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

Th17d

ADDENDUM

Click here to go to the original staff report.

DATE: October 4, 2012

TO: Commissioners and Interested Parties

FROM: South Central Coast District Staff

SUBJECT: Agenda Item 17d, Thursday, October 10-12, 2012, Coastal Development Permit Application 4-12-037 (Douglas)

Staff recommends the following minor changes to the staff report. Additions are shown in underline text and deletions are shown in ~~overstrike~~ text.

1. Please modify part A of Special Condition #11 to reflect the following changes:

11. Open Space Restriction

A. No development, as defined in Section 30106 of the Coastal Act, grazing, or agricultural activities shall occur in the Open Space Area as described and depicted in an Exhibit attached to the Notice of Intent to Issue Permit (NOI) that the Executive Director issues for this permit except for:

(1) Construction and (upon securing any necessary coastal development permit) maintenance of the water tank, well, and habitat restoration approved by the Commission in this coastal development permit and as generally shown on Exhibit 6 and 8b.

(~~1~~2) Fuel modification required by the Los Angeles County Fire Department undertaken in accordance with the final approved fuel modification plan approved pursuant to **Special Condition 3, Landscaping and Fuel Modification Plans**, or other fuel modification plans required and approved by the Commission pursuant to a different CDP(s) issued by the Commission;

(~~2~~3) Drainage and polluted runoff control activities required and approved pursuant to:

a. The drainage and runoff control plans approved pursuant to **Special Condition 2, Permanent Drainage and Runoff Control Plan,** of this permit; and

b. The landscaping and erosion control plans approved pursuant to **Special Condition 4, Interim Erosion Control & Construction Best Management Practices Plan, and Special Condition 3, Landscaping and Fuel Modification Plans,** of this permit;

(~~3~~4) Planting of native vegetation and other restoration activities, if approved by the Commission as an amendment to this coastal development permit or a new coastal development permit;

(~~4~~5) If approved by the Commission as an amendment to this coastal development permit or a new coastal development permit,

a. construction and maintenance of public hiking trails; and

b. construction and maintenance of roads, trails, and utilities consistent with existing easements.

c. construction and maintenance of equestrian facilities in fuel modification Zones B and C that do not expand fuel modification beyond what is required for the approved residence.

[…]

2. Please modify the last full sentence in the last paragraph on Page 35 as follows:

To permanently ensure that no further development occurs on the site outside of the proposed development area, **Special Condition Eleven (11)** prohibits all development outside of the proposed development area and beyond Zone B of the applicant's Fuel Modification Plan as shown in **Exhibit ~~5~~ 8a and 8b.**

3. Please modify the last full sentence in the last paragraph on Page 36 as follows:

However, while direct impacts to ESHA through the removal of vegetation would be avoided on the site outside of the development and fuel modification areas, through the open space restriction ~~and conservation easement~~, indirect impacts to habitat within the open space area will still result from the presence of the proposed development and human activities taking place on the site.

