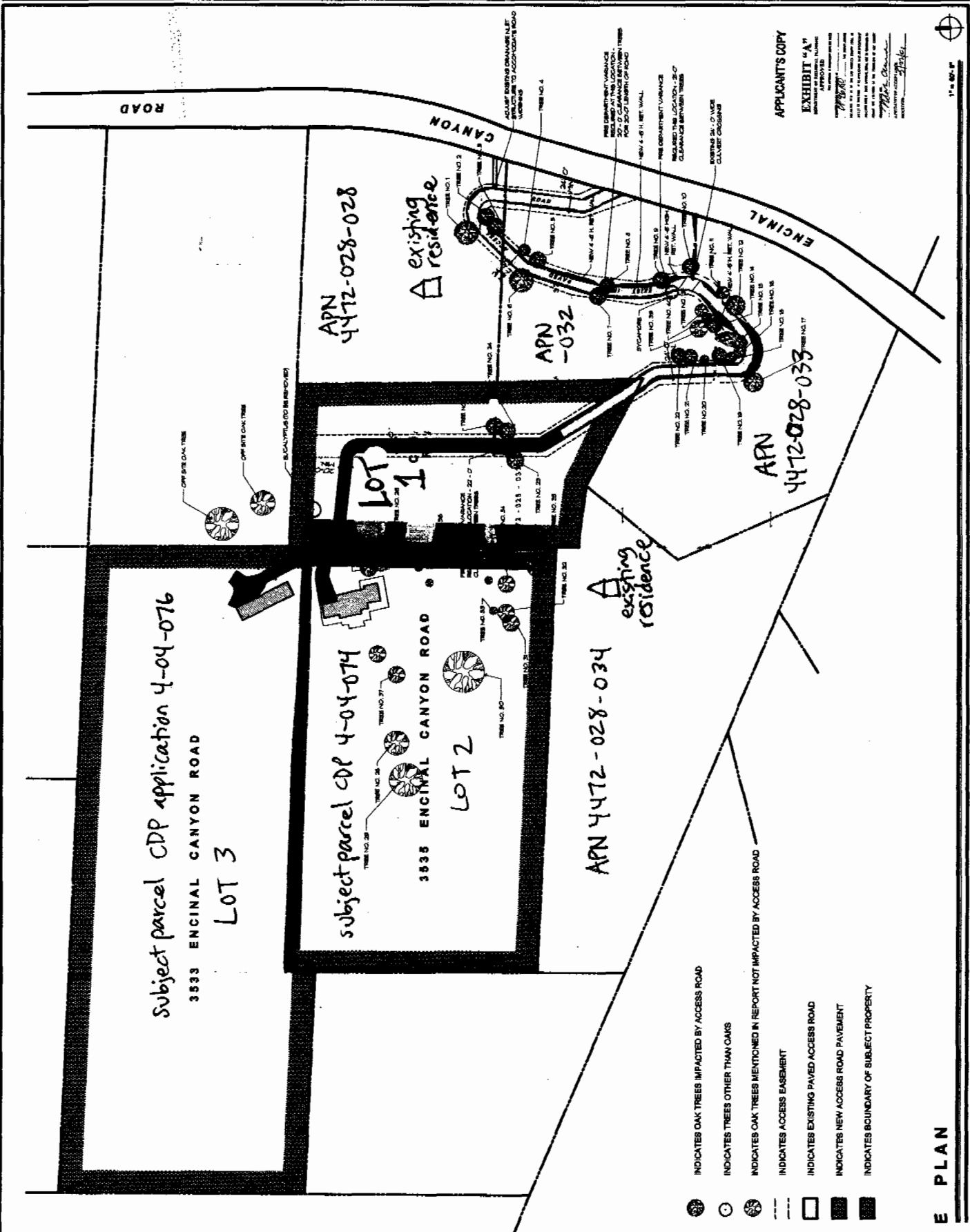
LWS' RESIDENCES
3533, 3535 & 3575 ENCINAL CYN RD
MALIBU, CA 90265

BARCOCHINI & ASSOCIATES, INC.
MICHAEL E. BARCOCHINI, AIA - (310) 456-9855
3502 COAST VIEW DRIVE - MALIBU, CA 90265

SITE PLAN

DATE	DESCRIPTION
JULY 15, 2009	BY
AUGUST 18, 2009	BY
SEPTEMBER 15, 2009	BY
OCTOBER 15, 2009	BY
NOVEMBER 15, 2009	BY
DECEMBER 15, 2009	BY

A-1.1



APPLICANT'S COPY
EXHIBIT "A"
SUBMITTED TO THE CITY OF MALIBU
FOR REVIEW AND APPROVAL OF THE
CITY ENGINEER AND THE CITY CLERK
ON BEHALF OF THE APPLICANT
DATE: 07/15/09
APPLICANT: LWS' RESIDENCES
APPLICANT'S REPRESENTATIVE: [Signature]

- INDICATES OAK TREES IMPACTED BY ACCESS ROAD
- INDICATES TREES OTHER THAN OAKS
- INDICATES OAK TREES MENTIONED IN REPORT NOT IMPACTED BY ACCESS ROAD
- INDICATES ACCESS EASEMENT
- INDICATES EXISTING PAVED ACCESS ROAD
- INDICATES NEW ACCESS ROAD PAVEMENT
- INDICATES BOUNDARY OF SUBJECT PROPERTY

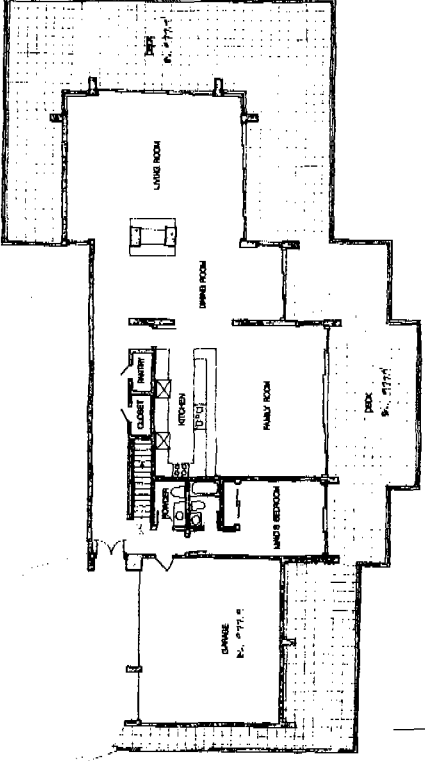
E PLAN

EXHIBIT 4
CDP 4-04-074, 076
Site Plan

BARSCCCHINI & ASSOCIATES, INC.
 ARCHITECTS
 MICHAEL E. BARSCCCHINI, AIA - (916) 456-3625
 2902 COAST VIEW DRIVE - MALIBU, CA 90265

A SINGLE FAMILY RESIDENCE FOR: DR. HILLET LAKS
 3536 ENCINAL CYN RD.
 MALIBU, CA 90265

APPLICANT'S COPY
 EXHIBIT "A"
 SUBMITTED TO THE CITY OF MALIBU
 PLANNING DEPARTMENT
 10000 CALIFORNIA AVENUE, SUITE 100
 MALIBU, CA 90263
 DATE: 08/15/2017



AREA TABULATION

UPPER LEVEL:	5,108 S.F.
LOWER LEVEL:	2,478 S.F.
RESIDENCE TOTAL:	7,586 S.F.
GARAGE:	973 S.F.
TOTAL AREA:	8,559 S.F.

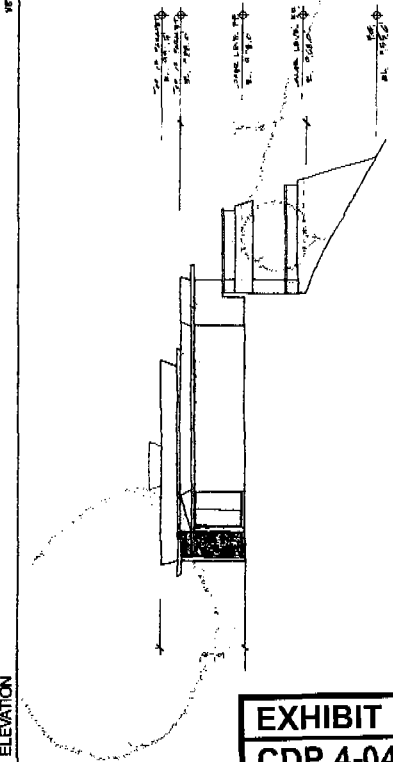
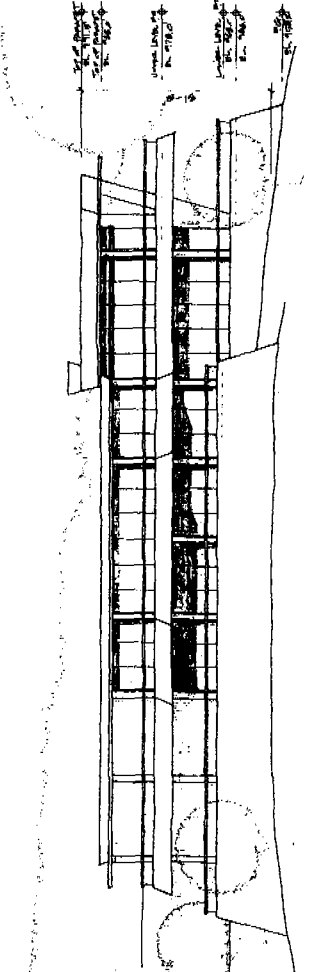
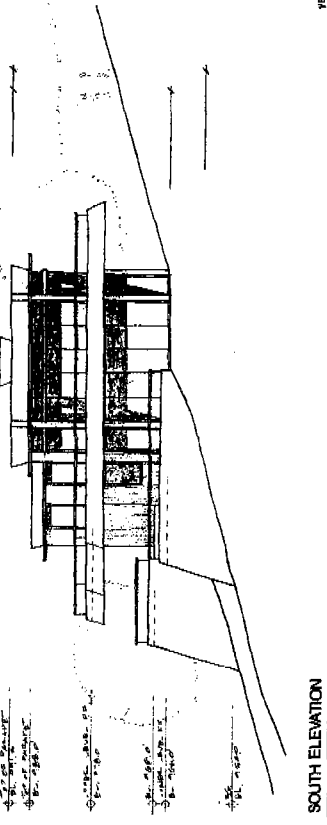
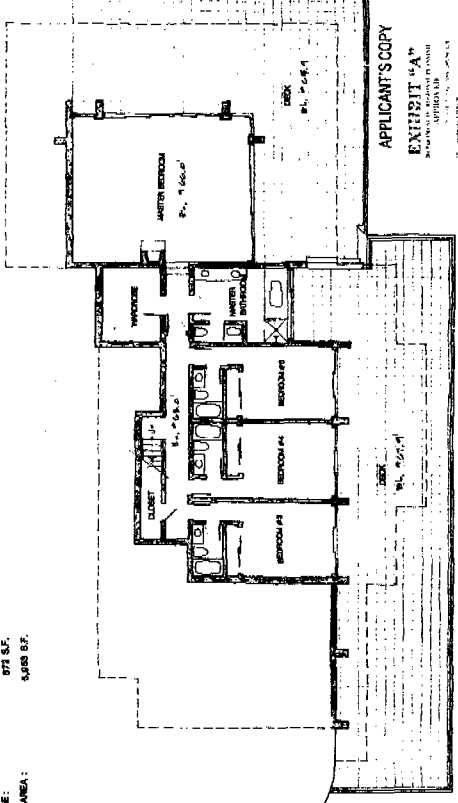
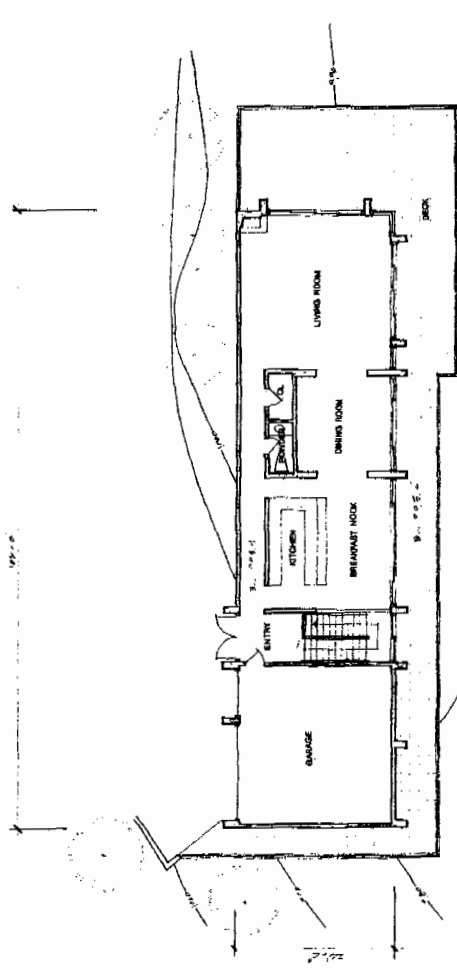


EXHIBIT 5
CDP 4-04-074, 076
Lot 2 Floor Plan
and Elevations



AREA TABULATION

UPPER LEVEL:	5,091 S.F.
LOWER LEVEL:	5,278 S.F.
RESIDENCE TOTAL:	10,369 S.F.
GARAGE:	702 S.F.
TOTAL AREA:	11,071 S.F.

