CALIFORNIA COASTAL COMMISSION
SOUTH CENTRAL COAST AREA
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Staff Report:	4/27/06
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Commission Action:	

Th 19g

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 4-05-150

APPLICANT: Madalon K. Witter

AGENT: Sherman Stacey and Pete Petrovsky

PROJECT LOCATION: 2100 McReynolds Road, Santa Monica Mountains (Los Angeles County)

APN NOS.: 4464-024-020, 4464-024-021, 4464-024-022, 4464-024-023, 4464-024-024, 4465-006-054, 4465-006-055

STAFF NOTE

This application was filed on September 17, 2005. Under the provisions of the Permit Streamlining Act, the latest possible date for Commission action was March 16, 2006; however, the applicant extended the time limit for action on the item by 90 days. Therefore, the latest possible date for Commission action is **June 14, 2006,** which is the first day of the June 2006 Commission meeting. There can be no assurance at this time that the subject application could be scheduled on that day to meet the provisions of the Permit Streamlining Act. As such, the Commission must act on Application No. 4-05-150 at the May 2006 Hearing.

PROJECT DESCRIPTION: Request for approval of development plan for a 45.31-acre property, including removal of all (approximately 25) unpermitted mobile homes, trailers and similar dwellings; restoration of unpermitted graded pads and roads by “natural vegetation” or “some reasonably feasible vegetation”; elimination and restoration of any unpermitted septic or sewage disposal sites for non-vested development “to the extent reasonably feasible”; and removal of any unpermitted water lines and systems. The proposed project description also states that the applicant does not seek authorization for any existing animal facilities or new water tank sites, but does not indicate whether the applicant proposes to remove such facilities.

The site plan accompanying the proposed project description shows existing roads and pads, and identifies two existing wells, two existing electrical poles, and an existing house, garage, and concrete structure. The plan shows symbols for four additional electrical poles and an additional well, but does not label them as such. The existing garage shown on the plan was determined to be vested under Claim of Vested Rights No. VR-4-97-1 (Witter), and it is likely that the house and concrete structure are those that were found to be vested under VR-4-97-1, but whose location was unknown at that time. The well that was determined to be vested under VR-4-97-1 is shown but not labeled on the plan; the two existing wells identified on the plan are not vested. The plan does not show how the existing electrical poles serve the vested development, and therefore it must be assumed that those poles also are not vested. It is unclear whether the applicant seeks after-the-fact approval for the unpermitted wells and electrical facilities shown on the plan. The extent of the proposed removal and revegetation of existing roads and pads is not identified on the plan, and the extent of such removal and revegetation, particularly in the area of vested development, which will require an access road and some pad area, is unclear. The proposed development plan does not show the location of the existing unpermitted septic systems, water lines and water systems, mobile homes and other dwellings to be removed.

The property consists of 45.31 acres that the County Assessor identifies as seven parcels. This parcel configuration was not authorized in compliance with the permit requirements of the Coastal Act and the applicant proposes, in a separate application (CDP Application No. 4-05-151), to combine and resubdivide the property into three parcels. The proposed lot line adjustment is not a part of this proposal.

LOCAL APPROVALS RECEIVED: None.

SUBSTANTIVE FILE DOCUMENTS: "Engineering Geology Feasibility Report," Earth Systems Southern California, March 6, 2003; Coastal Development Permit (CDP) No. P-2-17-78-2706 (Burrett); CDP No. 5-82-277 (Richardson/Brooke); CDP No. 4-94-052 (Burrett); Claim of Vested Rights File No. VR-4-97-1 (Witter); Violation File No. V-4-92-030; Cease and Desist Order and Restoration Order File Nos. CCC-05-CD-08 and CCC-05-RO-05.

SUMMARY OF STAFF RECOMMENDATION

Staff recommends ***DENIAL*** of the proposed project, which would allow unpermitted development to remain on a 45.31 acre site within chaparral, oak woodland, and riparian environmentally sensitive habitat areas and would not minimize cumulative impacts on coastal resources, and impacts to environmentally sensitive habitat areas (ESHA), water quality, and visual resources as required by Sections 30230, 30231, 30240, 30250, 30251, and 30253 of the Coastal Act. The standard of review for the proposed project is the Chapter Three policies of the Coastal Act. In addition, the policies of the certified Malibu-Santa Monica Mountains Land Use Plan (LUP) serve as guidance.

The subject property is an approximately 45.31-acre site in the Santa Monica Mountains area of unincorporated Los Angeles County (**Exhibit 10**). The project site consists of 45.31 acres, which the County Assessor's Office has identified as seven parcels. These parcels were not authorized in compliance with the Coastal Act. In a separate application (CDP Application No.

4-05-151) also to be heard at the May 2006 Commission meeting, the applicant proposes to combine and resubdivide the seven unpermitted parcels into four parcels (**Exhibit 15**).

The subject site contains extensive unpermitted physical development, including unpermitted grading; removal of major vegetation; placement of solid materials and erection of structures including, but not limited to: twenty-three trailers and/or mobile homes; four single-family residences; four areas with stables, barns, pens, and horses; two concrete structures; one large garage; seven storage sheds; one outhouse; one yurt; numerous storage containers; six lean-tos attached to trailers or motor homes; four wooden or metal fences; power transmission and distribution lines; telephone lines; numerous driveways and/or roads; pipes; abandoned vehicles including cars, boats, trucks, and buses; tents; trash (including five large deposit areas); construction materials (including wood, metal, glass, and concrete materials); construction equipment including one bulldozer; and water wells and water tanks.[1] Since 1992, the Commission has made efforts to address the unpermitted development on the subject site, through cease and desist orders and other enforcement action and litigation. To date, the unpermitted development remains on the project sites. An excerpt from the July 28, 2005 CDO and RO staff report, which details the history of violations on the subject property and related Commission action, is included as **Exhibit 6** of this report.

The subject site is characterized by mountainous terrain with elevations ranging from 1800 feet to 2200 feet above sea level. The site is accessible by a series of private, unpermitted dirt roads and McReynolds Road, which connects the south-east boundary of the property to Latigo Canyon Road. While scattered residential development is located south of the project site, the site is surrounded on the west, north, and east by the Castro Crest complex of the Santa Monica Mountains National Recreation Area. The site is visible from various public viewing points, including along the Backbone Trail, that afford scenic vistas of the relatively undisturbed natural area. The property is located within a wildlife corridor[2], and contains large, contiguous areas of chaparral and oak woodlands, as well as an intermittent blue-line stream, recognized by the United States Geological Survey (USGS), and its associated riparian oak woodland habitat (**Exhibits 11 - 12 and 17 - 18**). Commission staff biologist John Dixon has visited the site, most recently on August 22, 2005, and has confirmed that the chaparral and oak woodland habitat on the site constitutes ESHA.

As noted above, extensive areas of the site have been cleared, graded and developed with mobile homes and other structures since 1977 without benefit of a coastal development permit. In addition, other areas of the site were cleared, graded and developed prior to 1977 without the required local approvals, and thus were determined by the Commission to not be vested in Vested Rights Determination No. V-4-97-1. The Commission did, however, determine that a limited amount of development, including a water well and pump on Assessor's Parcel No. (APN) 4465-006-054, a 600 sq. ft. garage on APN 4464-024-020, a 384 sq. ft. single family residence, a 168 sq. ft. storage structure, and electrical facilities with valid permits serving permitted developments, was vested (**Exhibit 4**).

Aerial photographs from 1976 indicate that areas on the property that were subsequently cleared and developed consisted of native chaparral habitat, and in the south central portion of

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[1] Due to the transient nature of the structures on site, it is difficult to establish an exact inventory of development on the site at any given time. Therefore, all accounts of on-site development in this report must be considered approximate.

[2] The Malibu/Santa Monica Mountains Land Use Plan designates certain areas as wildlife migration corridors, and considers them to be "Sensitive Environmental Resources".

the site, oak woodland. It is reasonable to assume that areas cleared and graded prior to 1976 also consisted of native chaparral habitat and oak woodland. In determining the extent of ESHA on the subject site, the Commission must consider the condition of the subject site prior to any unpermitted or non-vested development. Thus, the entire site, with the exception of the limited development determined to be vested by Vested Rights Determination No. V-4-97-1, constitutes environmentally sensitive habitat.