4. Please replace Exhibit 8 with Exhibit 8a and 8b.

Please see Exhibit 8b for eastern portion of property

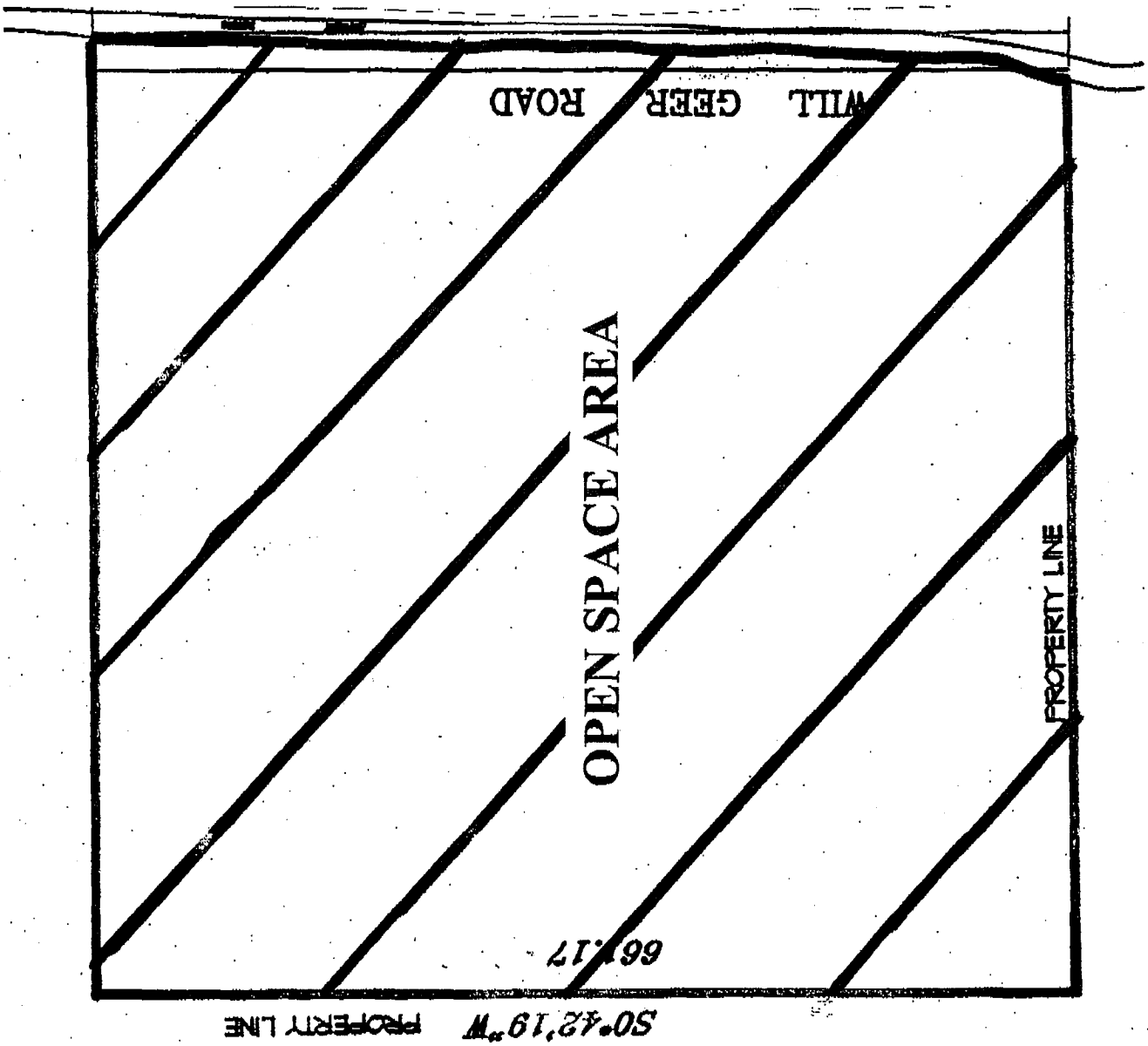

Exhibit 8a
CDP No.4-12-037
Open Space Area
Western Portion of Site

Please see Exhibit 8a for western portion of property

Exhibit 8b
CDP No.4-12-037
Open Space Area
Eastern Portion of Project

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Filed:	6/18/12
49th Day:	8/6/12
180th Day:	12/15/12
Staff:	M. Ahrens
Staff Report:	9/20/12
Hearing Date:	10/10/12

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 4-12-037

APPLICANT: Jesse Douglas

AGENT: Schmitz & Associates, Inc.

PROJECT LOCATION: 1370 Will Geer Road, Topanga (Los Angeles Co.)

APN NO.: 4440-007-012

PROJECT DESCRIPTION: Construction of a two-story, 4,327 sq. ft. single family residence, 1,348 sq. ft. detached three-car garage and workshop, 742 sq. ft. guesthouse, trellis, driveway, turnaround, septic system, swimming pool, spa, retaining walls, well, water tank, landscaping, widening of Will Geer Road from 16 ft. to 20 ft., revegetation of an approximately 10,000 sq. ft. cleared area, and approximately 344 cu. yds. of grading (222 cu. yds. cut, 122 cu. yds. fill).

Lot area	20 acres
Building coverage	5,745 sq. ft.
Pavement coverage	~15,000 sq. ft.
Landscape coverage	~16,000 sq. ft.
Height Above Finished Grade	30 feet
Parking spaces	3

MOTION & RESOLUTION: Page 4

SUMMARY OF STAFF RECOMMENDATION: Staff recommends APPROVAL of the proposed project with Seventeen (17) Special Conditions regarding (1) geologic recommendations, (2) drainage and polluted runoff control, (3) landscaping and erosion control plans, (4) wildfire waiver of liability, (5) structural appearance, (6) future development, (7) lighting restriction, (8) deed restriction, (9) habitat impact mitigation, (10) removal of natural vegetation, (11) open space restriction, (12) site inspection; (13) pool and spa drainage and maintenance, (14) removal of excess excavated material, (15) restoration/revegetation plan, (16) condition compliance, and (17) Local Approvals.