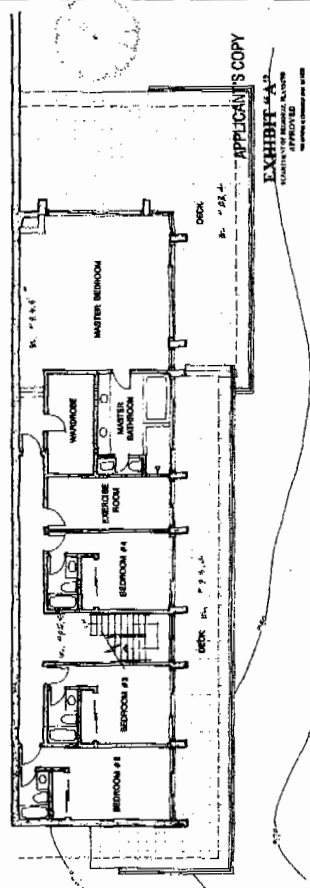


EXHIBIT 6-A
 CONTAINED HEREIN IS THE
 FINAL SET OF ARCHITECTURAL
 DRAWINGS FOR THE PROJECT
 IDENTIFIED ABOVE.
 THESE DRAWINGS SHALL BE
 USED ONLY FOR THE PROJECT
 IDENTIFIED ABOVE.
 ANY OTHER USE IS STRICTLY
 PROHIBITED.
 DATE: 07/15/10
 ARCHITECT: [Signature]

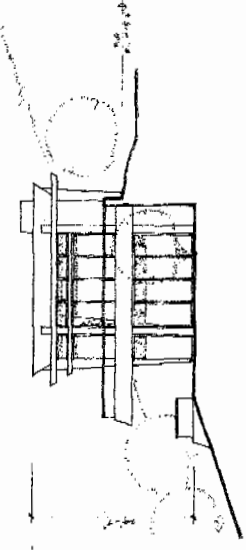
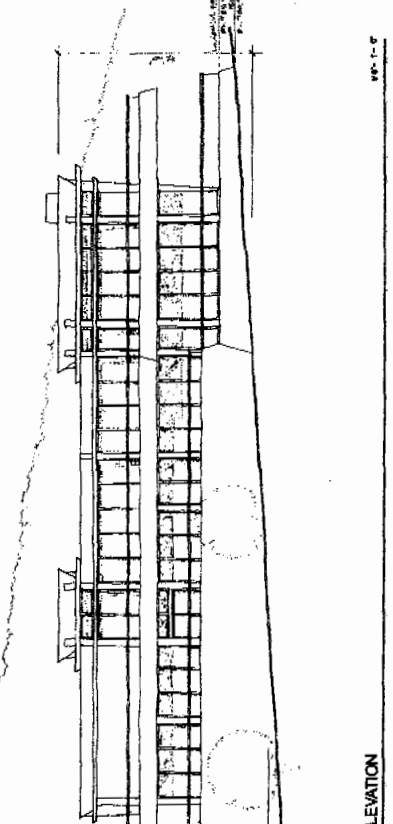
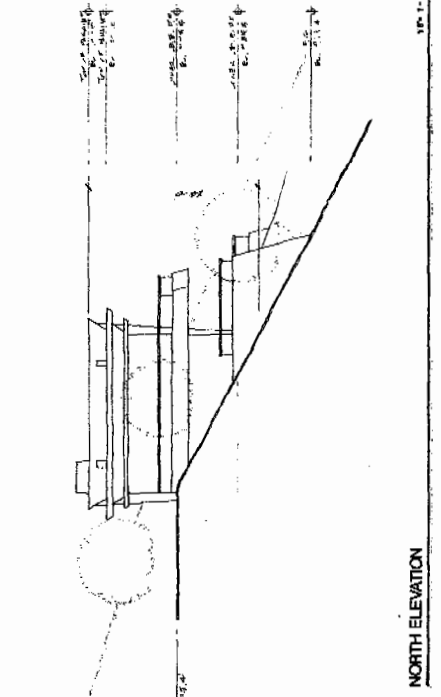
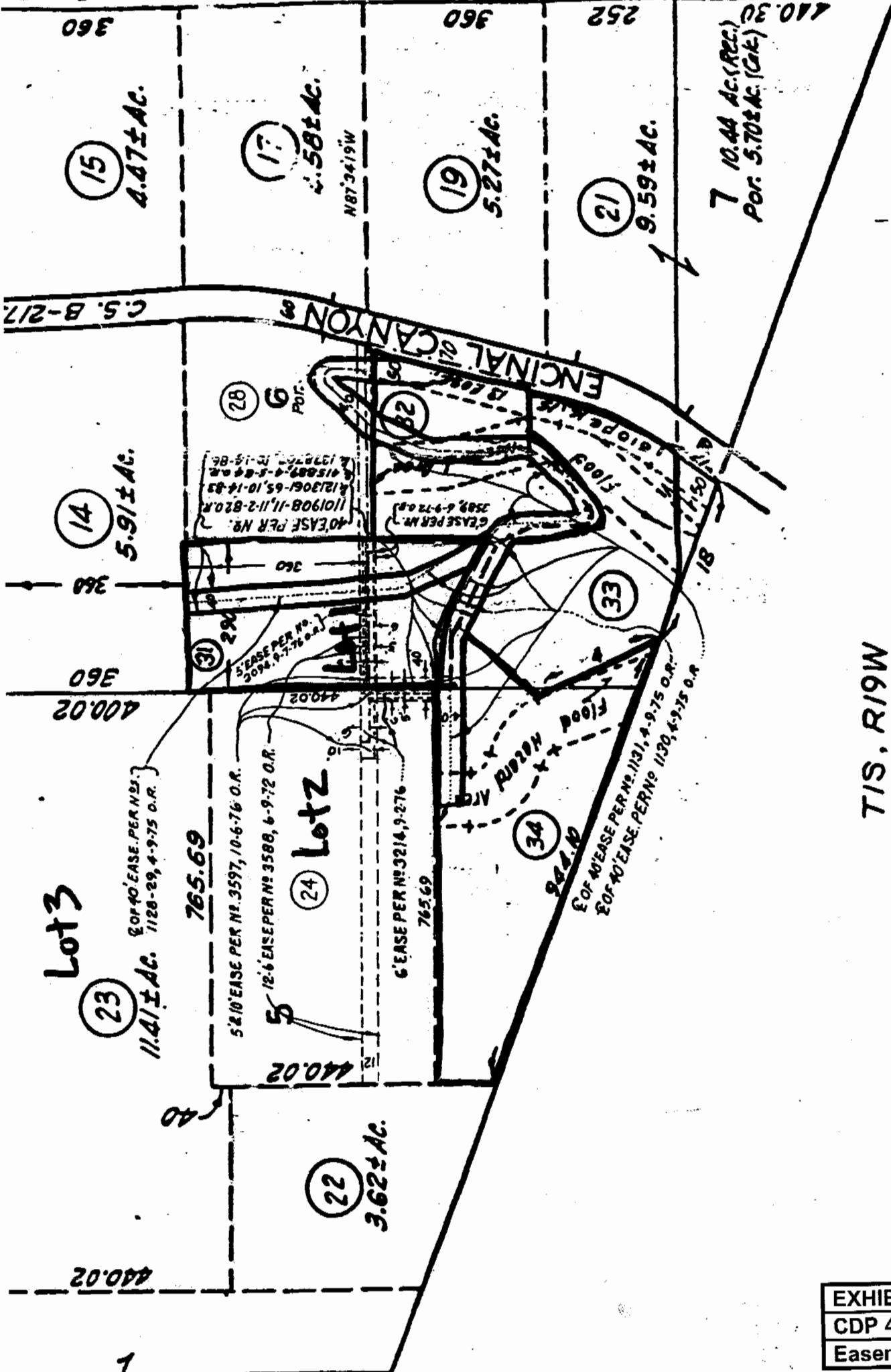


EXHIBIT 6
CDP 4-04-074, 076
Lot 3 Floor Plan
and Elevations



T1S, R19W

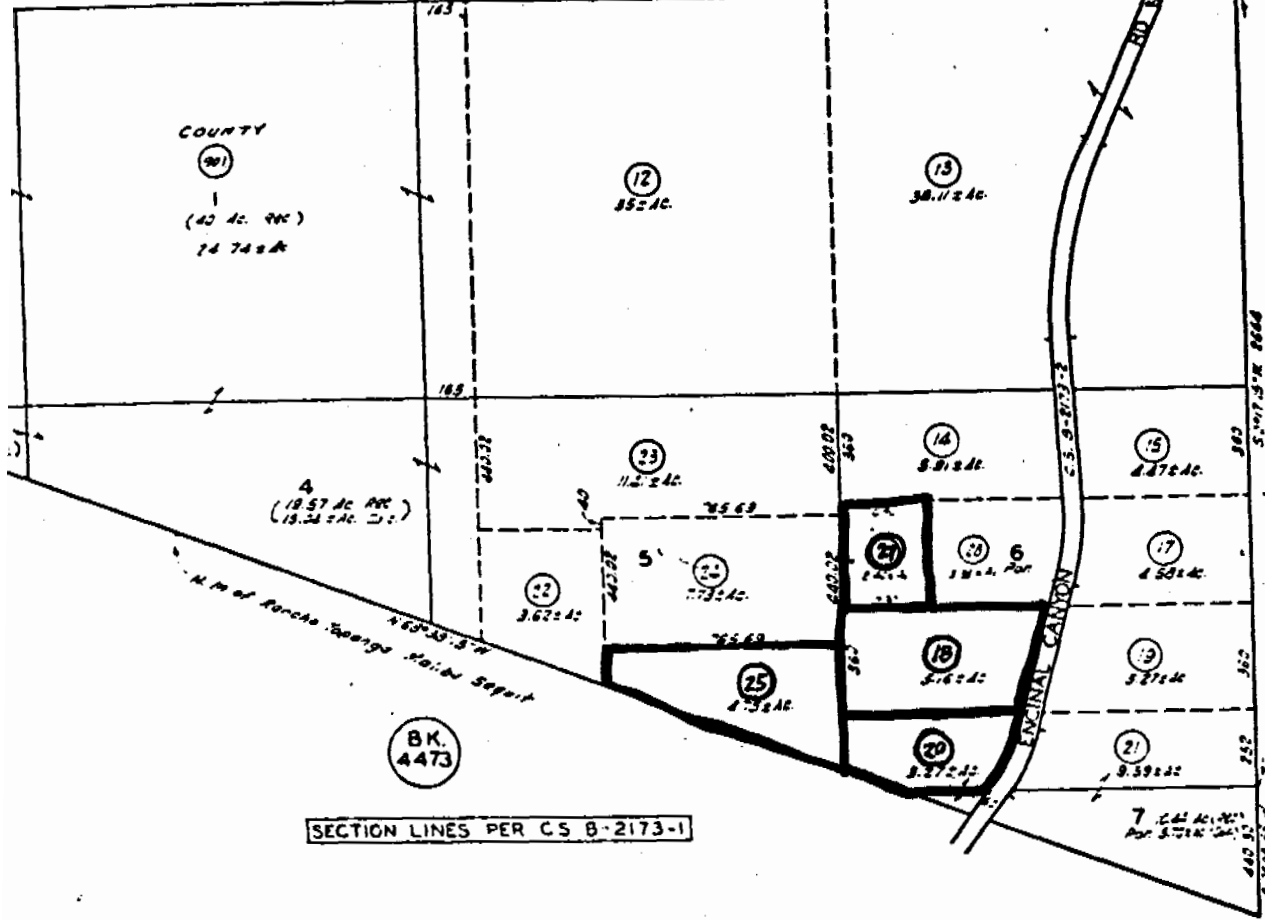
THIS MAP MAY OR MAY NOT BE A SURVEY OF THE LAND DEPICTED HEREON. YOU SHOULD NOT RELY UPON IT FOR ANY PURPOSE OTHER THAN ORIENTATION TO THE GENERAL LOCATION OF THE PARCEL OR PARCELS DEPICTED. FIRST AMERICAN EXPRESSLY DISCLAIMS ANY LIABILITY FOR ALLEGED LOSS OR DAMAGE WHICH MAY RESULT FROM RELIANCE UPON THIS MAP.