The applicant's proposal is intended to address matters concerning the unpermitted development, as identified in Section 4.1 of a 1998 settlement agreement between the Commission and the applicant. There are several components to the applicant's proposal, some of which are straightforward and others of which are more oblique. For instance, it is clear that the applicant requests approval for removal of all (approximately 25) unpermitted mobile homes, trailers and similar dwellings, and removal of any unpermitted water lines and systems. However, it is unclear whether the applicant proposes to remove the remainder of development on site. Non-habitable structures, such as the various sheds, storage containers, lean-tos, construction materials and equipment, vehicles, fences, and trash are not addressed. In addition, the proposed project description states that the applicant does not seek authorization for any existing animal facilities or new water tank sites, but does not indicate whether the applicant proposes to remove such facilities.

In addition, the site plan (**Exhibit 13**) accompanying the project description does not clearly depict the applicant's proposal. Specifically, the plan shows existing roads and pads, all of which, according to the project description, the applicant proposes to remove; the plan also shows vested structures that the applicant intends to retain, and identifies several unpermitted structures as "existing" development in the same manner as the vested structures. Specifically, the plan shows existing roads and pads, and identifies two existing wells, two existing electrical poles, and an existing house, garage, and concrete structure. The plan shows symbols for four additional electrical poles and an additional well, but does not label them as such. The existing garage shown on the plan was determined to be vested under Claim of Vested Rights No. VR-4-97-1 (Witter), and it is likely that the house and concrete structure are those that were found to be vested under VR-4-97-1, but whose location was unknown at that time. The well that was determined to be vested under VR-4-97-1 is shown but not labeled on the plan; the two existing wells identified on the plan are not vested. The plan does not show how the existing electrical poles serve the vested development, and therefore it must be assumed that those poles also are not vested. It is unclear whether the applicant seeks after-the-fact approval for the unpermitted wells and electrical facilities shown on the plan. The proposed development plan does not show the location of the existing unpermitted septic systems, water lines and water systems, mobile homes and other dwellings to be removed.

Lastly, the project description states that the applicant will perform "restoration to the extent reasonably feasible of all graded areas that are not specifically permitted or linked to a permitted or vested use, by some form of vegetation." However, the proposed removal and revegetation of existing roads and pads is not identified on the plan, and the extent of such removal and revegetation, particularly in the area of vested development, is unclear. Furthermore, no restoration plan has been submitted, and the proposed method of restoration is not clearly stated. Specifically, the project description states that "In February 2000 applicant submitted report supporting a proposition that natural revegetation was the most appropriate method to restore graded areas…If some other reasonably feasible vegetation is recommended (than natural form of vegetation) by the CCC staff, applicant will study and plant such reasonably feasible vegetation." Staff notes that unaided regrowth of vegetation is not an activity that requires a coastal development permit; neither is it an activity that is likely to result in

restoration of native habitat, particularly given that the subject areas have been graded and exposed to non-native plant materials and the applicant does not propose any removal of non-native vegetation or planting of native vegetation. Staff further notes that the basic outline of a restoration proposal, including a map of the areas to be restored, must be submitted by the applicant; while staff could recommend imposition of a special condition that requires the restoration plan to meet specific requirements, staff cannot recommend a condition that designs the restoration plan for the applicant.

In summary, while the applicant's proposal contains some components, such as the removal of unpermitted dwellings and water lines, that are likely consistent with the resource protection policies of the Coastal Act, the proposed project does not sufficiently address the totality of unpermitted development on the site, and its impacts on coastal resources. In addition, the proposed project does not include measures to adequately address the extensive damage to ESHA, water quality, and public views that has resulted from the unpermitted development on the site. It is important to emphasize that the baseline for evaluating the proposed project is not the existing condition of the subject property, but its condition prior to the extensive unpermitted grading, vegetation clearance, construction, placement of structures, and sewage disposal on the site. Given that the proposed project poorly defines the amount, location, and extent of development to be removed, and contains no viable proposal for restoration of the extensive graded and cleared areas on the site, approval of the proposed project would thus permit an undefined amount of unpermitted development on the site, including, at a minimum, removal of vegetation and grading within ESHA.

Thus, the applicant's proposal is inconsistent with Coastal Act policies for the protection of environmentally sensitive habitat, water quality, and visual resources, and the minimization of hazards and cumulative impacts on coastal resources; furthermore, alternatives exist that would be consistent with Coastal Act policies. Therefore, staff recommends denial of the subject application.

I. STAFF RECOMMENDATION:

MOTION: ***I move that the Commission approve Coastal Development Permit No. 4-05-150 for the development proposed by the applicant.***

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 grounds that the development will not conform with the policies of Chapter Three 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 Three. 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 is requesting approval of a development plan for a 45.31-acre property, including removal of all (approximately 25) unpermitted mobile homes, trailers and similar dwellings; restoration of unpermitted graded pads and roads by "natural vegetation" or "some reasonably feasible vegetation"; elimination and restoration of any unpermitted septic or sewage disposal sites for non-vested development "to the extent reasonably feasible"; and removal of any unpermitted water lines and systems. The proposed project description also states that the applicant does not seek authorization for any existing animal facilities or new water tank sites, but does not indicate whether the applicant proposes to remove such facilities. The proposed development plan shows existing roads and pads, and identifies two existing wells, two existing electrical poles, and an existing house, garage, and concrete structure. The plan shows symbols for four additional electrical poles and an additional well, but does not label them as such. The existing garage shown on the plan was determined to be vested under Claim of Vested Rights No. VR-4-97-1 (Witter), and it is likely that the house and concrete structure are those that were found to be vested under VR-4-97-1, but whose location was unknown at that time. The well that was determined to be vested under VR-4-97-1 is shown but not labeled on the plan; the two existing wells identified on the plan are not vested. The plan does not show how the existing electrical poles serve the vested development, and therefore it must be assumed that those poles also are not vested. It is unclear whether the applicant seeks after-the-fact approval for the unpermitted wells and electrical facilities shown on the plan. The extent of the proposed removal and revegetation of existing roads and pads is not identified on the plan, and the extent of such removal and revegetation, particularly in the area of vested development, which will require an access road and some pad area, is unclear. The proposed development plan does not show the location of the existing unpermitted septic systems, water lines and water systems, mobile homes and other dwellings to be removed.

The subject property is an approximately 45.31-acre site in the Santa Monica Mountains area of unincorporated Los Angeles County (**Exhibit 10**). The project site consists of 45.31 acres that the County Assessor identifies as seven parcels; however, this parcel configuration was not authorized in compliance with the permit requirements of the Coastal Act. In a separate application (CDP Application No. 4-05-151) also to be heard at the May 2006 Commission meeting, the applicant proposes to combine and resubdivide the seven parcels into four parcels (**Exhibit 15**).

The subject site contains extensive unpermitted physical development, including unpermitted grading; removal of major vegetation; placement of solid materials and erection of structures including, but not limited to: twenty-three trailers and/or mobile homes; four single-family residences; four areas with stables, barns, pens, and horses; two concrete structures; one large garage; seven storage sheds; one outhouse; one yurt; numerous storage containers; six lean-tos attached to trailers or motor homes; four wooden or metal fences; power transmission and distribution lines; telephone lines; numerous driveways and/or roads; pipes; abandoned vehicles including cars, boats, trucks, and buses; tents; trash (including five large deposit areas);

construction materials (including wood, metal, glass, and concrete materials); construction equipment including one bulldozer; and water wells and water tanks. Since 1992, the Commission has made efforts to address the unpermitted development on the subject site, through cease and desist orders and other enforcement action and litigation. An excerpt from the July 28, 2005 CDO and RO staff report, which details the history of violations on the subject property and related Commission action, is included as **Exhibit 6** of this report.

The subject site is characterized by mountainous terrain with elevations ranging from 1800 feet to 2200 feet above sea level (**Exhibit 12**). The site is accessible by a series of private, unpermitted dirt roads and McReynolds Road, which connects the south-east boundary of the property to Latigo Canyon Road. While scattered residential development is located south of the project site, the site is surrounded on the west, north, and east by the Castro Crest complex of the Santa Monica Mountains National Recreation Area. The site is visible from various public viewing points, including along the Backbone Trail, that afford scenic vistas of the relatively undisturbed natural area. The property is located within a wildlife corridor[3], and contains large, contiguous areas of chaparral and oak woodlands, as well as an intermittent blue-line stream, recognized by the United States Geological Survey (USGS), and associated riparian oak woodland habitat (**Exhibits 11, 12, 17, 18**). Commission staff biologist John Dixon has visited the site, most recently on August 22, 2005, and has confirmed that the chaparral and oak woodland habitat on the site is ESHA.