The project site is a vacant 20-acre parcel located in the Mesa area of Topanga in the east-central Santa Monica Mountains. The area surrounding the project site is characterized by natural hillside terrain, as well as several custom single-family residences. The proposed development area is visible from the Henry Ridge Trail and from public viewing areas in Topanga State Park. The parcel is undeveloped, but the northeast portion of the parcel, in the area of the proposed development, has been subject to substantial clearance of vegetation that includes the areas of brush clearance required for a neighboring residence as well as approximately 2.5-acres outside of the required brush clearance area. The undisturbed portions of the property contain native chaparral vegetation contiguous with a larger area of native habitat. In addition, because the 2.5-acres of disturbance occurred without benefit of a coastal development permit, the existing disturbed and cleared areas must also be considered chaparral habitat. Therefore, the entire site, with the exception of the required 200 ft. brush clearance zone for the home on the neighboring parcel, is considered an environmentally sensitive habitat area (ESHA) pursuant to Section 30107.5 of the Coastal Act.

Standing alone, Section 30240 would require denial of the proposed development to prevent adverse impacts to ESHA from construction of the proposed residence. However, Section 30010 provides that the Commission cannot construe the Coastal Act as authorizing the Commission to deny a permit in a manner that will take private property for public use. To avoid a "taking" of private property, the Commission must allow a reasonable residential development on the applicant's parcel.

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. As conditioned, the proposed project is consistent with all applicable Chapter Three policies of the Coastal Act, as interpreted pursuant to Section 30010.

The proposed project was previously submitted as CDP 4-05-003 and was heard by the Commission on June 13, 2006. The Commission approved CDP 4-05-003, with conditions similar, though not identical, to those suggested herein. The applicant subsequently filed a lawsuit challenging the Commission's action. The trial court decision ordered the Commission to reconsider Application 4-05-003 and conduct further proceedings with respect to the CDP. This application came back before the Commission on remand on 10/10/07 and was approved with sixteen (16) special conditions, which are substantially the same as Special Conditions 1-16 recommenced herein. Although CDP 4-05-003 was approved on remand by the Commission, no development or construction ever occurred on the site. The applicant never satisfied the conditions of approval of CDP 4-05-003 and the permit expired on October 10, 2009. As such, the applicant has resubmitted an application for the same project that was previously by the Commission pursuant to CDP 4-05-003 . Staff is recommending approval of the proposed project with 17 special conditions that are substantially similar to the conditions that were originally required pursuant to CDP 4-05-003, with the exception that an additional special condition (Special Condition 17) requires the applicant provide evidence of all required current local approvals for the proposed development since the previous approvals have expired.

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EXHIBITS

SUBSTANTIVE FILE DOCUMENTS: Malibu - Santa Monica Mountains Land Use Plan (LUP); "Preliminary Geologic & Soils Engineering Investigation – Proposed Single Family Residence, Guesthouse and Swimming Pool," Subsurface Designs, Inc., April 9, 2004, and updated report dated February 14, 2012; Percolation Test Report, Lawrence Young, Registered Environmental Health Specialist, June 16, 2004; "Biological Study, 1370 Will Geer Road, Topanga, CA" dated February 16, 2012 Rachel Tierney Consulting, report based on site visit of June 23, 2005 and February 6, 2012. Coastal Development Permit 4-05-003 (Douglas).

I. STAFF RECOMMENDATION

MOTION: ***I move that the Commission approve Coastal Development Permit No. 4-12-037 pursuant to the staff recommendation.***

Staff Recommendation of Approval:

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution to Approve the Permit:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation.** Any questions of intent or interpretation of any term or condition will be resolved by the Executive Director or the Commission.

4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. Plans Conforming to Geologic Recommendations

By acceptance of this permit, the applicant agrees to comply with the recommendations contained in the submitted geologic report ("Preliminary Geologic & Soils Engineering Investigation – Proposed Single Family Residence, Guesthouse and Swimming Pool," Subsurface Designs, Inc., dated February 14, 2012). These recommendations, including those concerning construction, grading and earthwork, foundations, sewage disposal, and drainage, shall be incorporated into all final design and construction, and must be reviewed and approved by the consultant prior to commencement of development.

The final plans approved by the consultant shall be in substantial conformance with the plans approved by the Commission relative to construction, grading and earthwork, foundations, sewage disposal, and drainage. Any substantial changes in the proposed development approved by the Commission that may be required by the consultant shall require amendment(s) to the permit(s) or new Coastal Development Permit(s).

2. Permanent Drainage and Polluted Runoff Control Plans

A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director, two (2) copies of a final Drainage and Runoff Control Plan for the post-construction project site, prepared by a qualified licensed professional. The Plan shall include detailed drainage and runoff control plans with supporting calculations. The plans shall incorporate long-term post-construction Best Management Practices (BMPs) that protect water quality and minimize increases in runoff volume and rate in the project design of developments in the following order of priority:

a. Site Design BMPs: Project design features that reduce the creation or severity of potential pollutant sources, or reduce the alteration of the project site's natural stormwater flow regime. Examples are minimizing impervious surfaces, preserving native vegetation, and minimizing grading.