First American Title Company of Los Angeles

EXHIBIT 7
 CDP 4-04-074, 076
 Easement Map

SEC. 28
(Frac.)

N. 89°30'20"W. 2657.33



BK. 4471

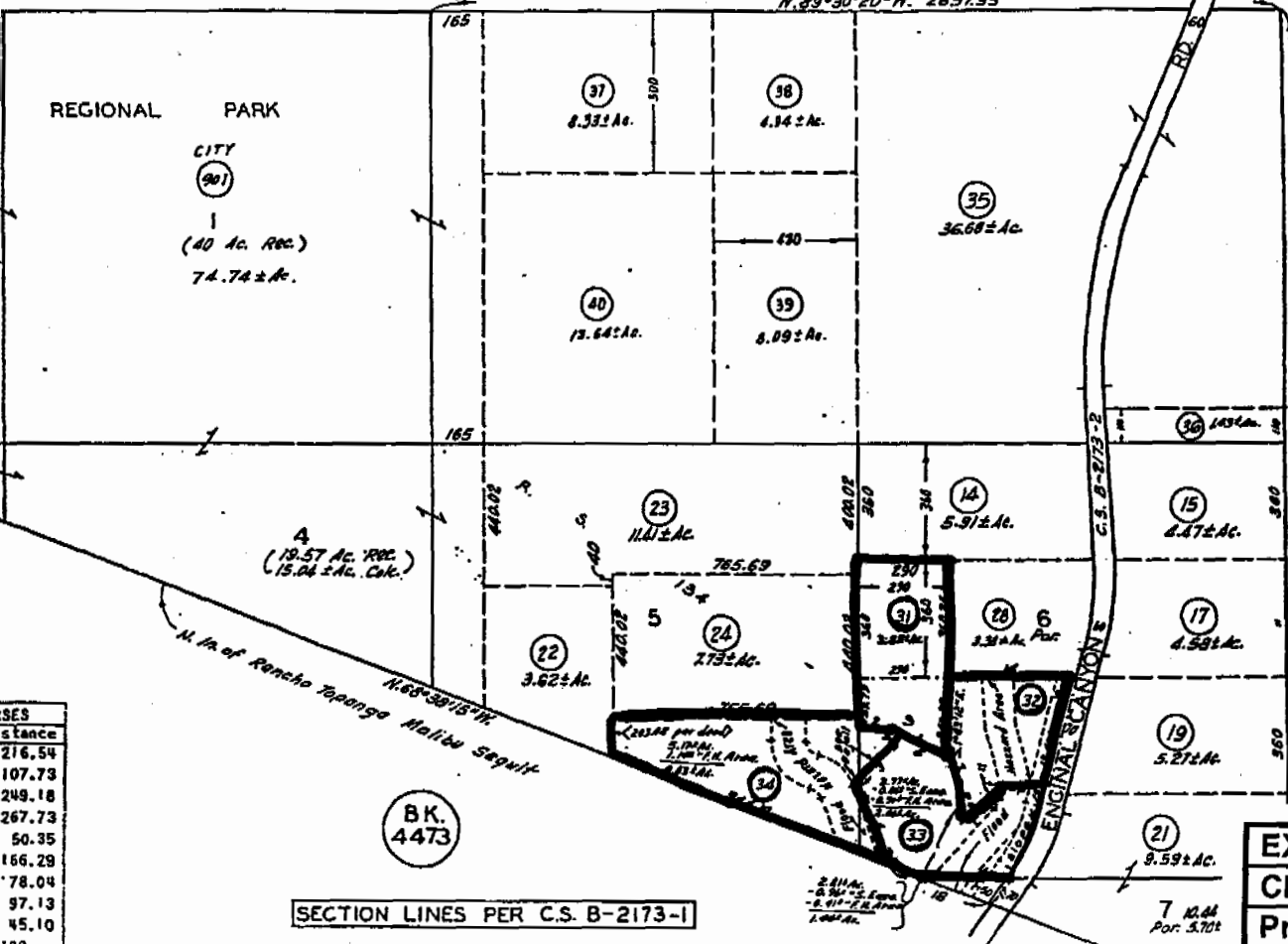
Pre-LLA
Parcel
Configuration

SECTION LINES PER C.S. B-2173-1

T.1S., R.19W.

SEC. 28
(Frac.)

N. 89°30'20"W. 2657.33



- 890516-84
- 830519335-84
- 830817-84
- 831229-84
- 810202802-84
- 8801606017001
- 91121602020001-07
- 96062109003001-07
- 1998052404

Post-LLA
Parcel
Configuration

BK. 4471

SECTION LINES PER C.S. B-2173-1

Distance
216.54
107.73
249.18
267.73
50.35
166.29
78.04
97.13
45.10
139

EXHIBIT 8
CDP 4-04-074, 076
Pre- and Post-LLA
Parcel Maps

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400



MEMORANDUM

FROM: John Dixon, Ph.D.
Ecologist / Wetland Coordinator

TO: Ventura Staff

SUBJECT: Designation of ESHA in the Santa Monica Mountains

DATE: March 25, 2003

In the context of the Malibu LCP, the Commission found that the Mediterranean Ecosystem in the Santa Mountains is rare, and especially valuable because of its relatively pristine character, physical complexity, and resultant biological diversity. Therefore, areas of undeveloped native habitat in the Santa Monica Mountains that are large and relatively unfragmented may meet the definition of ESHA by virtue of their valuable roles in that ecosystem, regardless of their relative rarity throughout the state. This is the only place in the coastal zone where the Commission has recognized chaparral as meeting the definition of ESHA. The scientific background presented herein for ESHA analysis in the Santa Monica Mountains is adapted from the Revised Findings for the Malibu LCP that the Commission adopted on February 6, 2003.

For habitats in the Santa Monica Mountains, particularly coastal sage scrub and chaparral, there are three site-specific tests to determine whether an area is ESHA because of its especially valuable role in the ecosystem. First, is the habitat properly identified, for example as coastal sage scrub or chaparral? The requisite information for this test generally should be provided by a site-specific biological assessment. Second, is the habitat largely undeveloped and otherwise relatively pristine? Third, is the habitat part of a large, contiguous block of relatively pristine native vegetation? This should be documented with an aerial photograph from our mapping unit (with the site delineated) and should be attached as an exhibit to the staff report. For those habitats that are absolutely rare or that support individual rare species, it is not necessary to find that they are relatively pristine, and are neither isolated nor fragmented.

**Designation of Environmentally Sensitive Habitat in the
Santa Monica Mountains**

The Coastal Act provides a definition of "environmentally sensitive area" as: "Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (Section 30107.5).

Exhibit 9
CDP 4-04-074, 076
ESHA Memo

There are three important elements to the definition of ESHA. First, a geographic area can be designated ESHA either because of the presence of individual species of plants or animals or because of the presence of a particular habitat. Second, in order for an area to be designated as ESHA, the species or habitat must be either rare or it must be especially valuable. Finally, the area must be easily disturbed or degraded by human activities.

The first test of ESHA is whether a habitat or species is rare. Rarity can take several forms, each of which is important. Within the Santa Monica Mountains, rare species and habitats often fall within one of two common categories. Many rare species or habitats are globally rare, but locally abundant. They have suffered severe historical declines in overall abundance and currently are reduced to a small fraction of their original range, but where present may occur in relatively large numbers or cover large local areas. This is probably the most common form of rarity for both species and habitats in California and is characteristic of coastal sage scrub, for example. Some other habitats are geographically widespread, but occur everywhere in low abundance. California's native perennial grasslands fall within this category.

A second test for ESHA is whether a habitat or species is especially valuable. Areas may be valuable because of their "special nature," such as being an unusually pristine example of a habitat type, containing an unusual mix of species, supporting species at the edge of their range, or containing species with extreme variation. For example, reproducing populations of valley oaks are not only increasingly rare, but their southernmost occurrence is in the Santa Monica Mountains. Generally, however, habitats or species are considered valuable because of their special "role in the ecosystem." For example, many areas within the Santa Monica Mountains may meet this test because they provide habitat for endangered species, protect water quality, provide essential corridors linking one sensitive habitat to another, or provide critical ecological linkages such as the provision of pollinators or crucial trophic connections. Of course, all species play a role in their ecosystem that is arguably "special." However, the Coastal Act requires that this role be "especially valuable." This test is met for relatively pristine areas that are integral parts of the Santa Monica Mountains Mediterranean ecosystem because of the demonstrably rare and extraordinarily special nature of that ecosystem as detailed below.

Finally, ESHAs are those areas that could be easily disturbed or degraded by human activities and developments. Within the Santa Monica Mountains, as in most areas of southern California affected by urbanization, all natural habitats are in grave danger of direct loss or significant degradation as a result of many factors related to anthropogenic changes.

Ecosystem Context of the Habitats of the Santa Monica Mountains

The Santa Monica Mountains comprise the largest, most pristine, and ecologically complex example of a Mediterranean ecosystem in coastal southern California.

California's coastal sage scrub, chaparral, oak woodlands, and associated riparian areas have analogues in just a few areas of the world with similar climate. Mediterranean ecosystems with their wet winters and warm dry summers are only found in five localities (the Mediterranean coast, California, Chile, South Africa, and south and southwest Australia). Throughout the world, this ecosystem with its specially adapted vegetation and wildlife has suffered severe loss and degradation from human development. Worldwide, only 18 percent of the Mediterranean community type remains undisturbed¹. However, within the Santa Monica Mountains, this ecosystem is remarkably intact despite the fact that it is closely surrounded by some 17 million people. For example, the 150,000 acres of the Santa Monica Mountains National Recreation Area, which encompasses most of the Santa Monica Mountains, was estimated to be 90 percent free of development in 2000². Therefore, this relatively pristine area is both large and mostly unfragmented, which fulfills a fundamental tenet of conservation biology³. The need for large contiguous areas of natural habitat in order to maintain critical ecological processes has been emphasized by many conservation biologists⁴.

In addition to being a large single expanse of land, the Santa Monica Mountains ecosystem is still connected, albeit somewhat tenuously, to adjacent, more inland ecosystems⁵. Connectivity among habitats within an ecosystem and connectivity among ecosystems is very important for the preservation of species and ecosystem integrity. In a recent statewide report, the California Resources Agency⁶ identified wildlife corridors and habitat connectivity as the top conservation priority. In a letter to governor Gray Davis, sixty leading environmental scientists have endorsed the

¹ National Park Service. 2000. Draft general management plan & environmental impact statement. Santa Monica Mountains National Recreation Area – California.

² Ibid.

³ Harris, L. D. 1988. Edge effects and conservation of biotic diversity. *Conserv. Biol.* 330-332. Soule, M. E., D. T. Bolger, A. C. Alberts, J. Wright, M. Sorice and S. Hill. 1988. Reconstructed dynamics of rapid extinctions of chaparral-requiring birds in urban habitat islands. *Conserv. Biol.* 2: 75-92. Yahner, R. H. 1988. Changes in wildlife communities near edges. *Conserv. Biol.* 2:333-339. Murphy, D. D. 1989. Conservation and confusion: Wrong species, wrong scale, wrong conclusions. *Conservation Biol.* 3:82-84.

⁴ Crooks, K. 2000. Mammalian carnivores as target species for conservation in Southern California. p. 105-112 in: Keeley, J. E., M. Baer-Keeley and C. J. Fotheringham (eds), 2nd Interface Between Ecology and Land Development in California, U.S. Geological Survey Open-File Report 00-62. Sauvajot, R. M., E. C. York, T. K. Fuller, H. Sharon Kim, D. A. Kamradt and R. K. Wayne. 2000. Distribution and status of carnivores in the Santa Monica Mountains, California: Preliminary results from radio telemetry and remote camera surveys. p 113-123 in: Keeley, J. E., M. Baer-Keeley and C. J. Fotheringham (eds), 2nd Interface Between Ecology and Land Development in California, U.S. Geological Survey Open-File Report 00-62. Beier, P. and R. F. Noss. 1998. Do habitat corridors provide connectivity? *Conserv. Biol.* 12:1241-1252. Beier, P. 1996. Metapopulation models, tenacious tracking and cougar conservation. In: *Metapopulations and Wildlife Conservation*, ed. D. R. McCullough. Island Press, Covelo, California, 429p.