Extensive areas of the site have been cleared, graded and developed with mobile homes and other structures since 1977 without benefit of a coastal development permit. In addition, other areas of the site were cleared, graded and developed prior to 1977 without the required local approvals, and thus were determined by the Commission to be not vested in Vested Rights Determination No. V-4-97-1. The Commission also determined that a limited amount of development, including a water well and pump on Assessor's Parcel No. (APN) 4465-006-054, a 600 sq. ft. garage on APN 4464-024-020, a 384 sq. ft. single family residence, a 168 sq. ft. storage structure, and electrical facilities with valid permits serving permitted developments, was vested (**Exhibit 4**).

Aerial photographs from 1976 indicate that areas on the property that were subsequently cleared and developed consisted of native chaparral habitat, and in the south central portion of the site, oak woodland. It is reasonable to assume that areas cleared and graded prior to 1976 also consisted of native chaparral habitat and oak woodland. In determining the extent of ESHA on the subject site, the Commission must consider the condition of the subject site prior to any unpermitted or non-vested development. Thus, as described in greater detail below, the entire site, with the exception of the limited development determined to be vested by Vested Rights Determination No. V-4-97-1, is considered environmentally sensitive habitat.

<u>Previous Commission Action</u>

The Commission has previously approved two coastal development permits for subdivisions of two adjacent parcels. The subject project site includes portions of the adjacent parcels that were

[3] The Malibu/Santa Monica Mountains Land Use Plan designates certain areas as wildlife migration corridors, and considers them to be "Sensitive Environmental Resources".

considered by the Commission. On April 10, 1978, the Commission conditionally approved CDP No. P-2-17-78-2706, authorizing the subdivision of a 15.33-acre parcel identified into three, approximately 5-acre parcels (**Exhibit 2**). The Commission, to address its concerns regarding increased residential density on the parcels and in the surrounding area, imposed a special condition requiring recordation of a deed restriction limiting development on the parcels to one-single family residence per parcel, and prohibiting future subdivision of the parcels. The deed restriction was recorded on July 7, 1978.

Parcel Map No. 7155 was recorded pursuant to CDP No. P-2-17-78-2706, identifying three 5-acre parcels identified as APNs 4465-006-047, 4465-006-048, and 4465-006-049. A current Assessor's Parcel Map indicates that one of the original 5-acre parcels, APN 4465-006-048, has been illegally subdivided into two parcels: APN 4465-006-054, a 4.32-acre parcel; and 4465-006-055, a 0.14-acre parcel (**Exhibit 16**).

On March 12, 1980, Chris Brookes and Richard Brookes Jr. submitted CDP Application No. 5-82-377 to subdivide a 39.41-acre parcel, identified as APN 4464-024-004, into three 12-acre parcels and one 6-acre parcel. The 39.41-acre parcel was located immediately north of the 15.33-acre parcel that was subdivided pursuant to CDP No. P-2-17-78-2706. On August 25, 1982, the Commission approved CDP No. 5-82-377, with conditions, authorizing the subdivision of the parcel into three parcels, not the four that were proposed by the Brookes' (**Exhibit 3**). Parcel Map Waiver No. 7154 was recorded on March 8, 1984, in accordance with the CDP. A current Assessor's Parcel Map shows that, in addition to the three parcel-subdivision that was authorized under CDP No. 5-82-377, the original parcel, APN 4464-024-004, has been subject to three attempted unpermitted subdivisions, resulting in division of the original parcel into six parcels (**Exhibit 16**).

Commission staff first became aware of the presence of unpermitted development on the subject property on May 19, 1992. Subsequent site visits confirmed that, in addition to the unpermitted creation of lots described above, extensive physical development had been undertaken on the property and a search of Commission records concluded that no CDPs were obtained for the development. Since 1992, Commission staff has made efforts to address the unpermitted development through cease and desist orders and other enforcement action. In addition, on August 11, 1998, the Commission made a vested rights determination with regards to development on the property. The results of that determination are included as **Exhibit 4** of this report. In October 1998, the Commission, the applicant and landowner, Madalon Witter, and Douglas Richardson (who was at that time the property manager and a prior owner of the site) entered into a settlement agreement. The settlement agreement directed Ms. Witter and Mr. Richardson to file complete CDP applications to remove or retain the unpermitted development and to correct the unpermitted subdivision of the property. Ms. Witter submitted separate applications for a lot line adjustment and a restoration/development plan on October 29, 2002. The applications remained incomplete for almost a year, were not completed as required, and were ultimately returned to Ms. Witter on September 18, 2003.

Commission staff commenced cease and desist and restoration order proceedings in January 2005 in order to compel removal of the extensive unpermitted development on the property and restoration of the severely impacted and extremely valuable habitat on the property. The hearing on Cease and Desist Order (CDO) CCC-05-CD-08 and Restoration Order (RO) CCC-05-RO-05 was scheduled for the August 12, 2005 meeting; however, the hearing was postponed at the request of the applicant. An excerpt from the July 28, 2005 CDO and RO staff report, which details the history of violations on the subject property and related Commission action, is included as **Exhibit 6** of this report.

The applicant submitted the current applications on August 18, 2005. The hearing on the application was originally scheduled for the February 2006 Commission meeting, but was postponed at the applicant's request in order to allow the applicant additional time to review the staff recommendation. The January 27, 2006 staff report recommended denial of the proposed project, which, based on the applicant's submitted plans, appeared to entail identification of various areas of the project site for "vested area", "development area", and "restoration area", and retention of a significant amount of development, including grading, roads, several mobile homes and numerous other structures. On March 12, 2006, the applicant's representative, L. Peter Petrovsky, submitted a comment letter on the staff recommendation disputing the proposed project description that was presented in the report and other aspects of the staff recommendation. March 15, 2006, staff met for several hours with Mr. Petrovsky in order to clarify the proposed project description for the subject application and a parallel application for a lot line adjustment on the same property (CDP Application No. 4-05-151). Following the meeting, staff sent a letter to Mr. Petrovsky, dated March 23, 2006, requesting submittal of a revised, detailed project description and project plans for both the physical development proposed on the site, as well as clearly delineating the proposed new lot lines and incorporating all proposed changes no later than April 3, 2006. On April 18, 2006, staff received a revised plan for the subject application. The revised plan differs substantially from the previously submitted plan, as discussed elsewhere in this report, and, unlike the previous plan, has not been approved in concept by Los Angeles County. The revised plan is included as **Exhibit 13**.

B. CUMULATIVE IMPACTS

Sections 30250 and 30252 of the Coastal Act address the cumulative impacts of new developments. Section 30250 (a) of the Coastal Act states:

> ***(a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.***

Section 30252 of the Coastal Act states:

> ***The location and amount of new development should maintain and enhance public access to the coast by (l) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing non-automobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.***

Pursuant to Coastal Act Sections 30250 and 30252 cited above, new development raises issues relative to cumulative impacts on coastal resources. The Coastal Act requires that new development be permitted within, contiguous, or in close proximity to existing developed areas or, if outside such areas, only where public services are adequate and only where public access and coastal resources will not be cumulatively affected by such development. The basic goal of the Coastal Act is to concentrate development in or near developed areas able to accommodate it, thereby promoting infilling and avoiding sprawl into areas with significant resource value. The Commission has repeatedly emphasized the need to address the cumulative impacts of new development in the Malibu and Santa Monica Mountains area in past permit action. The Commission has also recognized that construction of additional dwelling units on a site where a primary residence exists intensifies the use of the subject parcel. The intensified use creates additional demands on public services, such as water, sewage, electricity, and roads. Thus, additional dwelling units pose potential cumulative impacts in addition to the impacts otherwise caused by the primary residential development.

Based on the requirements of Coastal Act Section 30250 and 30252, the Commission has limited the development of additional dwelling units on residential parcels in the Malibu and Santa Monica Mountain areas to one second unit per parcel with a maximum of 750 sq. ft. habitable interior square footage. In addition, the issue of additional units on lots with primary residences has been the subject of past Commission action in certifying the Malibu/Santa Monica Mountains Land Use Plan (LUP). In its review and action on the LUP, the Commission found that placing an upper limit on the size of second units (750 sq. ft.) was necessary given the traffic and infrastructure constraints which exist in Malibu and given the abundance of existing vacant residential lots. Furthermore, in allowing these small units, the Commission found that the small size of units (750 sq. ft.) and the fact that they are likely to be occupied by one, or at most two people, such units would have less impact on the limited capacity of Pacific Coast Highway and other roads (as well as infrastructure constraints such as water, sewage, and electricity) than an ordinary single family residence.