b. Source Control BMPs: Methods that reduce potential pollutants at their sources and/or avoid entrainment of pollutants in runoff, including schedules of activities, prohibitions of practices, maintenance procedures, managerial practices, or operational practices. Examples are covering outdoor storage areas, use of efficient irrigation, and minimizing the use of landscaping chemicals.

c. Treatment Control BMPs: Systems designed to remove pollutants from stormwater, by gravity settling of particulate pollutants, filtration, biological uptake, media adsorption, or any other physical, biological, or chemical process. Examples are vegetated swales, detention basins, and storm drain inlet filters. Where post-construction treatment of stormwater runoff is required, treatment control BMPs (or suites of BMPs) shall, at a minimum, be sized and designed to treat, infiltrate, or filter stormwater runoff from each storm event, up to and including the 85th percentile, 24-hour storm event for volume-based BMPs, or the 85th percentile, 1-hour storm event (with an appropriate safety factor of 2 or greater) for flow-based BMPs.

The qualified licensed professional shall certify in writing that the final Drainage and Runoff Control Plan is in substantial conformance with the following minimum requirements:

(1) Projects shall incorporate Low Impact Development (LID) techniques in order to minimize stormwater quality and quantity impacts from development, unless a credible and compelling explanation is provided as to why such features are not feasible and/or appropriate. LID strategies use small-scale integrated and distributed management practices, including minimizing impervious surfaces, infiltrating stormwater close to its source, and preservation of permeable soils and native vegetation.

(2) Post-development runoff rates from the site shall be maintained at levels similar to pre-development conditions.

(3) Selected BMPs shall consist, or primarily consist, of site design elements and/or landscape based systems or features that serve to maintain site permeability, avoid directly connected impervious area and/or retain, infiltrate, or filter runoff from rooftops, driveways and other hardscape areas, where feasible. Examples of such features include but are not limited to porous pavement, pavers, rain gardens, vegetated swales, infiltration trenches, cisterns.

(4) Landscape plants shall have low water and chemical treatment demands and be consistent with **Special Condition 3, Landscaping and Fuel Modification Plans**. An efficient irrigation system designed based on hydrozones and utilizing drip emitters or micro-sprays or other efficient design shall be utilized for any landscaping requiring water application.

(5) All slopes shall be stabilized in accordance with provisions contained in the Landscaping and/or Interim Erosion and Sediment Control Condition for this Coastal Development Permit and, if applicable, in accordance with engineered plans prepared by a qualified licensed professional.

(6) Runoff shall be discharged from the developed site in a non-erosive manner. Energy dissipating measures shall be installed where needed to prevent erosion. Plan details and cross sections for any rock rip-rap and/or other energy dissipating devices or structures associated with the drainage system shall be prepared by a qualified licensed professional. The drainage plans shall specify, the location, dimensions, cubic yards of rock, etc. for the any velocity reducing structure with the supporting calculations showing the sizing requirements and how the device meets those sizing requirements. The qualified, licensed professional shall ensure that all energy dissipaters use the minimum amount of rock and/or other hardscape necessary to protect the site from erosion.

(7) All BMPs shall be operated, monitored, and maintained in accordance with manufacturer's specifications where applicable, or in accordance with well recognized technical specifications appropriate to the BMP for the life of the project and at a minimum, all structural BMPs shall be inspected, cleaned-out, and where necessary, repaired prior to the onset of the storm season (October 15th each year) and at regular intervals as necessary between October 15th and April 15th of each year. Debris and other water pollutants removed from structural BMP(s) during clean-out shall be contained and disposed of in a proper manner.

(9) For projects located on a hillside, slope, or which may otherwise be prone to geologic instability, site drainage and BMP selection shall be developed concurrent with the

preliminary development design and grading plan, and final drainage plans shall be approved by a licensed geotechnical engineer or engineering geologist.

(10) Should any of the project's surface or subsurface drainage/filtration structures or other BMPs fail or result in increased erosion, the applicant/landowner or successor-in-interest shall be responsible for any necessary repairs to the drainage/filtration system or BMPs and restoration of the affected area. Should repairs or restoration become necessary, prior to the commencement of such repair or restoration work, the applicant shall submit a repair and restoration plan to the Executive Director to determine if an amendment or new coastal development permit is required to authorize such work.

B. The final Drainage and Runoff Control Plan shall be in conformance with the site/ development plans approved by the Coastal Commission. Any necessary changes to the Coastal Commission approved site/development plans required by a qualified, licensed professional shall be reported to the Executive Director. No changes to the Coastal Commission approved final site/development plans shall occur without an amendment to the coastal development permit, unless the Executive Director determines that no amendment is required.