⁵ The SMM area is linked to larger natural inland areas to the north through two narrow corridors: 1) the Conejo Grade connection at the west end of the Mountains and 2) the Simi Hills connection in the central region of the SMM (from Malibu Creek State Park to the Santa Susanna Mountains).

⁶ California Resources Agency. 2001. Missing Linkages: Restoring Connectivity to the California Landscape. California Wilderness Coalition, Calif. Dept of Parks & Recreation, USGS, San Diego Zoo and The Nature Conservancy. Available at: <http://www.calwild.org/pubs/reports/linkages/index.htm>

conclusions of that report⁷. The chief of natural resources at the California Department of Parks and Recreation has identified the Santa Monica Mountains as an area where maintaining connectivity is particularly important⁸.

The species most directly affected by large scale connectivity are those that require large areas or a variety of habitats, e.g., gray fox, cougar, bobcat, badger, steelhead trout, and mule deer⁹. Large terrestrial predators are particularly good indicators of habitat connectivity and of the general health of the ecosystem¹⁰. Recent studies show that the mountain lion, or cougar, is the most sensitive indicator species of habitat fragmentation, followed by the spotted skunk and the bobcat¹¹. Sightings of cougars in both inland and coastal areas of the Santa Monica Mountains¹² demonstrate their continued presence. Like the "canary in the mineshaft," an indicator species like this is good evidence that habitat connectivity and large scale ecological function remains in the Santa Monica Mountains ecosystem.

The habitat integrity and connectivity that is still evident within the Santa Monica Mountains is extremely important to maintain, because both theory and experiments over 75 years in ecology confirm that large spatially connected habitats tend to be more stable and have less frequent extinctions than habitats without extended spatial structure¹³. Beyond simply destabilizing the ecosystem, fragmentation and disturbance

⁷ Letters received and included in the September 2002 staff report for the Malibu LCP.

⁸ Schoch, D. 2001. Survey lists 300 pathways as vital to state wildlife. Los Angeles Times. August 7, 2001.

⁹ Martin, G. 2001. Linking habitat areas called vital for survival of state's wildlife Scientists map main migration corridors. San Francisco Chronicle, August 7, 2001.

¹⁰ Noss, R. F., H. B. Quigley, M. G. Hornocker, T. Merrill and P. C. Paquet. 1996. Conservation biology and carnivore conservation in the Rocky Mountains. *Conserv. Biol.* 10: 949-963. Noss, R. F. 1995. Maintaining ecological integrity in representative reserve networks. World Wildlife Fund Canada.

¹¹ Sauvajot, R. M., E. C. York, T. K. Fuller, H. Sharon Kim, D. A. Kamradt and R. K. Wayne. 2000. Distribution and status of carnivores in the Santa Monica Mountains, California: Preliminary results from radio telemetry and remote camera surveys. p 113-123 in: Keeley, J. E., M. Baer-Keeley and C. J. Fotheringham (eds), 2nd Interface Between Ecology and Land Development in California, U.S. Geological Survey Open-File Report 00-62. Beier, P. 1996. Metapopulation models, tenacious tracking and cougar conservation. In: *Metapopulations and Wildlife Conservation*, ed. D. R. McCullough. Island Press, Covelo, California, 429p.

¹² Recent sightings of mountain lions include: Temescal Canyon (pers. com., Peter Brown, Facilities Manager, Calvary Church), Topanga Canyon (pers. com., Marti Witter, NPS), Encinal and Trancas Canyons (pers. com., Pat Healy), Stump Ranch Research Center (pers. com., Dr. Robert Wayne, Dept. of Biology, UCLA). In May of 2002, the NPS *photographed* a mountain lion at a trip camera on the Back Bone Trail near Castro Crest – Seth Riley, Eric York and Dr. Ray Sauvajot, National Park Service, SMMNRA.

¹³ Gause, G. F. 1934. *The struggle for existence*. Baltimore, William and Wilkins 163 p. (also reprinted by Hafner, N.Y. 1964). Gause, G. F., N. P. Smaragdova and A. A. Witt. 1936. Further studies of interaction between predators and their prey. *J. Anim. Ecol.* 5:1-18. Huffaker, C. B. 1958. Experimental studies on predation: dispersion factors and predator-prey oscillations. *Hilgardia* 27:343-383. Luckinbill, L. S. 1973. Coexistence in laboratory populations of *Paramecium aurelia* and its predator *Didinium nasutum*. *Ecology* 54:1320-1327. Allen, J. C., C. C. Brewster and D. H. Slone. 2001. Spatially explicit ecological models: A spatial convolution approach. *Chaos, Solitons and Fractals*. 12:333-347.

can even cause unexpected and irreversible changes to new and completely different kinds of ecosystems (habitat conversion)¹⁴.

As a result of the pristine nature of large areas of the Santa Monica Mountains and the existence of large, unfragmented and interconnected blocks of habitat, this ecosystem continues to support an extremely diverse flora and fauna. The observed diversity is probably a function of the diversity of physical habitats. The Santa Monica Mountains have the greatest geological diversity of all major mountain ranges within the transverse range province. According to the National Park Service, the Santa Monica Mountains contain 40 separate watersheds and over 170 major streams with 49 coastal outlets¹⁵. These streams are somewhat unique along the California coast because of their topographic setting. As a "transverse" range, the Santa Monica Mountains are oriented in an east-west direction. As a result, the south-facing riparian habitats have more variable sun exposure than the east-west riparian corridors of other sections of the coast. This creates a more diverse moisture environment and contributes to the higher biodiversity of the region. The many different physical habitats of the Santa Monica Mountains support at least 17 native vegetation types¹⁶ including the following habitats considered sensitive by the California Department of Fish and Game: native perennial grassland, coastal sage scrub, red-shank chaparral, valley oak woodland, walnut woodland, southern willow scrub, southern cottonwood-willow riparian forest, sycamore-alder woodland, oak riparian forest, coastal salt marsh, and freshwater marsh. Over 400 species of birds, 35 species of reptiles and amphibians, and more than 40 species of mammals have been documented in this diverse ecosystem. More than 80 sensitive species of plants and animals (listed, proposed for listing, or species of concern) are known to occur or have the potential to occur within the Santa Monica Mountains Mediterranean ecosystem.

The Santa Monica Mountains are also important in a larger regional context. Several recent studies have concluded that the area of southern California that includes the Santa Monica Mountains is among the most sensitive in the world in terms of the number of rare endemic species, endangered species and habitat loss. These studies have designated the area to be a local hot-spot of endangerment in need of special protection¹⁷.

Therefore, the Commission finds that the Santa Monica Mountains ecosystem is itself rare and especially valuable because of its special nature as the largest, most pristine,

¹⁴ Scheffer, M., S. Carpenter, J. A. Foley, C. Folke and B. Walker. 2001. Catastrophic shifts in ecosystems. *Nature* 413:591-596.

¹⁵ NPS. 2000. op.cit.

¹⁶ From the NPS report (2000 op. cit.) that is based on the older Holland system of subjective classification. The data-driven system of Sawyer and Keeler-Wolf results in a much larger number of distinct "alliances" or vegetation types.

¹⁷ Myers, N. 1990. The biodiversity challenge: Expanded hot-spots analysis. *Environmentalist* 10:243-256. Myers, N., R. A. Mittermeier, C. G. Mittermeier, G. A. B. da Fonseca and J. A. Kent. 2000. Biodiversity hot-spots for conservation priorities. *Nature* 403:853-858. Dobson, A. P., J. P. Rodriguez, W. M. Roberts and D. S. Wilcove. 1997. Geographic distribution of endangered species in the United States. *Science* 275:550-553.

physically complex, and biologically diverse example of a Mediterranean ecosystem in coastal southern California. The Commission further finds that because of the rare and special nature of the Santa Monica Mountains ecosystem, the ecosystem roles of substantially intact areas of the constituent plant communities discussed below are "especially valuable" under the Coastal Act.

Major Habitats within the Santa Monica Mountains

The most recent vegetation map that is available for the Santa Monica Mountains is the map that was produced for the National Park Service in the mid-1990s using 1993 satellite imagery supplemented with color and color infrared aerial imagery from 1984, 1988, and 1994 and field review¹⁸. The minimum mapping unit was 5 acres. For that map, the vegetation was mapped in very broad categories, generally following a vegetation classification scheme developed by Holland¹⁹. Because of the mapping methods used the degree of plant community complexity in the landscape is not represented. For example, the various types of "ceanothus chaparral" that have been documented were lumped under one vegetation type referred to as "northern mixed chaparral." Dr. Todd Keeler-Wolf of the California Department of Fish and Game is currently conducting a more detailed, quantitative vegetation survey of the Santa Monica Mountains.

The National Park Service map can be used to characterize broadly the types of plant communities present. The main generic plant communities present in the Santa Monica Mountains²⁰ are: coastal sage scrub, chaparral, riparian woodland, coast live oak woodland, and grasslands.

Riparian Woodland

Some 49 streams connect inland areas with the coast, and there are many smaller drainages as well, many of which are "blue line." Riparian woodlands occur along both perennial and intermittent streams in nutrient-rich soils. Partly because of its multi-layered vegetation, the riparian community contains the greatest overall biodiversity of all the plant communities in the area²¹. At least four types of riparian communities are discernable in the Santa Monica Mountains: walnut riparian areas, mulefat-dominated riparian areas, willow riparian areas and sycamore riparian woodlands. Of these, the

¹⁸ Franklin, J. 1997. Forest Service Southern California Mapping Project, Santa Monica Mountains National Recreation Area, Task 11 Description and Results, Final Report. June 13, 1997, Dept. of Geography, San Diego State University, USFS Contract No. 53-91S8-3-TM45.

¹⁹ Holland R. F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California, The Resources Agency, Dept. of Fish and Game, Natural Heritage Division, Sacramento, CA. 95814.

²⁰ National Park Service. 2000. Draft: General Management Plan & Environmental Impact Statement, Santa Monica Mountains National Recreation Area, US Dept. of Interior, National Park Service, December 2000. (Fig. 11 in this document.)

²¹ Ibid.

sycamore riparian woodland is the most diverse riparian community in the area. In these habitats, the dominant plant species include arroyo willow, California black walnut, sycamore, coast live oak, Mexican elderberry, California bay laurel, and mule fat. Wildlife species that have been observed in this community include least Bell's vireo (a State and federally listed species), American goldfinches, black phoebes, warbling vireos, bank swallows (State listed threatened species), song sparrows, belted kingfishers, raccoons, and California and Pacific tree frogs.

Riparian communities are the most species-rich to be found in the Santa Monica Mountains. Because of their multi-layered vegetation, available water supply, vegetative cover and adjacency to shrubland habitats, they are attractive to many native wildlife species, and provide essential functions in their lifecycles²². During the long dry summers in this Mediterranean climate, these communities are an essential refuge and oasis for much of the areas' wildlife.

Riparian habitats and their associated streams form important connecting links in the Santa Monica Mountains. These habitats connect all of the biological communities from the highest elevation chaparral to the sea with a unidirectional flowing water system, one function of which is to carry nutrients through the ecosystem to the benefit of many different species along the way.

The streams themselves provide refuge for sensitive species including: the coast range newt, the Pacific pond turtle, and the steelhead trout. The coast range newt and the Pacific pond turtle are California Species of Special Concern and are proposed for federal listing²³, and the steelhead trout is federally endangered. The health of the streams is dependent on the ecological functions provided by the associated riparian woodlands. These functions include the provision of large woody debris for habitat, shading that controls water temperature, and input of leaves that provide the foundation of the stream-based trophic structure.

The importance of the connectivity between riparian areas and adjacent habitats is illustrated by the Pacific pond turtle and the coast range newt, both of which are sensitive and both of which require this connectivity for their survival. The life history of the Pacific pond turtle demonstrates the importance of riparian areas and their associated watersheds for this species. These turtles require the stream habitat during the wet season. However, recent radio tracking work²⁴ has found that although the Pacific pond turtle spends the wet season in streams, it also requires upland habitat for refuge during the dry season. Thus, in coastal southern California, the Pacific pond turtle requires both streams and intact adjacent upland habitats such as coastal sage

²² Walter, Hartmut. Bird use of Mediterranean habitats in the Santa Monica Mountains, Coastal Commission Workshop on the Significance of Native Habitats in the Santa Monica Mountains. CCC Hearing, June 13, 2002, Queen Mary Hotel.