The additional dwelling unit issue has also been raised by the Commission with respect to statewide consistency of both coastal development permits and Local Coastal Programs (LCPs). Statewide, additional dwelling units on single family parcels take on a variety of different forms which in large part consist of: 1) a second unit with kitchen facilities including a granny unit, caretaker's unit, or farm labor unit; and 2) a guesthouse, with or without separate kitchen facilities. Past Commission action has consistently found that both second units and guest houses inherently have the potential to cumulatively impact coastal resources. Thus, conditions on coastal development permits and standards within LCP's have been required to limit the size and number of such units to ensure consistency with Chapter Three policies of the Coastal Act in this area.

The land use designations of the certified Malibu/Santa Monica Mountains LUP provide guidance on the maximum allowable density and intensity of land use that may be permitted in any particular area. The LUP assigns three density categories for the proposed project site: Mountain Land, which allows one dwelling unit for twenty acres of land; Rural Land I, which allows one dwelling unit for ten acres of land; and Rural Land II which allows one dwelling unit for five acres of land. The land use designations criss-cross the entire property; therefore each proposed new parcel contains more than one land use designation. Approximately 23 acres of the approximately 45-acre property is designated as Mountain Land; approximately 8 acres is designated as Rural Land 1; and approximately 14 acres is designated as Rural Land II. Based

on these designations, the LUP would allow a maximum of four units on the property.[4] The applicant proposes a lot combination and resubdivision that would result in four parcels.

In addition to the base land use designations, the project site is also designated as a wildlife corridor in the LUP, and is thus subject to a sensitive environmental resource area overlay. The wildlife corridor overlay restricts grading and vegetation removal on each parcel to

> ***That necessary to accommodate the residential unit, garage, and one other structure, once access road and minimum brush clearance required by the Los Angeles County Fire Department…The standard for a graded building pad shall be a maximum of 10,000 square feet.***

The overlay also stipulates that

- ***Structures shall be clustered to minimize the effects on sensitive environmental resources***
- ***Structures shall be located as close to the periphery of the designated (area) a feasible, or in any location in which it can be demonstrated that the effects of development will be less environmentally damaging.***
- ***Structures and uses shall be located as close as possible to existing roadways and other services to minimize the construction of new infrastructure.***
- ***New on-site access roads shall be limited to a maximum length of 300 feet or one-third of the parcel depth, whichever is smaller. Greater lengths may be allowed provided that the County Engineer and Environmental Review Board determine that there is not an acceptable alternative and that a significant impact willl not be realized and shall constitute a conditional use.***
- ***The cleared area shall not exceed 10% of the area excluding access roads.***
- ***Site grading shall be accomplished in accordance with stream protection and erosion control policies.***
- ***Designated environmentally sensitive streambeds shall not be filled. Any crossings should be accomplished by a bridge.***
- ***Approval of development shall be subject to review by the Environmental Review Board.***

The number of unpermitted structures and roads and the amount of cleared and disturbed ground on the project site greatly exceeds the density and intensity of development allowed by the LUP, and is not consistent with the development standards required by the LUP in designated wildlife corridors. As discussed in detail above, while the applicant's proposal contains some components, such as the removal of unpermitted dwellings and water lines, that are likely consistent with Section 32050(a), the proposed project does not sufficiently address the totality of unpermitted development on the site, and its impacts on coastal resources. In addition, the proposed project does not include measures to adequately address the extensive impacts to ESHA, water quality, and public views that have resulted from the unpermitted development on the site. It is important to emphasize that the baseline for evaluating the proposed project is not the existing condition of the subject property, but its condition prior to the

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[4] It is important to note, however, that the boundary of the property, prior to the unpermitted subdivisions, included a fifth approximately 9,300 sq. ft. lot, identified by the County as APN 4464-024-019, which is under separate ownership and is not included in this application. This parcel was not authorized in a coastal development permit, and contains a portion of a residential structure located on the parcel immediately south. Development on the property identified by the County as APN 4464-024-019 is not addressed in this permit application.

extensive unpermitted grading, vegetation clearance, construction, and placement of structures on the site. Given that the proposed project poorly defines the amount, location, and extent of development to be removed, and contains no viable proposal for restoration of the extensive graded and cleared areas on the site, approval of the proposed project would thus permit an undefined amount of unpermitted development on the site, including, at a minimum, removal of vegetation and grading within ESHA.

Furthermore, alternatives exist to the proposed project that would minimize landform alteration and visual impacts. One alternative is a proposal that would, in unambiguous terms, include removal of all unpermitted structures on the site, and a detailed restoration plan. The restoration plan would include a restorative grading plan and a revegetation plan, with performance standards and a monitoring program, that would ensure the successful restoration of native chaparral, oak woodland, and riparian habitat in all disturbed areas outside of a clearly defined access road and pad area for the vested development on site. The alternative proposal could also include plans for clustered development areas (no greater than 10,000 sq. ft.) on all legal parcels, each containing one single family residence, garage, and one additional structure, consistent with local and Coastal development permitting requirements.

As such, the Commission finds that the proposed project will not minimize cumulative impacts to coastal resources and is therefore inconsistent with Section 30250(a) of the Coastal Act.

C. ENVIRONMENTALLY SENSITIVE HABITAT AREAS

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 require that the biological productivity and the quality of coastal waters and streams be maintained and, where feasible, restored through among other means, minimizing adverse effects of waste water discharge and entrainment, 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 or especially valuable?
2) Does the habitat or species have a 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 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 1**, 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 LCP[5].

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 coast[6]. Coast live oak also occurs as a

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[5] Revised Findings for the City of Malibu Local Coastal Program (as adopted on September 13, 2002) adopted on February 6, 2003.
[6] NPS 2000. op. cit.

riparian corridor species within the Santa Monica Mountains. The important ecosystem functions of oak woodlands and savanna are widely recognized[7]. These habitats support a high diversity of birds[8], and provide refuge for many species of sensitive bats[9]. 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.

The subject property is an approximately 45.31-acre site in the Santa Monica Mountains area of unincorporated Los Angeles County. The site is characterized by mountainous terrain with elevations ranging from 1800 feet to 2200 feet above sea level. The site is accessible by a series of private, unpermitted dirt roads and McReynolds Road, which connects the south-east boundary of the property to Latigo Canyon Road. While scattered residential development is located south of the project site, the site is surrounded on the west, north, and east by the Castro Crest complex of the Santa Monica Mountains National Recreation Area.

The property is located within a wildlife corridor[10], and contains large, contiguous areas of chaparral and oak woodlands, as well as an intermittent blue-line stream, recognized by the United States Geological Survey (USGS), and its associated riparian oak woodland habitat. Commission staff biologist John Dixon has visited the site, most recently on August 22, 2005, and has confirmed that the chaparral and oak woodland habitat on the site is ESHA.

Extensive areas of the site have been cleared, graded and developed with mobile homes and other structures since 1977 without benefit of a coastal development permit. In addition, significant portions of the site were cleared, graded and developed prior to 1977 without the required local approvals, and thus were determined by the Commission to be not vested in Vested Rights Determination No. V-4-97-1. The Commission did, however, determine that a limited amount of development, including a water well and pump on Assessor's Parcel No. (APN) 4465-006-054, a 600 sq. ft. garage on APN 4464-024-020, a 384 sq. ft. single family residence, a 168 sq. ft. storage structure, and electrical facilities with valid permits serving permitted developments, was vested.

Aerial photographs from 1976 indicate that areas on the property that were subsequently cleared and developed consisted of native chaparral habitat, and in the south central portion of the site, oak woodland. It is reasonable to assume that areas cleared and graded without permits prior to 1976 also consisted of native chaparral habitat and oak woodland. In determining the extent of ESHA on the subject site, the Commission must consider the condition of the subject site prior to any unpermitted or non-vested development. Thus, the entire site,

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[7] 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.

[8] 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

[9] 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.

[10] The Malibu/Santa Monica Mountains Land Use Plan designates certain areas as wildlife migration corridors, and considers them to be "Sensitive Environmental Resources".

with the exception of the limited development determined to be vested by Vested Rights Determination No. V-4-97-1, is considered environmentally sensitive habitat.

Therefore, due to the important ecosystem roles of oak woodland and chaparral in the Santa Monica Mountains (detailed in **Exhibit 1**), and the fact that the subject site is (with the exception of unpermitted or non-vested development) relatively undisturbed and part of a large, unfragmented block of habitat, the Commission finds that the chaparral and oak woodland habitat on and surrounding the subject site, including such habitat that has been removed or impacted by the above-described unpermitted and non-vested development, meets the definition of ESHA under the Coastal Act.