3. Landscaping and Fuel Modification Plans

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit two sets of landscaping and fuel modification plans, prepared by a licensed landscape architect or a qualified resource specialist. The landscaping and erosion control plans shall be reviewed and approved by the consulting engineering geologist to ensure that the plans are in conformance with the consultants' recommendations. The consulting landscape architect or qualified landscape professional shall certify in writing that the final Landscape and Fuel Modification plans are in conformance with the following requirements:

A) Landscaping Plan

(1) All graded & disturbed areas on the subject site shall be planted and maintained for erosion control purposes within thirty (30) days of receipt of the certificate of occupancy for the residence. To minimize the need for irrigation all landscaping shall consist primarily of native/drought resistant plants, as listed by the California Native Plant Society, Santa Monica Mountains Chapter, in their document entitled Recommended List of Plants for Landscaping in the Santa Monica Mountains, dated February 5, 1996. All native plant species shall be of local genetic stock. No plant species listed as problematic and/or invasive by the California Native Plant Society (http://www.CNPS.org/), the California Invasive Plant Council (formerly the California Exotic Pest Plant Council) (http://www.cal-ipc.org/), or as may be identified from time to time by the State of California shall be employed or allowed to naturalize or persist on the site. No plant species listed as a "noxious weed" by the State of California or the U.S. Federal Government shall be utilized within the property.

(2) All cut and fill slopes shall be stabilized with planting at the completion of final grading. Planting should be of native plant species indigenous to the Santa Monica Mountains using accepted planting procedures, consistent with fire safety requirements. All native plant species shall be of local genetic stock. Such planting shall be adequate to provide 90 percent coverage within two (2) years, and this requirement shall apply to all disturbed soils;

(3) Plantings will be maintained in good growing condition throughout the life of the project and, whenever necessary, shall be replaced with new plant materials to ensure continued compliance with applicable landscape requirements;
(4) Rodenticides containing any anticoagulant compounds (including, but not limited to, Warfarin, Brodifacoum, Bromadiolone or Diphacinone) shall not be used.
(5) Fencing of the entire property is prohibited. Fencing shall extend no further than the approved development area. The fencing type and location shall be illustrated on the landscape plan. Fencing shall also be subject to the color requirements outlined in **Special Condition 5, Structural Appearance**, below.

B) Fuel Modification Plans

Vegetation within 20 feet of the proposed house may be removed to mineral earth, vegetation within a 200-foot radius of the main structure may be selectively thinned in order to reduce fire hazard. However, such thinning shall only occur in accordance with an approved long-term fuel modification plan submitted pursuant to this special condition. The fuel modification plan shall include details regarding the types, sizes and location of plant materials to be removed, and how often thinning is to occur. In addition, the applicant shall submit evidence that the fuel modification plan has been reviewed and approved by the Forestry Department of Los Angeles County. Irrigated lawn, turf and ground cover planted within the twenty foot radius of the proposed house shall be selected from the most drought tolerant species or subspecies, or varieties suited to the Mediterranean climate of the Santa Monica Mountains.

C) Conformance with Commission Approved Site/Development Plans

The Permittee shall undertake development in accordance with the final Landscape and Fuel Modification Plans. The final Landscape and Fuel Modification Plans shall be in conformance with the site/development plans approved by the Coastal Commission. Any changes to the Coastal Commission approved site/development plans shall be reported to the Executive Director. No changes to the Coastal Commission approved final site/development plans shall occur without an amendment to the coastal development permit, unless the Executive Director determines that no amendment is legally required.

D) Monitoring

Three years from the date of the receipt of the Certificate of Occupancy for the residence the applicant shall submit to the Executive Director, a landscape monitoring report, prepared by a licensed Landscape Architect or qualified Resource Specialist, that certifies the on-site landscaping is in conformance with the landscape plan approved pursuant to this Special Condition. The monitoring report shall include photographic documentation of plant species and plant coverage.

If the landscape monitoring report indicates the landscaping is not in conformance with or has failed to meet the requirements specified in this condition, the applicant, or successors in interest, shall submit, within 30 days of the date of the monitoring report, a revised or supplemental landscape plan, certified by a licensed Landscape Architect or a qualified Resource Specialist,

that specifies additional or supplemental landscaping measures to remediate those portions of the original plan that have failed or are not in conformance with the original approved plan. This remedial landscaping plan shall be implemented within 30 days of the date of the final supplemental landscaping plan and remedial measures shall be repeated as necessary to meet the requirements of this condition.

4. Interim Erosion Control Plans and Construction Responsibilities

A. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director an Interim Erosion Control and Construction Best Management Practices Plan, prepared by a qualified, licensed professional. The qualified, licensed professional shall certify in writing that the Interim Erosion Control and Construction Best Management Practices (BMPs) plan are in conformance with the following requirements:

1. Erosion Control Plan

(a) The plan shall delineate the areas to be disturbed by grading or construction activities and shall include any temporary access roads, staging areas and stockpile areas. The natural areas on the site shall be clearly delineated on the plan and on-site with fencing or survey flags.