²³ USFWS. 1989. Endangered and threatened wildlife and plants; animal notice of review. Fed. Reg. 54:554-579. USFWS. 1993. Endangered and threatened wildlife and plants; notice of 1-year petition finding on the western pond turtle. Fed. Reg. 58:42717-42718.

²⁴ Rathbun, G.B., N.J. Scott and T.G. Murphy. 2002. Terrestrial habitat use by Pacific pond turtle in a Mediterranean climate. *Southwestern Naturalist*. (in Press).

scrub, woodlands or chaparral as part of their normal life cycle. The turtles spend about four months of the year in upland refuge sites located an average distance of 50 m (but up to 280 m) from the edge of the creek bed. Similarly, nesting sites where the females lay eggs are also located in upland habitats an average of 30 m (but up to 170 m) from the creek. Occasionally, these turtles move up to 2 miles across upland habitat²⁵. Like many species, the pond turtle requires both stream habitats and the upland habitats of the watershed to complete its normal annual cycle of behavior. Similarly, the coast range newt has been observed to travel hundreds of meters into upland habitat and spend about ten months of the year far from the riparian streambed²⁶. They return to the stream to breed in the wet season, and they are therefore another species that requires both riparian habitat and adjacent uplands for their survival.

Riparian habitats in California have suffered serious losses and such habitats in southern California are currently very rare and seriously threatened. In 1989, Faber estimated that 95-97% of riparian habitat in southern California was already lost²⁷. Writing at the same time as Faber, Bowler asserted that, "[t]here is no question that riparian habitat in southern California is endangered."²⁸ In the intervening 13 years, there have been continuing losses of the small amount of riparian woodlands that remain. Today these habitats are, along with native grasslands and wetlands, among the most threatened in California.

In addition to direct habitat loss, streams and riparian areas have been degraded by the effects of development. For example, the coast range newt, a California Species of Special Concern has suffered a variety of impacts from human-related disturbances²⁹. Human-caused increased fire frequency has resulted in increased sedimentation rates, which exacerbates the cannibalistic predation of adult newts on the larval stages.³⁰ In addition impacts from non-native species of crayfish and mosquito fish have also been documented. When these non-native predators are introduced, native prey organisms are exposed to new mortality pressures for which they are not adapted. Coast range newts that breed in the Santa Monica Mountain streams do not appear to have adaptations that permit co-occurrence with introduced mosquito fish and crayfish³¹. These introduced predators have eliminated the newts from streams where they previously occurred by both direct predation and suppression of breeding.

²⁵ Testimony by R. Dagit, Resource Conservation District of the Santa Monica Mountains at the CCC Habitat Workshop on June 13, 2002.

²⁶ Dr. Lee Kats, Pepperdine University, personal communication to Dr J. Allen, CCC.

²⁷ Faber, P.A., E. Keller, A. Sands and B.M. Massey. 1989. The ecology of riparian habitats of the southern California coastal region: a community profile. U.S. Fish and Wildlife Service Biological Report 85(7.27) 152pp.

²⁸ Bowler, P.A. 1989. Riparian woodland: An endangered habitat in southern California. Pp 80-97 in Schoenherr, A.A. (ed.) Endangered plant communities of southern California. Botanists Special Publication No. 3.

²⁹ Gamradt, S.C., L.B. Kats and C.B. Anzalone. 1997. Aggression by non-native crayfish deters breeding in California newts. *Conservation Biology* 11(3):793-796.

³⁰ Kerby, L.J., and L.B. Kats. 1998. Modified interactions between salamander life stages caused by wildfire-induced sedimentation. *Ecology* 79(2):740-745.

³¹ Gamradt, S.C. and L.B. Kats. 1996. Effect of introduced crayfish and mosquitofish on California newts. *Conservation Biology* 10(4):1155-1162.

Therefore, because of the essential role that riparian plant communities play in maintaining the biodiversity of the Santa Monica Mountains, because of the historical losses and current rarity of these habitats in southern California, and because of their extreme sensitivity to disturbance, the native riparian habitats in the Santa Monica Mountains meet the definition of ESHA under the Coastal Act.

Coastal Sage Scrub and Chaparral

Coastal sage scrub and chaparral are often lumped together as “shrublands” because of their roughly similar appearance and occurrence in similar and often adjacent physical habitats. In earlier literature, these vegetation associations were often called soft chaparral and hard chaparral, respectively. “Soft” and “hard” refers to differences in their foliage associated with different adaptations to summer drought. Coastal sage scrub is dominated by soft-leaved, generally low-growing aromatic shrubs that die back and drop their leaves in response to drought. Chaparral is dominated by taller, deeper-rooted evergreen shrubs with hard, waxy leaves that minimize water loss during drought.

The two vegetation types are often found interspersed with each other. Under some circumstances, coastal sage scrub may even be successional to chaparral, meaning that after disturbance, a site may first be covered by coastal sage scrub, which is then replaced with chaparral over long periods of time.³² The existing mosaic of coastal sage scrub and chaparral is the result of a dynamic process that is a function of fire history, recent climatic conditions, soil differences, slope, aspect and moisture regime, and the two habitats should not be thought of as completely separate and unrelated entities but as different phases of the same process³³. The spatial pattern of these vegetation stands at any given time thus depends on both local site conditions and on history (e.g., fire), and is influenced by both natural and human factors.

In lower elevation areas with high fire frequency, chaparral and coastal sage scrub may be in a state of flux, leading one researcher to describe the mix as a “coastal sage-chaparral subclimax.”³⁴ Several other researchers have noted the replacement of chaparral by coastal sage scrub, or coastal sage scrub by chaparral depending on fire history.³⁵ In transitional and other settings, the mosaic of chaparral and coastal sage

³² Cooper, W.S. 1922. The broad-sclerophyll vegetation of California. Carnegie Institution of Washington Publication 319. 124 pp.

³³ Longcore, T and C. Rich. 2002. Protection of environmentally sensitive habitat areas in proposed local coastal plan for the Santa Monica Mountains. The Urban Wildlands Group, Inc., P.O. Box 24020 Los Angeles, CA 90024. (See attached comment document in Appendix).

³⁴ Hanes, T.L. 1965. Ecological studies on two closely related chaparral shrubs in southern California. Ecological Monographs 41:27-52.

³⁵ Gray, K.L. 1983. Competition for light and dynamic boundary between chaparral and coastal sage scrub. *Madrone* 30(1):43-49. Zedler, P.H., C.R. Gautier and G.S. McMaster. 1983. Vegetation change in response to extreme events: The effect of a short interval between fires in California chaparral and coastal sage scrub. *Ecology* 64(4): 809-818.

scrub enriches the seasonal plant resource base and provides additional habitat variability and seasonality for the many species that inhabit the area.

Relationships Among Coastal Sage Scrub, Chaparral and Riparian Communities

Although the constituent communities of the Santa Monica Mountains Mediterranean ecosystem can be defined and distinguished based on species composition, growth habits, and the physical habitats they characteristically occupy, they are not independent entities ecologically. Many species of plants, such as black sage, and laurel sumac, occur in more than one plant community and many animals rely on the predictable mix of communities found in undisturbed Mediterranean ecosystems to sustain them through the seasons and during different portions of their life histories.

Strong evidence for the interconnectedness between chaparral, coastal scrub and other habitats is provided by "opportunistic foragers" (animals that follow the growth and flowering cycles across these habitats). Coastal scrub and chaparral flowering and growth cycles differ in a complimentary and sequential way that many animals have evolved to exploit. Whereas coastal sage scrub is shallow-rooted and responds quickly to seasonal rains, chaparral plants are typically deep-rooted having most of their flowering and growth later in the rainy season after the deeper soil layers have been saturated³⁶. New growth of chaparral evergreen shrubs takes place about four months later than coastal sage scrub plants and it continues later into the summer³⁷. For example, in coastal sage scrub, California sagebrush flowers and grows from August to February and coyote bush flowers from August to November³⁸. In contrast, chamise chaparral and bigpod ceanothus flower from April to June, buck brush ceanothus flowers from February to April, and hoaryleaf ceanothus flowers from March to April.

Many groups of animals exploit these seasonal differences in growth and blooming period. The opportunistic foraging insect community (e.g., honeybees, butterflies and moths) tends to follow these cycles of flowering and new growth, moving from coastal sage scrub in the early rainy season to chaparral in the spring³⁹. The insects in turn are followed by insectivorous birds such as the blue-gray gnatcatcher⁴⁰, bushtit, cactus wren, Bewick's wren and California towhee. At night bats take over the role of daytime insectivores. At least 12 species of bats (all of which are considered sensitive) occur in

³⁶ DeSimone, S. 2000. California's coastal sage scrub. *Fremontia* 23(4):3-8. Mooney, H.A. 1988. Southern coastal scrub. Chap. 13 in Barbour, M.G. and J. Majors; Eds. 1988. *Terrestrial vegetation of California*, 2nd Edition. Calif. Native Plant Soc. Spec. Publ. #9.

³⁷ Schoenherr, A. A. 1992. *A natural history of California*. University of California Press, Berkeley. 772p.

³⁸ Dale, N. 2000. Flowering plants of the Santa Monica Mountains. California Native Plant Society, 1722 J Street, Suite 17, Sacramento, CA 95814.

³⁹ Ballmer, G. R. 1995. What's bugging coastal sage scrub. *Fremontia* 23(4):17-26.

⁴⁰ Root, R. B. 1967. The niche exploitation pattern of the blue-gray gnatcatcher. *Ecol. Monog.* 37:317-350.

the Santa Monica Mountains⁴¹. Five species of hummingbirds also follow the flowering cycle⁴².

Many species of 'opportunistic foragers', which utilize several different community types, perform important ecological roles during their seasonal movements. The scrub jay is a good example of such a species. The scrub jay is an omnivore and forages in coastal sage scrub, chaparral, and oak woodlands for insects, berries and notably acorns. Its foraging behavior includes the habit of burying acorns, usually at sites away from the parent tree canopy. Buried acorns have a much better chance of successful germination (about two-fold) than exposed acorns because they are protected from desiccation and predators. One scrub jay will bury approximately 5000 acorns in a year. The scrub jay therefore performs the function of greatly increasing recruitment and regeneration of oak woodland, a valuable and sensitive habitat type⁴³.

Like the scrub jay, most of the species of birds that inhabit the Mediterranean ecosystem in the Santa Monica Mountains require more than one community type in order to flourish. Many species include several community types in their daily activities. Other species tend to move from one community to another seasonally. The importance of maintaining the integrity of the multi-community ecosystem is clear in the following observations of Dr. Hartmut Walter of the University of California at Los Angeles:

"Bird diversity is directly related to the habitat mosaic and topographic diversity of the Santa Monicas. Most bird species in this bio-landscape require more than one habitat for survival and reproduction." "A significant proportion of the avifauna breeds in the wooded canyons of the Santa Monicas. Most of the canyon breeders forage every day in the brush- and grass-covered slopes, ridges and mesas. They would not breed in the canyons in the absence of the surrounding shrublands. Hawks, owls, falcons, orioles, flycatchers, woodpeckers, warblers, hummingbirds, etc. belong to this group. Conversely, some of the characteristic chaparral birds such as thrashers, quails, and wrentits need the canyons for access to shelter, protection from fire, and water. The regular and massive movement of birds between riparian corridors and adjacent shrublands has been demonstrated by qualitative and quantitative observations by several UCLA students⁴⁴."

Thus, the Mediterranean ecosystem of the Santa Monica Mountains is a mosaic of vegetation types linked together ecologically. The high biodiversity of the area results

⁴¹ Letter from Dr. Marti Witter, NPS, dated Sept. 13, 2001, in letters received and included in the September 2002 staff report for the Malibu LCP.

⁴² National Park Service. 1993. A checklist of the birds of the Santa Monica Mountains National Recreation Area. Southwest Parks and Monuments Assoc., 221 N. Court, Tucson, AZ. 85701

⁴³ Borchert, M. I., F. W. Davis, J. Michaelsen and L. D. Oyler. 1989. Interactions of factors affecting seedling recruitment of blue oak (*Quercus douglasii*) in California. *Ecology* 70:389-404. Bosserma, I. 1979. Jays and oaks: An eco-ethological study of a symbiosis. *Behavior* 70:1-118. Schoenherr, A. A. 1992. A natural history of California. University of California Press, Berkeley. 772p.