The applicant's proposal is intended to address matters concerning the unpermitted development, as identified in Section 4.1 of a 1998 settlement agreement between the Commission and the applicant. There are several components to the applicant's proposal, some of which are straightforward and others of which are more oblique. For instance, it is clear that the applicant requests approval for removal of all (approximately 25) unpermitted mobile homes, trailers and similar dwellings, and removal of any unpermitted water lines and systems. However, it is unclear whether the applicant proposes to remove the remainder of development on site. Non-habitable structures, such as the various sheds, storage containers, lean-tos, construction materials and equipment, vehicles, fences, and trash are not addressed. In addition, the proposed project description states that the applicant does not seek authorization for any existing animal facilities or new water tank sites, but does not indicate whether the applicant proposes to remove such facilities.

In addition, the site plan (**Exhibit 13**) accompanying the project description does not clearly depict the applicant's proposal. Specifically, the plan shows existing roads and pads, all of which, according to the project description, the applicant proposes to remove; the plan also shows vested structures that the applicant intends to retain, and identifies several unpermitted structures as "existing" development in the same manner as the vested structures. Specifically, the plan shows existing roads and pads, and identifies two existing wells, two existing electrical poles, and an existing house, garage, and concrete structure. The plan shows symbols for four additional electrical poles and an additional well, but does not label them as such. The existing garage shown on the plan was determined to be vested under Claim of Vested Rights No. VR-4-97-1 (Witter), and it is likely that the house and concrete structure are those that were found to be vested under VR-4-97-1, but whose location was unknown at that time. The well that was determined to be vested under VR-4-97-1 is shown but not labeled on the plan; the two existing wells identified on the plan are not vested. The plan does not show how the existing electrical poles serve the vested development, and therefore it must be assumed that those poles also are not vested. It is unclear whether the applicant seeks after-the-fact approval for the unpermitted wells and electrical facilities shown on the plan. The proposed development plan does not show the location of the existing unpermitted septic systems, water lines and water systems, mobile homes and other dwellings to be removed.

Lastly, the project description states that the applicant will perform "restoration to the extent reasonably feasible of all graded areas that are not specifically permitted or linked to a permitted or vested use, by some form of vegetation." However, the proposed removal and revegetation of existing roads and pads is not identified on the plan, and the extent of such removal and revegetation, particularly in the area of vested development, is unclear. Furthermore, no restoration plan has been submitted, and the proposed method of restoration is not clearly stated. Specifically, the project description states that "In February 2000 applicant submitted report supporting a proposition that natural revegetation was the most appropriate

method to restore graded areas…If some other reasonably feasible vegetation is recommended (than natural form of vegetation) by the CCC staff, applicant will study and plant such reasonably feasible vegetation." The Commission finds that unaided regrowth of vegetation is not likely to result in restoration of native habitat in these circumstances, particularly given that the subject areas have been graded, maintained in a disturbed state, and exposed to non-native plant materials and the applicant does not propose any removal of non-native vegetation or planting of native vegetation. Thus the applicant's proposed restoration plan is inconsistent with Section 30240. Further, although the Commission can in some instances impose conditions that make an inadequate restoration plan consistent with the Coastal Act, the Commission cannot impose a condition that completely designs the restoration plan for the applicant.

In summary, while the applicant's proposal contains some components, such as the removal of unpermitted dwellings and water lines, that are likely consistent with the ESHA protection policies of the Coastal Act, the proposed project does not sufficiently address the totality of unpermitted development on the site, and its impacts on ESHA. In addition, the proposed project does not include measures to adequately address the extensive damage to ESHA that has resulted from the unpermitted development on the site. It is important to emphasize that the baseline for evaluating the proposed project is not the existing condition of the subject property, but its condition prior to the extensive unpermitted grading, vegetation clearance, construction, placement of structures, and sewage disposal on the site. Given that the proposed project poorly defines the amount, location, and extent of development to be removed, and contains no viable proposal for restoration of the extensive graded and cleared areas on the site, approval of the proposed project would thus permit an undefined amount of unpermitted development on the site, including, at a minimum, removal of vegetation and grading within ESHA. Approval of such development would be inconsistent with Section 30240.

As explained above, the project site and the surrounding area (with the exception of the limited development determined to be vested by Vested Rights Determination No. V-4-97-1,) constitutes an environmentally sensitive habitat area (ESHA) pursuant to Section 30107.5. Section 30240 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 within ESHA to only those uses that are dependent on the resource. As described above, the applicant's proposal involves, at a minimum, removal of vegetation and grading within ESHA. As these forms of development do not have to be located within ESHA to function, the Commission does not consider them to be uses dependent on ESHA resources. Application of Section 30240, by itself, would require denial of the applicant's proposal, because such development would result in significant disruption of habitat values and would not be a use dependent on those sensitive habitat resources.

In addition, the applicant includes in the proposal a statement that she is entitled to "dwellings on legal parcels," but does not include specific development proposals for any dwellings, with the exception of an existing house, which is most likely the vested single family residence noted above.

As noted above, the baseline for evaluating the proposed project is not the existing condition of the subject property, but its condition prior to the extensive unpermitted grading, vegetation clearance, construction, placement of structures, and sewage disposal on the site. Thus the proposed project must demonstrate that it adequately removes all unpermitted development and restores the topography (to the maximum extent feasible) and native plant communities that existed prior to the unpermitted clearance and grading. Any failure to do so must be interpreted

as a request for after-the-fact approval for the unpermitted development and its associated impacts on ESHA.

The proposed project poorly defines the amount, location, and extent of development to be removed, and contains no viable proposal for restoration of the extensive graded and cleared areas on the site. Approval of the proposed project would thus permit an undefined amount of unpermitted development on the site, including, at a minimum, removal of vegetation and grading within chaparral, oak woodland, and riparian ESHA.

Development within the oak woodlands can have significant impacts on individual oaks and to an woodland as a whole. In past permit actions, the Commission has recognized the importance of the habitat area provided by oak woodlands or savannas. Oak woodlands, and often associated riparian areas, have been identified as extremely important to the fish and wildlife resources of California. They are recognized for supporting a wide variety of wildlife species by providing food, nesting, and roosting cover, and in many instances, important understory vegetation. In addition, hardwoods benefit fishery resources by preventing the erosion of hillsides and stream banks, moderating water temperatures by shading, and contributing nutrients and food-chain organisms to waterways (California Department of Fish and Game, Hardwood Policies, 1985).

Oaks are easily damaged and are very sensitive to disturbances that occur to the tree or the surrounding environment. Their 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 (Los Angeles County Regional Planning Oak Tree Ordinance).

Further, removal of chaparral habitat results not only in direct loss of habitat value through removal of the vegetation cover, but also in fragmentation of the habitat when such removal occurs throughout a large area, as on the project site. Fragmentation reduces the value of the remaining undisturbed ESHA for animals and birds on the site, and in designated wildlife migration corridors, such as the project site, can reduce wildlife corridor functions. The numerous graded pads as well as the roads that criss-cross the site fragment the remaining ESHA on the site and limit wildlife migration. In addition, the grading and disturbance of large areas of the project sites exposes a huge area to erosion. As discussed in detail below, the removal of native vegetation and the grading or disturbance of soils on the site significantly increases the amount of soil erosion, leading to the sedimentation of the blue-line stream on the site and coastal waters downstream, including other streams and ultimately the ocean.

Obviously, native vegetation that is cleared or substantially removed and widely spaced will be lost as habitat and watershed cover. For example, undisturbed coastal sage scrub and chaparral vegetation typical of coastal canyon slopes, and the downslope riparian corridors of the canyon bottoms, ordinarily contains a variety of tree and shrub species with established root systems. Depending on the canopy coverage, these species may be accompanied by understory species of lower profile. The established vegetative cover, including the leaf detritus and other mulch contributed by the native plants, slows rainfall runoff from canyon slopes and staunches silt flows that result from ordinary erosional processes. The native vegetation thereby limits the intrusion of sediments into downslope creeks. Accordingly, disturbed slopes where vegetation is either cleared or thinned are more directly exposed to rainfall runoff that can therefore wash canyon soils into down-gradient creeks. The resultant erosion reduces topsoil

and steepens slopes, making revegetation increasingly difficult or creating ideal conditions for colonization by invasive, non-native species that supplant the native populations.

The cumulative loss of habitat cover also reduces the value of the sensitive resource areas as a refuge for birds and animals, for example by making them—or their nests and burrows—more readily apparent to predators. The impacts of vegetation 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 (mourning dove, American crow, Western scrub-jay, Northern mockingbird)[11]. 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 vegetation 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 chaparral[12].