(b) Include a narrative report describing all temporary run-off and erosion control measures to be used during construction.

(c) The plan shall identify and delineate on a site or grading plan the locations of all temporary erosion control measures.

(d) The plan shall specify that grading shall take place only during the dry season (April 1 – October 31). This period may be extended for a limited period of time if the situation warrants such a limited extension, if approved by the Executive Director. The applicant shall install or construct temporary sediment basins (including debris basins, desilting basins, or silt traps), temporary drains and swales, sand bag barriers, silt fencing, and shall stabilize any stockpiled fill with geofabric covers or other appropriate cover, install geotextiles or mats on all cut or fill slopes, and close and stabilize open trenches as soon as possible. Basins shall be sized to handle not less than a 10 year, 6 hour duration rainfall intensity event.

(e) The erosion control measures shall be required on the project site prior to or concurrent with the initial grading operations and maintained throughout the development process to minimize erosion and sediment from runoff waters during construction. All sediment should be retained on-site, unless removed to an appropriate, approved dumping location either outside of the coastal zone or within the coastal zone to a site permitted to receive fill.

(f) The plan shall also include temporary erosion control measures should grading or site preparation cease for a period of more than 30 days, including but not limited to: stabilization of all stockpiled fill, access roads, disturbed soils and cut and fill slopes with geotextiles and/or mats, sand bag barriers, silt fencing; temporary drains and swales and sediment basins. The plans shall also specify that all disturbed areas shall be seeded with native grass species and include the technical specifications for seeding the

disturbed areas. These temporary erosion control measures shall be monitored and maintained until grading or construction operations resume.

(g) All temporary, construction related erosion control materials shall be comprised of bio-degradable materials (natural fiber, not photo-degradable plastics) and must be removed when permanent erosion control measures are in place. Bio-degradable erosion control materials may be left in place if they have been incorporated into the permanent landscaping design.

2. Construction Best Management Practices

(a) No demolition or construction materials, debris, or waste shall be placed or stored where it may enter sensitive habitat, receiving waters or a storm drain, or be subject to wave, wind, rain, or tidal erosion and dispersion.

(b) No demolition or construction equipment, materials, or activity shall be placed in or occur in any location that would result in impacts to environmentally sensitive habitat areas, streams, wetlands or their buffers.

(c) Any and all debris resulting from demolition or construction activities shall be removed from the project site within 24 hours of completion of the project.

(d) Demolition or construction debris and sediment shall be removed from work areas each day that demolition or construction occurs to prevent the accumulation of sediment and other debris that may be discharged into coastal waters.

(e) All trash and debris shall be disposed in the proper trash and recycling receptacles at the end of every construction day.

(f) The applicant shall provide adequate disposal facilities for solid waste, including excess concrete, produced during demolition or construction.

(g) Debris shall be disposed of at a permitted disposal site or recycled at a permitted recycling facility. If the disposal site is located in the coastal zone, a coastal development permit or an amendment to this permit shall be required before disposal can take place unless the Executive Director determines that no amendment or new permit is legally required.

(h) All stock piles and construction materials shall be covered, enclosed on all sides, shall be located as far away as possible from drain inlets and any waterway, and shall not be stored in contact with the soil.

(i) Machinery and equipment shall be maintained and washed in confined areas specifically designed to control runoff. Thinners or solvents shall not be discharged into sanitary or storm sewer systems.

(j) The discharge of any hazardous materials into any receiving waters shall be prohibited.

(k) Spill prevention and control measures shall be implemented to ensure the proper handling and storage of petroleum products and other construction materials. Measures shall include a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum products or contact

with runoff. The area shall be located as far away from the receiving waters and storm drain inlets as possible.

(l) Best Management Practices (BMPs) and Good Housekeeping Practices (GHPs) designed to prevent spillage and/or runoff of demolition or construction-related materials, and to contain sediment or contaminants associated with demolition or construction activity, shall be implemented prior to the on-set of such activity

(m) All BMPs shall be maintained in a functional condition throughout the duration of construction activity.

B. The final Interim Erosion Control and Construction Best Management Practices Plan shall be in conformance with the site/ development plans approved by the Coastal Commission. Any necessary changes to the Coastal Commission approved site/development plans required by a qualified, licensed professional shall be reported to the Executive Director. No changes to the Coastal Commission approved final site/development plans shall occur without an amendment to the coastal development permit, unless the Executive Director determines that no amendment is required.