⁴⁴ Walter, Hartmut. Bird use of Mediterranean habitats in the Santa Monica Mountains, Coastal Commission Workshop on the Significance of Native Habitats in the Santa Monica Mountains. CCC Hearing, June 13, 2002, Queen Mary Hotel.

from both the diversity and the interconnected nature of this mosaic. Most raptor species, for example, require large areas and will often require different habitats for perching, nesting and foraging. Fourteen species of raptors (13 of which are considered sensitive) are reported from the Santa Monica Mountains. These species utilize a variety of habitats including rock outcrops, oak woodlands, riparian areas, grasslands, chaparral, coastal sage scrub, estuaries and freshwater lakes⁴⁵.

When the community mosaic is disrupted and fragmented by development, many chaparral-associated native bird species are impacted. In a study of landscape-level fragmentation in the Santa Monica Mountains, Stralberg⁴⁶ found that the ash-throated flycatcher, Bewick's wren, wrentit, blue-gray gnatcatcher, California thrasher, orange-crowned warbler, rufous-crowned sparrow, spotted towhee, and California towhee all decreased in numbers as a result of urbanization. Soule⁴⁷ observed similar effects of fragmentation on chaparral and coastal sage scrub birds in the San Diego area.

In summary, all of the vegetation types in this ecosystem are strongly linked by animal movement and foraging. Whereas classification and mapping of vegetation types may suggest a snapshot view of the system, the seasonal movements and foraging of animals across these habitats illustrates the dynamic nature and vital connections that are crucial to the survival of this ecosystem.

Coastal Sage Scrub

"Coastal sage scrub" is a generic vegetation type that is inclusive of several subtypes⁴⁸. In the Santa Monica Mountains, coastal sage scrub is mostly of the type termed "Venturan Coastal Sage Scrub." In general, coastal sage scrub is comprised of dominant species that are semi-woody and low-growing, with shallow, dense roots that enable them to respond quickly to rainfall. Under the moist conditions of winter and spring, they grow quickly, flower, and produce light, wind-dispersed seeds, making them good colonizers following disturbance. These species cope with summer drought by dying back, dropping their leaves or producing a smaller summer leaf in order to reduce water loss. Stands of coastal sage scrub are much more open than chaparral and contain a greater admixture of herbaceous species. Coastal sage scrub is generally restricted to drier sites, such as low foothills, south-facing slopes, and shallow soils at higher elevations.

⁴⁵ National Park Service. 1993. A checklist of the birds of the Santa Monica Mountains National Recreation Area. Southwest Parks and Monuments Assoc., 221 N. Court, Tucson, AZ. 85701. and Letter from Dr. Marti Witter, NPS, Dated Sept. 13, 2001, in letters received and included in the September 2002 staff report for the Malibu LCP.

⁴⁶ Stralberg, D. 2000. Landscape-level urbanization effects on chaparral birds: A Santa Monica Mountains case study. p 125-136 in: Keeley, J. E., M. Baer-Keeley and C. J. Fotheringham (eds), 2nd Interface Between Ecology and Land Development in California, U.S. Geological Survey Open-File Report 00-62.

⁴⁷ Soule, M. E, D. T. Bolger, A. C. Alberts, J. Wright, M. Soric and S. Hill. 1988. Reconstructed dynamics of rapid extinctions of chaparral-requiring birds in urban habitat islands. *Conserv. Biol.* 2: 75-92.

⁴⁸ Kirkpatrick, J.B. and C.F. Hutchinson. 1977. The community composition of Californian coastal sage scrub. *Vegetatio* 35:21-33; Holland, 1986. op.cit.; Sawyer and Keeler-Wolf, 1995, op.cit.

The species composition and structure of individual stands of coastal sage scrub depend on moisture conditions that derive from slope, aspect, elevation and soil type. Drier sites are dominated by more drought-resistant species (e.g., California sagebrush, coast buckwheat, and *Opuntia* cactus). Where more moisture is available (e.g., north-facing slopes), larger evergreen species such as toyon, laurel sumac, lemonade berry, and sugar bush are common. As a result, there is more cover for wildlife, and movement of large animals from chaparral into coastal sage scrub is facilitated in these areas. Characteristic wildlife in this community includes Anna's hummingbirds, rufous-sided towhees, California quail, greater roadrunners, Bewick's wrens, coyotes, and coast horned lizards⁴⁹, but most of these species move between coastal sage scrub and chaparral during their daily activities or on a seasonal basis.

Of the many important ecosystem roles performed by the coastal sage scrub community, five are particularly important in the Santa Monica Mountains. Coastal sage scrub provides critical linkages between riparian corridors, provides essential habitat for species that require several habitat types during the course of their life histories, provides essential habitat for local endemics, supports rare species that are in danger of extinction, and reduces erosion, thereby protecting the water quality of coastal streams.

Riparian woodlands are primary contributors to the high biodiversity of the Santa Monica Mountains. The ecological integrity of those riparian habitats not only requires wildlife dispersal along the streams, but also depends on the ability of animals to move from one riparian area to another. Such movement requires that the riparian corridors be connected by suitable habitat. In the Santa Monica Mountains, coastal sage scrub and chaparral provide that function. Significant development in coastal sage scrub would reduce the riparian corridors to linear islands of habitat with severe edge effects⁵⁰, reduced diversity, and lower productivity.

Most wildlife species and many species of plants utilize several types of habitat. Many species of animals endemic to Mediterranean habitats move among several plant communities during their daily activities and many are reliant on different communities either seasonally or during different stages of their life cycle. Without an intact mosaic of coastal sage scrub, chaparral, and riparian community types, many species will not thrive. Specific examples of the importance of interconnected communities, or habitats, were provided in the discussion above. This is an essential ecosystem role of coastal sage scrub.

A characteristic of the coastal sage scrub vegetation type is a high degree of endemism. This is consonant with Westman's observation that 44 percent of the species he sampled in coastal sage scrub occurred at only one of his 67 sites, which were

⁴⁹ National Park Service. 2000. Draft: General Management Plan & Environmental Impact Statement, Santa Monica Mountains National Recreation Area, US Dept. of Interior, National Park Service, December 2000.

⁵⁰ Environmental impacts are particularly severe at the interface between development and natural habitats. The greater the amount of this "edge" relative to the area of natural habitat, the worse the impact.

distributed from the San Francisco Bay area to Mexico⁵¹. Species with restricted distributions are by nature more susceptible to loss or degradation of their habitat. Westman said of this unique and local aspect of coastal sage scrub species in California:

"While there are about 50 widespread sage scrub species, more than half of the 375 species encountered in the present study of the sage scrub flora are rare in occurrence within the habitat range. In view of the reduction of the area of coastal sage scrub in California to 10-15% of its former extent and the limited extent of preserves, measures to conserve the diversity of the flora are needed."⁵²

Coastal sage scrub in southern California provides habitat for about 100 rare species⁵³, many of which are also endemic to limited geographic regions⁵⁴. In the Santa Monica Mountains, rare animals that inhabit coastal sage scrub⁵⁵ include the Santa Monica shieldback katydid, silvery legless lizard, coastal cactus wren, Bell's sparrow, San Diego desert woodrat, southern California rufous-crowned sparrow, coastal western whiptail, and San Diego horned lizard. Some of these species are also found in chaparral⁵⁶. Rare plants found in coastal sage scrub in the Santa Monica Mountains include Santa Susana tarplant, Coulter's saltbush, Blockman's dudleya, Braunton's milkvetch, Parry's spineflower, and Plummer's mariposa lily⁵⁷. A total of 32 sensitive species of reptiles, birds and mammals have been identified in this community by the National Park Service.⁵⁸

One of the most important ecological functions of coastal sage scrub in the Santa Monica Mountains is to protect water quality in coastal streams by reducing erosion in the watershed. Although shallow rooted, the shrubs that define coastal sage scrub have dense root masses that hold the surface soils much more effectively than the exotic annual grasses and forbs that tend to dominate in disturbed areas. The native shrubs of this community are resistant not only to drought, as discussed above, but well adapted to fire. Most of the semi-woody shrubs have some ability to crown sprout after

⁵¹ Westman, W.E. 1981. Diversity relations and succession in Californian coastal sage scrub. *Ecology* 62:170-184.

⁵² Ibid.

⁵³ Atwood, J. L. 1993. California gnatcatchers and coastal sage scrub: The biological basis for endangered species listing. pp.149-166 *In: Interface Between Ecology and Land Development in California*. Ed. J. E. Keeley, So. Calif. Acad. of Sci., Los Angeles. California Department of Fish and Game (CDFG). 1993. The Southern California Coastal Sage Scrub (CSS) Natural Communities Conservation Plan (NCCP). CDFG and Calif. Resources Agency, 1416 9th St., Sacramento, CA 95814.

⁵⁴ Westman, W.E. 1981. op. cit.

⁵⁵ Biological Resources Assessment of the Proposed Santa Monica Mountains Significant Ecological Area. Nov. 2000. Los Angeles Co., Dept. of Regional Planning, 320 West Temple St., Rm. 1383, Los Angeles, CA 90012.

⁵⁶ O'Leary J.F., S.A. DeSimone, D.D. Murphy, P.F. Brussard, M.S. Gilpin, and R.F. Noss. 1994. Bibliographies on coastal sage scrub and related malacophyllous shrublands of other Mediterranean-type climates. *California Wildlife Conservation Bulletin* 10:1-51.

⁵⁷ Biological Resources Assessment of the Proposed Santa Monica Mountains Significant Ecological Area. Nov. 2000. Los Angeles Co., Dept. of Regional Planning, 320 West Temple St., Rm. 1383, Los Angeles, CA 90012.

⁵⁸ NPS, 2000, op cit.

fire. Several CSS species (e.g., *Eriogonum cinereum*) in the Santa Monica Mountains and adjacent areas resprout vigorously and other species growing near the coast demonstrate this characteristic more strongly than do individuals of the same species growing at inland sites in Riverside County.⁵⁹ These shrub species also tend to recolonize rapidly from seed following fire. As a result they provide persistent cover that reduces erosion.

In addition to performing extremely important roles in the Mediterranean ecosystem, the coastal sage scrub community type has been drastically reduced in area by habitat loss to development. In the early 1980's it was estimated that 85 to 90 percent of the original extent of coastal sage scrub in California had already been destroyed.⁶⁰ Losses since that time have been significant and particularly severe in the coastal zone.

Therefore, because of its increasing rarity, its important role in the functioning of the Santa Monica Mountains Mediterranean ecosystem, and its extreme vulnerability to development, coastal sage scrub within the Santa Monica Mountains meets the definition of ESHA under the Coastal Act.

Chaparral

Another shrub community in the Santa Monica Mountain Mediterranean ecosystem is chaparral. Like "coastal sage scrub," this is a generic category of vegetation. Chaparral species have deep roots (10s of ft) and hard waxy leaves, adaptations to drought that increase water supply and decrease water loss at the leaf surface. Some chaparral species cope more effectively with drought conditions than do desert plants⁶¹. Chaparral plants vary from about one to four meters tall and form dense, intertwining stands with nearly 100 percent ground cover. As a result, there are few herbaceous species present in mature stands. Chaparral is well adapted to fire. Many species regenerate mainly by crown sprouting; others rely on seeds which are stimulated to germinate by the heat and ash from fires. Over 100 evergreen shrubs may be found in chaparral⁶². On average, chaparral is found in wetter habitats than coastal sage scrub, being more common at higher elevations and on north facing slopes.

The broad category "northern mixed chaparral" is the major type of chaparral shown in the National Park Service map of the Santa Monica Mountains. However, northern mixed chaparral can be variously dominated by chamise, scrub oak or one of several species of manzanita or by ceanothus. In addition, it commonly contains woody vines and large shrubs such as mountain mahogany, toyon, hollyleaf redberry, and sugarbush⁶³. The rare red shank chaparral plant community also occurs in the Santa Monica Mountains. Although included within the category "northern mixed chaparral" in

⁵⁹ Dr. John O'Leary, SDSU, personal communication to Dr. John Dixon, CCC, July 2, 2002

⁶⁰ Westman, W.E. 1981. op. cit.

⁶¹ Dr. Stephen Davis, Pepperdine University. Presentation at the CCC workshop on the significance of native habitats in the Santa Monica Mountains. June 13, 2002.

⁶² Keely, J.E. and S.C. Keeley. Chaparral. Pages 166-207 in M.G. Barbour and W.D. Billings, eds. North American Terrestrial Vegetation. New York, Cambridge University Press.

⁶³ Ibid.

the vegetation map, several types of ceanothus chaparral are reported in the Santa Monica Mountains. Ceanothus chaparral occurs on stable slopes and ridges, and may be dominated by bigpod ceanothus, buck brush ceanothus, hoaryleaf ceanothus, or greenbark ceanothus. In addition to ceanothus, other species that are usually present in varying amounts are chamise, black sage, holly-leaf redberry, sugarbush, and coast golden bush⁶⁴.