As noted above, a significant portion of the subject property has been subject to unpermitted vegetation clearance and grading. The applicant proposes to perform "restoration to the extent reasonably feasible of all graded areas that are not specifically permitted or linked to a permitted or vested use, by some form of vegetation." However, the proposed removal and revegetation of existing roads and pads is not identified on the plan, and the extent of such removal and revegetation, particularly in the area of vested development, is unclear. Furthermore, no restoration plan has been submitted, and the proposed method of restoration is not clearly stated. Specifically, the project description states that "In February 2000 applicant submitted report supporting a proposition that natural revegetation was the most appropriate method to restore graded areas…If some other reasonably feasible vegetation is recommended (than natural form of vegetation) by the CCC staff, applicant will study and plant such reasonably feasible vegetation." The Commission finds that unaided regrowth of vegetation is not likely to result in restoration of native habitat in these circumstances, particularly given that the subject areas have been graded and invaded by non-native plant materials and the applicant does not propose any removal of non-native vegetation or planting of native vegetation. Further, although in some instances the Commission can impose a special condition that makes an inadequate restoration plan consistent with Section 30240, the Commission cannot completely design a restoration plan for the applicant. Because the proposed project does not demonstrate that it will adequately restore the extensive areas of unpermitted grading and vegetation clearance on the subject site, approval of the proposed project would entail approval of the unpermitted grading and vegetation clearance and would be inconsistent with Section 30240.

In addition, while the applicant requests approval for removal of all (approximately 25) unpermitted mobile homes, trailers and similar dwellings, and removal of any unpermitted water lines and systems, it is unclear whether the applicant proposes to remove the remainder of

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[11] 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.
[12] 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.

development on site. Non-habitable structures, such as the various sheds, storage containers, lean-tos, construction materials and equipment, vehicles, fences, and trash are not addressed. In addition, the proposed project description states that the applicant does not seek authorization for any existing animal facilities or new water tank sites, but does not indicate whether the applicant proposes to remove such facilities. These unpermitted structures may be subject to brush clearance requirements. An officer of the Los Angeles County Agricultural Commissioner/Weights and Measures Department Weed Abatement Division recently informed staff that the Brush Clearance Unit of the Los Angeles County Fire Department has issued a notice of 410B Violation for failure to conduct brush clearance on the subject property for fire safety purposes. Staff informed the officer that the majority of structures on the site were unpermitted and that a permit application regarding those structures was to be heard at the February meeting. To staff's knowledge, the unit has postponed clearance of the property until a decision is made on this application.

In conclusion, while the applicant's proposal contains some components, such as the removal of unpermitted dwellings and water lines, that are likely consistent with the ESHA protection policies of the Coastal Act, the proposed project does not sufficiently address the totality of unpermitted development on the site, and its impacts on ESHA. In addition, the proposed project does not include measures to adequately address the extensive damage to ESHA that has resulted from the unpermitted development on the site. It is important to emphasize that the baseline for evaluating the proposed project is not the existing condition of the subject property, but its condition prior to the extensive unpermitted grading, vegetation clearance, construction, placement of structures, and sewage disposal on the site. Given that the proposed project poorly defines the amount, location, and extent of development to be removed, and contains no viable proposal for restoration of the extensive graded and cleared areas on the site, approval of the proposed project would thus permit an undefined amount of unpermitted development on the site, including, at a minimum, removal of vegetation and grading within ESHA.

Furthermore, there are alternatives to the proposed project, including a proposal that would, in unambiguous terms, include removal of all unpermitted structures on the site, and a detailed restoration plan. The restoration plan would include a restorative grading plan and a revegetation plan, with performance standards and a monitoring program, that would restore native chaparral, oak woodland, and riparian habitat in all disturbed areas outside of a clearly defined access road and pad area for the vested development on site. The alternative proposal could also include plans for clustered development areas (no greater than 10,000 sq. ft.) on all legal parcels, each containing one single family residence, garage, and one additional structure, consistent with local and Coastal development permitting requirements.

Therefore, the Commission finds that there are feasible alternatives to the proposed project that would substantially reduce adverse effects on ESHA. As such, the Commission finds that the proposed development will not minimize impacts to ESHA and is therefore inconsistent with Sections 30231 and 30240 of the Coastal Act.

D. WATER QUALITY

Section 30230 of the Coastal Act states:

> *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 of the Coastal Act 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.*

Non-point source pollution is the pollution of coastal waters (including streams and underground water systems), by numerous sources that are difficult to identify on an individual basis. Non-point source pollutants include suspended solids, coliform bacteria and nutrients. These pollutants can originate from many different sources such as overflow septic systems, storm drains, runoff from roadways, driveways, rooftops and horse facilities. In addition, erosion can result in sedimentation of coastal waters.

The project site is located on mountainous terrain near Latigo Canyon Road in the Santa Monica Mountains. The site is located within the upper Escondido Canyon watershed. A United States Geological Survey (USGS)-designated intermittent blue-line stream that is tributary to Escondido Creek, crosses the southern portion of the project site. The stream is located within a riparian oak woodland. Drainage over the entire property is by sheet flow runoff.

The applicant's proposal is intended to address matters concerning the unpermitted development, as identified in Section 4.1 of a 1998 settlement agreement between the Commission and the applicant. The unpermitted development includes graded pads, roads, vegetation clearance, construction and placement of numerous structures, makeshift sewage disposal systems, and confined animal facilities, some of which are located within a riparian oak woodland. Although it is clear that the applicant requests approval for removal of all (approximately 25) unpermitted mobile homes, trailers and similar dwellings, it is unclear whether the applicant proposes to remove the remainder of unpermitted development on site, including non-habitable structures such as the various sheds, storage containers, lean-tos, construction materials and equipment, vehicles, fences, and trash on the site. In addition, the proposed project description states that the applicant does not seek authorization for any existing animal facilities, but does not indicate whether the applicant proposes to remove such facilities.

Several unpermitted mobile homes and single-family residential structures on the site contain plumbing fixtures that discharge into the ground without benefit of septic systems. The applicant proposes to remove "any known septic system to the extent reasonably feasible." The site plan accompanying the project description does not clearly depict the applicant's proposal, and does not show the location of existing unpermitted septic systems to be removed.

As noted above, the baseline for evaluating the proposed project is not the existing condition of the subject property, but its condition prior to the extensive unpermitted grading, vegetation clearance, construction, placement of structures, and sewage disposal on the site. Thus the proposed project must demonstrate that it adequately removes all unpermitted development and

restores the topography (to the maximum extent feasible) and native plant communities that existed prior to the unpermitted clearance and grading. Any failure to do so must be interpreted as a request for after-the-fact approval for the unpermitted development and its associated impacts on water quality. Given that the proposed project poorly defines the amount, location, and extent of development to be removed, and contains no viable proposal for restoration of the extensive graded and cleared areas on the site, approval of the proposed project would thus permit an undefined amount of unpermitted development on the site, including, at a minimum, removal of vegetation and grading within ESHA, and potentially additional impervious surfaces, makeshift sewage disposal systems, and confined animal facilities.

Confined animal facilities, such as those on the project site, are one of the most recognized sources of non-point source pollutants since these types of developments are cleared of vegetation and have concentrated sources of animal wastes. Use of horse corrals generates horse wastes, which includes manure, urine, waste feed, and straw, shavings and/or dirt bedding which can be significant contributors to pollution. In addition, horse wastes contain nutrients such as phosphorous and nitrogen as well as microorganisms such as coliform bacteria which can cause eutrophication and a decrease in oxygen levels resulting in clouding, algae blooms, and other impacts affecting the biological productivity of coastal waters.

An increase in impervious surface at the subject site decreases the infiltrative function and capacity of existing permeable land on site, therefore leading to an increase in the volume and velocity of stormwater runoff that can be expected to leave the site. Further, pollutants commonly found in runoff associated with residential use include petroleum hydrocarbons such as oil and grease from vehicles; heavy metals; synthetic organic chemicals including paint and household cleaners; soap and dirt from washing vehicles; dirt and vegetation from yard maintenance; litter; fertilizers, herbicides, and pesticides; and bacteria and pathogens from animal waste.

When the pollutants are swept into coastal waters by storm water or other means, they can cause cumulative impacts such as: eutrophication and anoxic conditions resulting in fish kills and diseases and the alteration of aquatic habitat, including adverse changes to species composition and size; excess nutrients causing algae blooms and sedimentation increasing turbidity, which both reduce the penetration of sunlight needed by aquatic vegetation that provide food and cover for aquatic species; disruptions to the reproductive cycle of aquatic species; acute and sublethal toxicity in marine organisms leading to adverse changes in reproduction and feeding behavior; and human diseases such as hepatitis and dysentery. These impacts reduce the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes and reduce optimum populations of marine organisms and have adverse impacts on human health.