4. Assumption of Risk, Waiver of Liability and Indemnity

By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from wildfire and erosion; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

5. Structural Appearance

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit for the review and approval of the Executive Director, a color palette and material specifications for the outer surface of all structures authorized by the approval of this Coastal Development Permit. The palette samples shall be presented in a format not to exceed 8½" x 11" x ½" in size. The palette shall include the colors proposed for the roofs, trims, exterior surfaces, driveways, retaining walls, and other structures authorized by this permit. Acceptable colors shall be limited to colors compatible with the surrounding environment (earth tones) including shades of green, brown and gray with no white or light shades and no bright tones. All windows shall be comprised of non-glare glass.

The approved structures shall be colored with only the colors and window materials authorized pursuant to this special condition. Alternative colors or materials for future repainting or resurfacing or new windows may only be applied to the structures authorized by this Coastal Development Permit if such changes are specifically authorized by the Executive Director as complying with this special condition.

6. Future Development

This permit is only for the development described in this Coastal Development Permit. Pursuant to Title 14 California Code of Regulations section 13250(b)(6) and 13253(b)(6), the exemptions otherwise provided in Public Resources Code section 30610(a) and (b) shall not apply to the development governed by this Coastal Development Permit. Accordingly, any future structures, future improvements, or change of use to the permitted structures authorized by this permit, including but not limited to, any grading, clearing or other disturbance of vegetation other than as provided for in the approved landscape plan prepared pursuant to **Special Condition 3, Landscaping and Fuel Modification Plans,** shall require an amendment to this Coastal Development Permit from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government.

7. Lighting Restriction

A. The only outdoor night lighting allowed on the subject parcel is limited to the following:

(1) The minimum necessary to light walkways used for entry and exit to the structures, including parking areas on the site. This lighting shall be limited to fixtures that do not exceed two feet in height above finished grade, are directed downward and generate the same or less lumens equivalent to those generated by a 60 watt incandescent bulb, unless a greater number of lumens is authorized by the Executive Director.
(2) Security lighting attached to the residence and garage shall be controlled by motion detectors and is limited to same or less lumens equivalent to those generated by a 60 watt incandescent bulb.
(3) The minimum necessary to light the entry area to the driveway with the same or less lumens equivalent to those generated by a 60 watt incandescent bulb.

B. No lighting around the perimeter of the site and no lighting for aesthetic purposes is allowed.

8. Deed Restriction

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and approval documentation demonstrating that the applicant has executed and recorded against the parcel(s) governed by this permit a deed restriction, in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property; and (2) imposing the Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The deed restriction shall include a legal description of the entire parcel or parcels governed by this permit. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part,

modification, or amendment thereof, remains in existence on or with respect to the subject property.

9. Habitat Impact Mitigation

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the review and approval of the Executive Director, a map delineating all areas of chaparral and coastal sage scrub habitat (ESHA) that will be disturbed by the proposed development, including fuel modification and brush clearance requirements on the project site and adjacent property. The chaparral and coastal sage scrub ESHA areas on the site and adjacent property shall be delineated on a detailed map, to scale, illustrating the subject parcel boundaries and, if the fuel modification/brush clearance zones extend onto adjacent property, adjacent parcel boundaries. The delineation map shall indicate the total acreage for all chaparral and coastal sage scrub ESHA, both on and offsite, that will be impacted by the proposed development, including the fuel modification/brush clearance areas. A 200-foot clearance zone from the proposed structures shall be used to determine the extent of off-site brush clearance for fire protection purposes. The delineation shall be prepared by a qualified resource specialist or biologist familiar with the ecology of the Santa Monica Mountains.

Mitigation shall be provided for impacts to the chaparral and coastal sage scrub ESHA from the proposed development and fuel modification/brush clearance requirements by one of the three following habitat mitigation methods:

A. Habitat Restoration

1) Habitat Restoration Plan

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit a habitat restoration plan, for the review and approval of the Executive Director, for an area of degraded chaparral and/or coastal sage scrub habitat equivalent to the area of chaparral and/or coastal sage scrub ESHA impacted by the proposed development and fuel modification/brush clearance area. The habitat restoration area may either be onsite or offsite within the coastal zone either in the City of Malibu or elsewhere in the Santa Monica Mountains. The habitat restoration area shall be delineated on a detailed site plan, to scale, that illustrates the parcel boundaries and topographic contours of the site. The habitat restoration plan shall be prepared by a qualified resource specialist or biologist familiar with the ecology of the Santa Monica Mountains and shall be designed to restore the area in question for habitat function, species diversity and vegetation cover. The restoration plan shall include a statement of goals and performance standards, revegetation and restoration methodology, and maintenance and monitoring provisions. If the restoration site is offsite, the applicant shall submit written evidence to the Executive Director that the property owner has irrevocably agreed to allow the restoration work, maintenance and monitoring required by this condition and not to disturb any native vegetation in the restoration area.