Several sensitive plant species that occur in the chaparral of the Santa Monica Mountains area are: Santa Susana tarplant, Lyon's pentachaeta, marcescent dudleya, Santa Monica Mountains dudleya, Braunton's milk vetch and salt spring checkerbloom⁶⁵. Several occurring or potentially occurring sensitive animal species in chaparral from the area are: Santa Monica shieldback katydid, western spadefoot toad, silvery legless lizard, San Bernardino ring-neck snake, San Diego mountain kingsnake, coast patch-nosed snake, sharp-shinned hawk, southern California rufous-crowned sparrow, Bell's sparrow, yellow warbler, pallid bat, long-legged myotis bat, western mastiff bat, and San Diego desert woodrat.⁶⁶

Coastal sage scrub and chaparral are the predominant generic community types of the Santa Monica Mountains and provide the living matrix within which rarer habitats like riparian woodlands exist. These two shrub communities share many important ecosystem roles. Like coastal sage scrub, chaparral within the Santa Monica Mountains provides critical linkages among riparian corridors, provides essential habitat for species that require several habitat types during the course of their life histories, provides essential habitat for sensitive species, and stabilizes steep slopes and reduces erosion, thereby protecting the water quality of coastal streams.

Many species of animals in Mediterranean habitats characteristically move among several plant communities during their daily activities, and many are reliant on different communities either seasonally or during different stages of their life cycle. The importance of an intact mosaic of coastal sage scrub, chaparral, and riparian community types is perhaps most critical for birds. However, the same principles apply to other taxonomic groups. For example, whereas coastal sage scrub supports a higher diversity of native ant species than chaparral, chaparral habitat is necessary for the coast horned lizard, an ant specialist⁶⁷. Additional examples of the importance of an interconnected communities, or habitats, were provided in the discussion of coastal sage scrub above. This is an extremely important ecosystem role of chaparral in the Santa Monica Mountains.

Chaparral is also remarkably adapted to control erosion, especially on steep slopes. The root systems of chaparral plants are very deep, extending far below the surface and

⁶⁴ Ibid.

⁶⁵ Biological Resources Assessment of the Proposed Santa Monica Mountains Significant Ecological Area. Nov. 2000. Los Angeles Co., Dept. of Regional Planning, 320 West Temple St., Rm. 1383, Los Angeles, CA 90012.

⁶⁶ Ibid.

⁶⁷ A.V. Suarez. Ants and lizards in coastal sage scrub and chaparral. A presentation at the CCC workshop on the significance of native habitats in the Santa Monica Mountains. June 13, 2002.

penetrating the bedrock below⁶⁸, so chaparral literally holds the hillsides together and prevents slippage.⁶⁹ In addition, the direct soil erosion from precipitation is also greatly reduced by 1) water interception on the leaves and above ground foliage and plant structures, and 2) slowing the runoff of water across the soil surface and providing greater soil infiltration. Chaparral plants are extremely resistant to drought, which enables them to persist on steep slopes even during long periods of adverse conditions. Many other species die under such conditions, leaving the slopes unprotected when rains return. Since chaparral plants recover rapidly from fire, they quickly re-exert their ground stabilizing influence following burns. The effectiveness of chaparral for erosion control after fire increases rapidly with time⁷⁰. Thus, the erosion from a 2-inch rain-day event drops from 5 yd³/acre of soil one year after a fire to 1 yd³/acre after 4 years.⁷¹ The following table illustrates the strong protective effect of chaparral in preventing erosion.

Soil erosion as a function of 24-hour precipitation and chaparral age.

Years Since Fire	Erosion (yd ³ /acre) at Maximum 24-hr Precipitation of:		
	2 inches	5 inches	11 inches
1	5	20	180
4	1	12	140
17	0	1	28
50+	0	0	3

Therefore, because of its important roles in the functioning of the Santa Monica Mountains Mediterranean ecosystem, and its extreme vulnerability to development, chaparral within the Santa Monica Mountains meets the definition of ESHA under the Coastal Act.

Oak Woodland and Savanna

Coast live oak woodland occurs mostly on north slopes, shaded ravines and canyon bottoms. Besides the coast live oak, this plant community includes hollyleaf cherry, California bay laurel, coffeeberry, and poison oak. Coast live oak woodland is more

⁶⁸ Helmers, H., J.S. Horton, G. Juhren and J. O'Keefe. 1955. Root systems of some chaparral plants in southern California. *Ecology* 36(4):667-678. Kummerow, J. and W. Jow. 1977. Root systems of chaparral shrubs. *Oecologia* 29:163-177.

⁶⁹ Radtke, K. 1983. *Living more safely in the chaparral-urban interface*. General Technical Report PSW-67. U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station, Berkeley, California. 51 pp.

⁷⁰ Kittredge, J. 1973. *Forest influences — the effects of woody vegetation on climate, water, and soil*. Dover Publications, New York. 394 pp. Longcore, T and C. Rich. 2002. *Protection of environmentally sensitive habitat areas in proposed local coastal plan for the Santa Monica Mountains*. (Table 1). The Urban Wildlands Group, Inc., P.O. Box 24020 Los Angeles, CA 90024. Vicars, M. (ed.) 1999. *FireSmart: protecting your community from wildfire*. Partners in Protection, Edmonton, Alberta.

⁷¹ *Ibid.*

tolerant of salt-laden fog than other oaks and is generally found nearer the coast⁷². Coast live oak also occurs as a riparian corridor species within the Santa Monica Mountains.

Valley oaks are endemic to California and reach their southern most extent in the Santa Monica Mountains. Valley oaks were once widely distributed throughout California's perennial grasslands in central and coastal valleys. Individuals of this species may survive 400-600 years. Over the past 150 years, valley oak savanna habitat has been drastically reduced and altered due to agricultural and residential development. The understory is now dominated by annual grasses and recruitment of seedlings is generally poor. This is a very threatened habitat.

The important ecosystem functions of oak woodlands and savanna are widely recognized⁷³. These habitats support a high diversity of birds⁷⁴, and provide refuge for many species of sensitive bats⁷⁵. Typical wildlife in this habitat includes acorn woodpeckers, scrub jays, plain titmice, northern flickers, cooper's hawks, western screech owls, mule deer, gray foxes, ground squirrels, jackrabbits and several species of sensitive bats.

Therefore, because of their important ecosystem functions and vulnerability to development, oak woodlands and savanna within the Santa Monica Mountains met the definition of ESHA under the Coastal Act.

Grasslands

Grasslands consist of low herbaceous vegetation that is dominated by grass species but may also harbor native or non-native forbs.

California Perennial Grassland

Native grassland within the Santa Monica Mountains consists of perennial native needlegrasses: purple needlegrass, (*Nassella pulchra*), foothills needlegrass, (*Nassella lepida*) and nodding needlegrass (*Nassella cernua*). These grasses may occur in the same general area but they do not typically mix, tending to segregate based on slope

⁷² NPS 2000. op. cit.

⁷³ Block, W.M., M.L. Morrison, and J. Verner. 1990. Wildlife and oak-woodland interdependency. *Fremontia* 18(3):72-76. Pavlik, B.M., P.C. Muick, S. Johnson, and M. Popper. 1991. *Oaks of California*. Cachuma Press and California Oak Foundation, Los Olivos, California. 184 pp.

⁷⁴ Cody, M.L. 1977. Birds. Pp. 223-231 in Thrower, N.J.W., and D.E. Bradbury (eds.). *Chile-California Mediterranean scrub atlas*. US/IBP Synthesis Series 2. Dowden, Hutchinson & Ross, Stroudsburg, Pennsylvania. National Park Service. 1993. A checklist of the birds of the Santa Monica Mountains National Recreation Area. Southwest Parks and Monuments Assoc., 221 N. Court, Tucson, AZ. 85701

⁷⁵ Miner, K.L., and D.C. Stokes. 2000. Status, conservation issues, and research needs for bats in the south coast bioregion. Paper presented at *Planning for biodiversity: bringing research and management together*, February 29, California State University, Pomona, California.

and substrate factors⁷⁶. Mixed with these native needlegrasses are many non-native annual species that are characteristic of California annual grassland⁷⁷. Native perennial grasslands are now exceedingly rare⁷⁸. In California, native grasslands once covered nearly 20 percent of the land area, but today are reduced to less than 0.1 percent⁷⁹. The California Natural Diversity Database (CNDDDB) lists purple needlegrass habitat as a community needing priority monitoring and restoration. The CNDDDB considers grasslands with 10 percent or more cover by purple needlegrass to be significant, and recommends that these be protected as remnants of original California prairie. Patches of this sensitive habitat occur throughout the Santa Monica Mountains where they are intermingled with coastal sage scrub, chaparral and oak woodlands.

Many of the raptors that inhabit the Santa Monica Mountains make use of grasslands for foraging because they provide essential habitat for small mammals and other prey. Grasslands adjacent to woodlands are particularly attractive to these birds of prey since they simultaneously offer perching and foraging habitat. Particularly noteworthy in this regard are the white-tailed kite, northern harrier, sharp-shinned hawk, Cooper's hawk, red-shouldered hawk, red-tailed hawk, golden eagle, American kestrel, merlin, and prairie falcon⁸⁰.

Therefore, because of their extreme rarity, important ecosystem functions, and vulnerability to development, California native perennial grasslands within the Santa Monica Mountains meet the definition of ESHA under the Coastal Act.

California Annual Grassland

The term "California annual grassland" has been proposed to recognize the fact that non-native annual grasses should now be considered naturalized and a permanent feature of the California landscape and should be acknowledged as providing important ecological functions. These habitats support large populations of small mammals and provide essential foraging habitat for many species of birds of prey. California annual grassland generally consists of dominant invasive annual grasses that are primarily of Mediterranean origin. The dominant species in this community include common wild oats (*Avena fatua*), slender oat (*Avena barbata*), red brome (*Bromus madritensis* ssp. *Rubens*), riggut brome, (*Bromus diandrus*), and herbs such as black mustard (*Brassica nigra*), wild radish (*Raphanus sativus*) and sweet fennel (*Foeniculum vulgare*). Annual grasslands are located in patches throughout the Santa Monica Mountains in previously disturbed areas, cattle pastures, valley bottoms and along roadsides. While many of

⁷⁶ Sawyer, J. O. and T. Keeler-Wolf. 1995. A manual of California vegetation. California Native Plant Society, 1722 J St., Suite 17, Sacramento, CA 95814.

⁷⁷ Biological Resources Assessment of the Proposed Santa Monica Mountains Significant Ecological Area. Nov. 2000. Los Angeles Co., Dept. of Regional Planning, 320 West Temple St., Rm. 1383, Los Angeles, CA 90012.

⁷⁸ Noss, R.F., E.T. LaRoe III and J.M. Scott. 1995. Endangered ecosystems of the United States: a preliminary assessment of loss and degradation. Biological Report 28. National Biological Service, U.S. Dept. of Interior.

⁷⁹ NPS 2000. op. cit.

⁸⁰ NPS 2000. op. cit.

these patches are dominated by invasive non-native species, it would be premature to say that they are never sensitive or do not harbor valuable annual native species. A large number of native forbs also may be present in these habitats⁸¹, and many native wildflowers occur primarily in annual grasslands. In addition, annual grasslands are primary foraging areas for many sensitive raptor species in the area.

Inspection of California annual grasslands should be done prior to any impacts to determine if any rare native species are present or if any rare wildlife rely on the habitat and to determine if the site meets the Coastal Act ESHA criteria.

Effects of Human Activities and Development on Habitats within the Santa Monica Mountains

The natural habitats of the Santa Monica Mountains are highly threatened by current development pressure, fragmentation and impacts from the surrounding megalopolis. The developed portions of the Santa Monica Mountains represents the extension of this urbanization into natural areas. About 54% of the undeveloped Santa Monica Mountains are in private ownership⁸², and computer simulation studies of the development patterns over the next 25 years predict a serious increase in habitat fragmentation⁸³. Development and associated human activities have many well-documented deleterious effects on natural communities. These environmental impacts may be both direct and indirect and include the effects of increased fire frequency, of fire clearance, of introduction of exotic species, and of night lighting.