As noted above, a significant portion of the subject property has been subject to unpermitted vegetation clearance and grading. The applicant proposes to perform “restoration to the extent reasonably feasible of all graded areas that are not specifically permitted or linked to a permitted or vested use, by some form of vegetation.” However, the proposed removal and revegetation of existing roads and pads is not identified on the plan, and the extent of such removal and revegetation, particularly in the area of vested development, is unclear. Furthermore, no restoration plan has been submitted, and the proposed method of restoration is not clearly stated. Specifically, the project description states that “In February 2000 applicant submitted report supporting a proposition that natural revegetation was the most appropriate method to restore graded areas…If some other reasonably feasible vegetation is recommended (than natural form of vegetation) by the CCC staff, applicant will study and plant such

reasonably feasible vegetation." Staff notes that unaided regrowth of vegetation is not an activity that requires a coastal development permit; neither is it an activity that is likely to result in restoration of native habitat, particularly given that the subject areas have been graded and exposed to non-native plant materials and the applicant does not propose any removal of non-native vegetation or planting of native vegetation. Staff further notes that the basic outline of a restoration proposal, including a map of the areas to be restored, must be submitted by the applicant; while staff can recommend imposition of a special condition that requires the restoration plan to meet specific requirements, staff cannot recommend a condition that designs the restoration plan for the applicant. Because the proposed project does not demonstrate that it will adequately restore the extensive areas of unpermitted grading and vegetation clearance on the subject site, approval of the proposed project would entail approval of the unpermitted grading and vegetation clearance.

Removal of vegetation can result in increased erosion. Removal of vegetation exposes soils to erosion by wind, water, and human disturbance, and removes the root network that holds surface sediments in place. This is particularly true for areas containing native plant species, which are typically characterized by well-developed and extensive root structures in comparison to their surface/foliage weight. As noted above, one of the most important ecological functions of chaparral is to protect water quality in coastal streams by reducing erosion in the watershed. Although shallow rooted, the shrubs that define chaparral 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.

Erosion adjacent to streams can result in increased sedimentation, thereby reducing the biological productivity and quality of coastal waters. Surface soil erosion has been established by the United States Department of Agriculture, Natural Resources Conservation Service, as a principal cause of downstream sedimentation known to adversely affect riparian and marine habitats. Suspended sediments have been shown to absorb nutrients and metals, in addition to other contaminants, and transport them from their source throughout a watershed and ultimately into the Pacific Ocean. The construction of single family residences in sensitive watershed areas has been established as a primary cause of erosion and resultant sediment pollution in coastal streams. In this case, the extent of development, including the clearance of vegetation and the exposure of bare soils on the project sites is greatly in excess of the extent of development associated with a single family residence on each parcel.

As discussed above, the discharge of pollutants, including sediment, can cause significant negative impacts to streams. Unpermitted development on the site includes an extensive dirt road network, numerous graded pads, and horse facilities, as well as plumbing that discharges into the ground without benefit of septic systems. Approximately five acres of the existing unpermitted development is located inside, or within 100 feet of the canopy, of a riparian oak woodland surrounding a U.S.G.S. designated blue-line stream. Section 30231 requires maintenance of natural vegetation buffer areas that protect riparian habitats, and minimal alteration of natural streams. The Commission has consistently required development to be located no closer than 100 feet from riparian ESHA, in order to protect the biological integrity of the ESHA, provide space for transitional vegetated buffer areas, minimize human intrusion, and protect the quality of coastal waters consistent with Sections 30231 and 30240 of the Coastal Act.

As discussed in detail above, while the applicant's proposal contains some components, such as the removal of unpermitted dwellings and water lines, that are likely consistent with the water quality protection policies of the Coastal Act, the proposed project does not sufficiently address

the totality of unpermitted development on the site, and its impacts on water quality. In addition, the proposed project does not include measures to adequately address the extensive water quality impacts that have resulted from the unpermitted development on the site. It is important to emphasize that the baseline for evaluating the proposed project is not the existing condition of the subject property, but its condition prior to the extensive unpermitted grading, vegetation clearance, construction, and placement of structures on the site. Given that the proposed project poorly defines the amount, location, and extent of development to be removed, and contains no viable proposal for restoration of the extensive graded and cleared areas on the site, approval of the proposed project would thus permit an undefined amount of unpermitted development on the site, including, at a minimum, removal of vegetation and grading within ESHA.

Thus the proposed project must demonstrate that it adequately removes all unpermitted development and restores the topography (to the maximum extent feasible) and native plant communities that existed prior to the unpermitted clearance and grading. Any failure to do so must be interpreted as a request for after-the-fact approval for the unpermitted development and its associated impacts on water quality. Given that the proposed project poorly defines the amount, location, and extent of development to be removed, and contains no viable proposal for restoration of the extensive graded and cleared areas on the site, approval of the proposed project would thus permit an undefined amount of unpermitted development on the site, including, at a minimum, removal of vegetation and grading within ESHA, including within a riparian ESHA, and potentially including an increase in impervious surfaces, makeshift sewage disposal systems, and confined animal facilities.

Furthermore, alternatives exist to the proposed project that minimize water quality impacts. One alternative is a proposal that would, in unambiguous terms, include removal of all unpermitted structures on the site, and a detailed restoration plan. The restoration plan would include a restorative grading plan and a revegetation plan, with performance standards and a monitoring program, that would restore native chaparral, oak woodland, and riparian habitat in all disturbed areas outside of a clearly defined access road and pad area for the vested development on site. The alternative proposal could also include plans for clustered development areas (no greater than 10,000 sq. ft.) on all legal parcels, each containing one single family residence, garage, and one additional structure, consistent with local and Coastal development permitting requirements.

In summary, the proposed development does not maintain and restore biological productivity and water quality of coastal waters. Therefore, the proposed development is inconsistent with Sections 30230 and 30231 of the Coastal Act.

E. VISUAL RESOURCES

Section 30251 of the Coastal Act states:

> ***The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline reservation and Recreation Plan***

prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Section 30251 of the Coastal Act requires scenic and visual qualities to be considered and preserved. In addition, the following policies of the Malibu-Santa Monica Mountains Land Use Plan (LUP) provide guidance:

P125 New development shall be sited and designed to protect public views from LCP-designated scenic highways to and along the shoreline and to scenic coastal areas, including public parklands. Where physically and economically feasible, development on sloped terrain should be set below road grade.

P130 In highly scenic areas, and along scenic highways, new development (including buildings, fences, paved areas, signs, and landscaping) shall:

- ***be sited and designed to protect views to and along the ocean and to and along other scenic features, as defined and identified in the Malibu LCP.***
- ***minimize the alteration of natural landforms***
- ***be landscaped to conceal raw-cut slopes***
- ***be visually compatible with and subordinate to the character of its setting***
- ***be sited so as not to significantly intrude into the skyline as seen from public viewing places***

P131 Where feasible, prohibit placement of structures that will break the ridgeline view, as seen from public places.

P137 Clustering of development in suitable areas shall be encouraged as a means to facilitate greater view protection.

The subject site is located within a rural area characterized by expansive, naturally vegetated mountains and hillsides. While scattered residential development is located south of the project site, the site is surrounded on the west, north, and east by the Castro Crest complex of the Santa Monica Mountains National Recreation Area. The project site is visible from various public viewing points, including along the Backbone Trail, that afford scenic vistas of the relatively undisturbed natural area. The scenic nature of the area is reflected in the certified Malibu-Santa Monica Mountains Land Use Plan (LUP), which designates several ridgelines in the area, including the Castro Crest and a lower ridgeline that crosses the northern portion of the site, as scenic ridgelines.

The applicant's proposal is intended to address matters concerning the unpermitted development, as identified in Section 4.1 of a 1998 settlement agreement between the Commission and the applicant. The unpermitted development, including graded pads, roads, vegetation clearance, and construction and placement of numerous structures on the subject site, is visible from nearby trails and public land. In addition, a considerable amount of landform alteration has occurred to construct the numerous roads and pads in the mountainous terrain on site. No calculation of all of the unpermitted grading exists; however, approximately 25 acres of clearance and disturbance has occurred on the subject property.

As discussed in detail above, while the applicant's proposal contains some components, such as the removal of unpermitted dwellings and water lines, that are likely consistent with the visual

resource protection policies of the Coastal Act, the proposed project does not sufficiently address the totality of unpermitted development on the site, and its impacts on visual resources. In addition, the proposed project does not include measures to adequately address the extensive visual impacts that have resulted from the unpermitted development on the site. It is important to emphasize that the baseline for evaluating the proposed project is not the existing condition of the subject property, but its condition prior to the extensive unpermitted grading, vegetation clearance, construction, and placement of structures on the site. Given that the proposed project poorly defines the amount, location, and extent of development to be removed, and contains no viable proposal for restoration of the extensive graded and cleared areas on the site, approval of the proposed project would thus permit an undefined amount of unpermitted development on the site, including, at a minimum, removal of vegetation and grading within ESHA.

Furthermore, alternatives exist to the proposed project that minimize landform alteration and visual impacts. One alternative is a proposal that would, in unambiguous terms, include removal of all unpermitted structures on the site, and a detailed restoration plan. The restoration plan would include a restorative grading plan and a revegetation plan, with performance standards and a monitoring program, that would restore native chaparral, oak woodland, and riparian habitat in all disturbed areas outside of a clearly defined access road and pad area for the vested development on site. The alternative proposal could also include plans for clustered development areas (no greater than 10,000 sq. ft.) on all legal parcels, each containing one single family residence, garage, and one additional structure, consistent with local and Coastal development permitting requirements.

In summary, the proposed development does not protect visual resources and minimize landform alteration. Therefore, approval of the unpermitted development, as proposed, is inconsistent with Section 30251 of the Coastal Act.

F. VIOLATION

Development has occurred on the subject site without the required coastal development permit, including, but not limited to, unpermitted grading; removal of major vegetation; attempted subdivisions; placement of solid materials and erection of structures including, but not limited to: twenty-three trailers and/or mobile homes; four single-family residences; four areas with stables, barns, pens, and horses; two concrete structures; one large garage; seven storage sheds; one outhouse; one yurt; numerous storage containers; six lean-tos attached to trailers or motor homes; four wooden or metal fences; power transmission and distribution lines; telephone lines; numerous driveways and/or roads; pipes; abandoned vehicles including cars, boats, trucks, and buses; tents; trash (including five large deposit areas); construction materials (including wood, metal, glass, and concrete materials); construction equipment including one bulldozer; water wells and water tanks. The unpermitted development occurred prior to submission of this permit application. A separate permit application, CDP Application No. 4-05-151 (Witter), addresses the unpermitted subdivisions.

The applicant is requesting approval for a development plan for the subject property, including removal of all (approximately 25) unpermitted mobile homes, trailers and similar dwellings; restoration of unpermitted graded pads and roads by “natural vegetation” or “some reasonably feasible vegetation”; elimination and restoration of any unpermitted septic or sewage disposal sites for non-vested development “to the extent reasonably feasible”; and removal of any

unpermitted water lines and systems. As discussed above, the proposed project is not consistent with the cumulative impacts, environmentally sensitive habitat areas (ESHA), water quality, and visual resources policies of the Coastal Act and is denied. The Commission's enforcement division will evaluate further actions to address these matters.

Although development has taken place prior to submission of this permit application, consideration of this application by the Commission has been based solely upon the Chapter Three policies of the Coastal Act. Review of this permit application does not constitute a waiver of any legal action with regard to the alleged violations nor does it constitute an admission as to the legality of any development undertaken on the subject sites without a coastal development permit.

G. LOCAL COASTAL PROGRAM

Section 30604(a) of the Coastal Act states:

> *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 Permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program that conforms with the Chapter Three policies of the Coastal Act. The preceding sections provide findings that the proposed project will not be in conformity with the provisions of Chapter Three. As discussed, there are alternatives to the project that would conform with the hazards, cumulative impacts, ESHA, water quality, and visual resources of the Coastal Act. Therefore, the Commission finds that approval of the proposed development would prejudice the County's ability to prepare a Local Coastal Program for the Santa Monica Mountains area that is also consistent with the policies of Chapter 3 of the Coastal Act as required by Section 30604(a).

H. CALIFORNIA ENVIRONMENTAL QUALITY ACT

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 project will have significant adverse effects on the environment, within the meaning of the California Environmental Quality Act of 1970. There are feasible alternatives available that would lessen the adverse effects of the development.

Therefore, the proposed project is determined to be inconsistent with CEQA and the policies of the Coastal Act.

STATE OF CALIFORNIA – THE RESOURCES AGENCY GRAY DAVIS, GOVERNOR

CALIFORNIA COASTAL COMMISSION
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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 1
CDP No. 4-05-150
ESHA findings

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 undisturbed[1]. 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 2000[2]. Therefore, this relatively pristine area is both large and mostly unfragmented, which fulfills a fundamental tenet of conservation biology[3]. The need for large contiguous areas of natural habitat in order to maintain critical ecological processes has been emphasized by many conservation biologists[4].

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 ecosystems[5]. 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 Agency[6] 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

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[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 report[7]. 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 important[8].

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 deer[9]. Large terrestrial predators are particularly good indicators of habitat connectivity and of the general health of the ecosystem[10]. 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 bobcat[11]. Sightings of cougars in both inland and coastal areas of the Santa Monica Mountains[12] 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 structure[13]. Beyond simply destabilizing the ecosystem, fragmentation and disturbance

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[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. Conerv. 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. Balitmore, 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 outlets[15]. 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 types[16] 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 protection[17].

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,

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[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 review[18]. 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 Holland[19]. 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 Mountains[20] 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 area[21]. 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 lifecycles[22]. 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 listing[23], 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 work[24] 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 habitat[25]. 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 streambed[26]. 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 lost[27]. 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 disturbances[29]. 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 crayfish[31]. These introduced predators have eliminated the newts from streams where they previously occurred by both direct predation and suppression of breeding.

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[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 process[33]. 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. Madrono 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 saturated[36]. New growth of chaparral evergreen shrubs takes place about four months later than coastal sage scrub plants and it continues later into the summer[37]. For example, in coastal sage scrub, California sagebrush flowers and grows from August to February and coyote bush flowers from August to November[38]. 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 spring[39]. The insects in turn are followed by insectivorous birds such as the blue-gray gnatcatcher[40], 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 Mountains[41]. Five species of hummingbirds also follow the flowering cycle[42].

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 type[43].

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 students[44]."

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

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[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. Bossema, 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 lakes[45].

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, Stralberg[46] 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. Soule[47] 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 subtypes[48]. 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.

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[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. Sorice 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 lizards[49], 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 effects[50], 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 the 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 Mexico[51]. 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 species[53], many of which are also endemic to limited geographic regions[54]. In the Santa Monica Mountains, rare animals that inhabit coastal sage scrub[55] 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 chaparral[56]. 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 lily[57]. 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

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[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 plants[61]. 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 chaparral[62]. 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 sugarbush[63]. 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 bush[64].

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 checkerbloom[65]. 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 specialist[67]. 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 below[68], 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 time[70]. Thus, the erosion from a 2-inch rain-day event drops from 5 yd^3/acre of soil one year after a fire to 1 yd^3/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 coast[72]. 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 recognized[73]. These habitats support a high diversity of birds[74], and provide refuge for many species of sensitive bats[75]. 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 factors[76]. Mixed with these native needlegrasses are many non-native annual species that are characteristic of California annual grassland[77]. Native perennial grasslands are now exceedingly rare[78]. In California, native grasslands once covered nearly 20 percent of the land area, but today are reduced to less than 0.1 percent[79]. The California Natural Diversity Database (CNDDB) lists purple needlegrass habitat as a community needing priority monitoring and restoration. The CNDDB 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 falcon[80].

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), ripgut 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 habitats[81], 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 ownership[82], and computer simulation studies of the development patterns over the next 25 years predict a serious increase in habitat fragmentation[83]. 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 activities[84]. 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 stated[85] "*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 carriers[87]. 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 zone[88] around the home. The combination of insurance incentives and regulation assures that the 200-foot clearance zone will be applied universally[89]. 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 vegetation[90]. 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 chaparral[92].

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 area[93]. The Argentine ant competes with native harvester ants and carpenter ants displacing them from the habitat[94]. 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 developments[95]. 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 mutualisms[96]. 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 habitats[97].

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 seeds[99].

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 organisms[100]. 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 Rich[101].

Summary

In a past action, the Coastal Commission found[102] 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 Game[103]. 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 chapparal (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.

Link to Exhibits 2 and 3

Link to Exhibit 4

Link to Exhibits 5 through 9

Link to Exhibits 10 through 17