Increased Fire Frequency

Since 1925, all the major fires in the Santa Monica Mountains have been caused by human activities⁸⁴. Increased fire frequency alters plant communities by creating conditions that select for some species over others. Strong resprouting plant species such as laurel sumac, are favored while non-sprouters like bigpod ceanothus, are at a disadvantage. Frequent fire recurrence before the non-sprouters can develop and reestablish a seed bank is detrimental, so that with each fire their chances for propagation are further reduced. Resprouters can be sending up new shoots quickly, and so they are favored in an increased fire frequency regime. Also favored are weedy and invasive species. Dr. Steven Davis in his abstract for a Coastal Commission

⁸¹ Holstein, G. 2001. Pre-agricultural grassland in Central California. *Madrono* 48(4):253-264. Stromberg, M.R., P. Kephart and V. Yadon. 2001. Composition, invasibility and diversity of coastal California grasslands. *Madrono* 48(4):236-252.

⁸² National Park Service. 2000. Draft: General Management Plan & Environmental Impact Statement, Santa Monica Mountains National Recreation Area, US Dept. of Interior, National Park Service, December 2000.

⁸³ Swenson, J. J., and J. Franklin. 2000. The effects of future urban development on habitat fragmentation in the Santa Monica Mountains. *Landscape Ecol.* 15:713-730.

⁸⁴ NPS, 2000, op. cit.

Workshop stated⁸⁵ *"We have evidence that recent increases in fire frequency has eliminated drought-hardy non-sprouters from chaparral communities near Malibu, facilitating the invasion of exotic grasses and forbs that further exacerbate fire frequency."* Thus, simply increasing fire frequency from about once every 22 years (the historical frequency) to about once every 12 years (the current frequency) can completely change the vegetation community. This has cascading effects throughout the ecosystem.

Fuel Clearance

The removal of vegetation for fire protection in the Santa Monica Mountains is required by law in "Very High Fire Hazard Severity Zones"⁸⁶. Fuel removal is reinforced by insurance carriers⁸⁷. Generally, the Santa Monica Mountains are considered to be a high fire hazard severity zone. In such high fire hazard areas, homeowners must often resort to the California FAIR Plan to obtain insurance. Because of the high risk, all homes in "brush areas" are assessed an insurance surcharge if they have less than the recommended 200-foot fuel modification zone⁸⁸ around the home. The combination of insurance incentives and regulation assures that the 200-foot clearance zone will be applied universally⁸⁹. While it is not required that all of this zone be cleared of vegetation, the common practice is simply to disk this zone, essentially removing or highly modifying all native vegetation. For a new structure not adjacent to existing structures, this results in the removal or modification of a minimum of three acres of vegetation⁹⁰. While the directly impacted area is large, the effects of fuel modification extend beyond the 200-foot clearance area.

Effects of Fuel Clearance on Bird Communities

The impacts of fuel clearance on bird communities was studied by Stralberg who identified three ecological categories of birds in the Santa Monica Mountains: 1) local and long distance migrators (ash-throated flycatcher, Pacific-slope flycatcher, phainopepla, black-headed grosbeak), 2) chaparral-associated species (Bewick's wren, wrentit, blue-gray gnatcatcher, California thrasher, orange-crowned warbler, rufous-crowned sparrow, spotted towhee, California towhee) and 3) urban-associated species

⁸⁵ Davis, Steven. Effects of fire and other factors on patterns of chaparral in the Santa Monica Mountains, Coastal Commission Workshop on the Significance of Native Habitats in the Santa Monica Mountains. CCC Hearing, June 13, 2002, Queen Mary Hotel.

⁸⁶ 1996 Los Angeles County Fire Code Section 1117.2.1

⁸⁷ Longcore, T and C. Rich. 2002. Protection of environmentally sensitive habitat areas in proposed local coastal plan for the Santa Monica Mountains. The Urban Wildlands Group, Inc., P.O. Box 24020 Los Angeles, CA 90024. Vicars, M. (ed.) 1999. FireSmart: protecting your community from wildfire. Partners in Protection, Edmonton, Alberta.

⁸⁸ Fuel Modification Plan Guidelines. Co. of Los Angeles Fire Department, Fuel Modification Unit, Prevention Bureau, Forestry Division, Brush Clearance Section, January 1998.

⁸⁹ Longcore, T and C. Rich. 2002. Protection of environmentally sensitive habitat areas in proposed local coastal plan for the Santa Monica Mountains. The Urban Wildlands Group, Inc., P.O. Box 24020 Los Angeles, CA 90024.

⁹⁰ *ibid.*

(mourning dove, American crow, Western scrub-jay, Northern mockingbird)⁹¹. It was found in this study that the number of migrators and chaparral-associated species decreased due to habitat fragmentation while the abundance of urban-associated species increased. The impact of fuel clearance is to greatly increase this edge-effect of fragmentation by expanding the amount of cleared area and "edge" many-fold. Similar results of decreases in fragmentation-sensitive bird species are reported from the work of Bolger et al. in southern California chaparral⁹².

Effects of Fuel Clearance on Arthropod Communities

Fuel clearance and habitat modification may also disrupt native arthropod communities, and this can have surprising effects far beyond the cleared area on species seemingly unrelated to the direct impacts. A particularly interesting and well-documented example with ants and lizards illustrates this point. When non-native landscaping with intensive irrigation is introduced, the area becomes favorable for the invasive and non-native Argentine ant. This ant forms "super colonies" that can forage more than 650 feet out into the surrounding native chaparral or coastal sage scrub around the landscaped area⁹³. The Argentine ant competes with native harvester ants and carpenter ants displacing them from the habitat⁹⁴. These native ants are the primary food resource for the native coast horned lizard, a California "Species of Special Concern." As a result of Argentine ant invasion, the coast horned lizard and its native ant food resources are diminished in areas near landscaped and irrigated developments⁹⁵. In addition to specific effects on the coast horned lizard, there are other Mediterranean habitat ecosystem processes that are impacted by Argentine ant invasion through impacts on long-evolved native ant-plant mutualisms⁹⁶. The composition of the whole arthropod community changes and biodiversity decreases when habitats are subjected to fuel modification. In coastal sage scrub disturbed by fuel modification, fewer arthropod

⁹¹ Stralberg, D. 2000. Landscape-level urbanization effects on chaparral birds: a Santa Monica Mountains case study. Pp. 125–136 in Keeley, J.E., M. Baer-Keeley, and C.J. Fotheringham (eds.). *2nd interface between ecology and land development in California*. U.S. Geological Survey, Sacramento, California.

⁹² Bolger, D. T., T. A. Scott and J. T. Rotenberry. 1997. Breeding bird abundance in an urbanizing landscape in coastal Southern California. *Conserv. Biol.* 11:406-421.

⁹³ Suarez, A.V., D.T. Bolger and T.J. Case. 1998. Effects of fragmentation and invasion on native ant communities in coastal southern California. *Ecology* 79(6):2041-2056.

⁹⁴ Holway, D.A. 1995. The distribution of the Argentine ant (*Linepithema humile*) in central California: a twenty-year record of invasion. *Conservation Biology* 9:1634-1637. Human, K.G. and D.M. Gordon. 1996. Exploitation and interference competition between the invasive Argentine ant, (*Linepithema humile*), and native ant species. *Oecologia* 105:405-412.

⁹⁵ Fisher, R.N., A.V. Suarez and T.J. Case. 2002. Spatial patterns in the abundance of the coastal horned lizard. *Conservation Biology* 16(1):205-215. Suarez, A.V. J.Q. Richmond and T.J. Case. 2000. Prey selection in horned lizards following the invasion of Argentine ants in southern California. *Ecological Applications* 10(3):711-725.

⁹⁶ Suarez, A.V., D.T. Bolger and T.J. Case. 1998. Effects of fragmentation and invasion on native ant communities in coastal southern California. *Ecology* 79(6):2041-2056. Bond, W. and P. Slingsby. Collapse of an Ant-Plant Mutualism: The Argentine Ant (*Iridomyrmex humilis*) and Myrmecochorous Proteaceae. *Ecology* 65(4):1031-1037.

predator species are seen and more exotic arthropod species are present than in undisturbed habitats⁹⁷.

Studies in the Mediterranean vegetation of South Africa (equivalent to California shrubland with similar plant species) have shown how the invasive Argentine ant can disrupt the whole ecosystem.⁹⁸ In South Africa the Argentine ant displaces native ants as they do in California. Because the native ants are no longer present to collect and bury seeds, the seeds of the native plants are exposed to predation, and consumed by seed eating insects, birds and mammals. When this habitat burns after Argentine ant invasion the large-seeded plants that were protected by the native ants all but disappear. So the invasion of a non-native ant species drives out native ants, and this can cause a dramatic change in the species composition of the plant community by disrupting long-established seed dispersal mutualisms. In California, some insect eggs are adapted to being buried by native ants in a manner similar to plant seeds⁹⁹.

Artificial Night Lighting

One of the more recently recognized human impacts on ecosystem function is that of artificial night lighting as it effects the behavior and function of many different types of organisms¹⁰⁰. For literally billions of years the only nighttime sources of light were the moon and stars, and living things have adapted to this previously immutable standard and often depend upon it for their survival. A review of lighting impacts suggests that whereas some species are unaffected by artificial night lighting, many others are severely impacted. Overall, most impacts are negative ones or ones whose outcome is unknown. Research to date has found negative impacts to plants, aquatic and terrestrial invertebrates, amphibians, fish, birds and mammals, and a detailed literature review can be found in the report by Longcore and Rich¹⁰¹.

Summary

In a past action, the Coastal Commission found¹⁰² that the Santa Monica Mountains Mediterranean Ecosystem, which includes the undeveloped native habitats of the Santa Monica Mountains, is rare and especially valuable because of its relatively pristine

⁹⁷ Longcore, T.R. 1999. Terrestrial arthropods as indicators of restoration success in coastal sage scrub. Ph.D. Dissertation, University of California, Los Angeles.

⁹⁸ Christian, C. 2001. Consequences of a biological invasion reveal the importance of mutualism for plant communities. *Nature* 413:635-639.

⁹⁹ Hughes, L. and M. Westoby. 1992. *Capitula* on stick insect eggs and elaiosomes on seeds: convergent adaptations for burial by ants. *Functional Ecology* 6:642-648.

¹⁰⁰ Longcore, T and C. Rich. 2002. Protection of environmentally sensitive habitat areas in proposed local coastal plan for the Santa Monica Mountains. The Urban Wildlands Group, Inc., P.O. Box 24020 Los Angeles, CA 90024.

¹⁰¹ Ibid, and Ecological Consequences of Artificial Night Lighting, Conference, February 23-24, 2002, UCLA Los Angeles, California.

¹⁰² Revised Findings for the City of Malibu Local Coastal Program (as adopted on September 13, 2002) adopted on February 6, 2003.

character, physical complexity, and resultant biological diversity. The undeveloped native habitats within the Santa Monica Mountains that are discussed above are ESHA because of their valuable roles in that ecosystem, including providing a critical mosaic of habitats required by many species of birds, mammals and other groups of wildlife, providing the opportunity for unrestricted wildlife movement among habitats, supporting populations of rare species, and preventing the erosion of steep slopes and thereby protecting riparian corridors, streams and, ultimately, shallow marine waters.

The importance the native habitats in the Santa Monica Mountains was emphasized nearly 20 years ago by the California Department of Fish and Game¹⁰³. Commenting on a Draft Land Use Plan for the City of Malibu, the Regional Manager wrote that, "It is essential that large areas of land be reclassified to reflect their true status as ESHAs. One of the major needs of the Malibu LUP is that it should provide protection for entire drainages and not just stream bottoms." These conclusions were supported by the following observations:

"It is a fact that many of the wildlife species of the Santa Monica Mountains, such as mountain lion, deer, and raccoon, have established access routes through the mountains. They often travel to and from riparian zones and development such as high density residential may adversely affect a wildlife corridor.

Most animal species that exist in riparian areas will, as part of their life histories, also be found in other habitat types, including chaparral (sic) or grassland. For example, hawks nest and roost in riparian areas, but are dependent on large open areas for foraging. For the survival of many species, particularly those high on the food chain, survival will depend upon the presence of such areas. Such areas in the Santa Monica Mountains include grassland and coastal sage scrub communities, which have been documented in the SEA studies as supporting a wide diversity of plant and animal life."

This analysis by the Department of Fish and Game is consonant with the findings of the Commission in the case of the Malibu LCP, and with the conclusion that large contiguous areas of relatively pristine native habitat in the Santa Monica Mountains meet the definition of ESHA under the Coastal Act.

¹⁰³ Letter from F. A. Worthley, Jr. (CDFG) to N. Lucast (CCC) re Land Use Plan for Malibu dated March 22, 1983.



EXHIBIT 10
CDP 4-04-074, 076
Aerial View (2001)