The applicant shall submit, on an annual basis for five years, a written report, for the review and approval of the Executive Director, prepared by a qualified resource specialist, evaluating compliance with the performance standards outlined in the restoration plan and describing the revegetation, maintenance and monitoring that was conducted during the prior year. The annual report shall include recommendations for mid-course corrective measures. At the end of the five-year period, a final detailed report shall be submitted for the review and approval of the Executive Director. If this report indicates that the restoration project has been, in part or in whole, unsuccessful, based on the approved goals and performance standards, the applicant shall submit a revised or supplemental restoration plan with maintenance and monitoring provisions, for the review and approval of the Executive Director, to compensate for those portions of the original restoration plan that were not successful. Should supplemental restoration be required, the applicant shall submit, on an annual basis for five years, a written report, for the review and approval of the Executive Director, prepared by a qualified resource specialist, evaluating the supplemental restoration areas. At the end of the five-year period, a final report shall be submitted evaluating whether the supplemental restoration plan has achieved compliance with the goals and performance standards for the restoration area. If the goals and performance standards are not met within 10 years, the applicant shall submit an application for an amendment to the coastal development permit for an alternative mitigation program and shall implement whatever alternative mitigation program the Commission approves, as approved.

The habitat restoration work approved in the restoration plan shall be carried out prior to occupancy of the residence.

2) Open Space Deed Restriction

No development, as defined in section 30106 of the Coastal Act, shall occur in the habitat restoration area, as shown on the habitat restoration site plan required pursuant to (A)(1) above.

PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit evidence that the applicant has executed and recorded a deed restriction (if the applicant is not the owner, then the applicant shall submit evidence that the owner has executed and recorded the deed restriction), in a form and content acceptable to the Executive Director, reflecting the above restriction on development and designating the habitat restoration area as open space. The deed restriction shall include a graphic depiction and narrative legal descriptions of both the parcel on which the restoration area lies and the open space area/habitat restoration area. The deed restriction shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction. This deed restriction shall not be removed or changed without a Commission amendment to this coastal development permit.

3) Performance Bond

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall post performance bonds to guarantee implementation of the restoration plan as follows: a) one equal to the value of the labor and materials; and b) one equal to the value of the maintenance and monitoring for a period of 5 years. Each performance bond shall be released upon satisfactory completion of items (a) and (b) above. If the applicant fails to either restore or maintain and monitor according to the approved plans, the Coastal Commission may collect the security and complete the work on the property.

B. Habitat Conservation

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall (or, if the applicant is not the owner of the habitat conservation site, then the owner of the habitat conservation site shall) execute and record an open space deed restriction in a form and content acceptable to the Executive Director, over the entirety of a legal parcel or parcels containing chaparral and/or coastal sage scrub ESHA. The chaparral and/or coastal sage scrub ESHA located on the mitigation parcel or parcels must be of equal or greater area than the ESHA area impacted by the proposed development, including the fuel modification/brush clearance areas. No development, as defined in section 30106 of the Coastal Act, shall occur on the mitigation parcel(s) and the parcel(s) shall be preserved as permanent open space. The deed restriction shall include a graphic depiction and narrative legal descriptions of the parcel or parcels. The deed restriction shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction.

Prior to occupancy of the residence, the applicant shall submit evidence, for the review and approval of the Executive Director, that the recorded documents have been reflected in the Los Angeles County Tax Assessor Records.

If the mitigation parcel(s) is/are larger in size than the impacted habitat area, the excess acreage may be used to provide habitat impact mitigation for other development projects that impact like ESHA.

C. Habitat Impact Mitigation Fund

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit evidence, for the review and approval of the Executive Director, that payment for compensatory mitigation has been provided to the Mountains Recreation and Conservation Authority to mitigate adverse impacts to chaparral and coastal sage scrub habitat ESHA. The payment shall be calculated as follows:

1) Development Area, Irrigated Fuel Modification Zones, Off-site Brush Clearance

The payment for these areas shall be $12,000 per acre within the development area, any required irrigated fuel modification zones, and required off-site brush

clearance areas (assuming a 200-foot radius from all structures). The total acreage shall be based on the map delineating these areas required by this condition.

2) Non-irrigated Fuel Modification Zones

The payment for non-irrigated fuel modification areas (on-site) shall be $3,000 per acre. The total acreage shall be based on the map delineating these areas required by this condition.

Prior to the payment for mitigation to the Mountains Recreation and Conservation Authority, the applicant shall submit, for the review and approval of the Executive Director, the calculation of the payment required to mitigate adverse impacts to chaparral and/or coastal sage scrub habitat ESHA, in accordance with this condition. After review and approval of the payment calculation, the payment shall be made to the Mountains Recreation and Conservation Authority's Coastal Habitat Impact Mitigation Fund for the acquisition, permanent preservation or restoration of habitat in the Santa Monica Mountains coastal zone, with priority given to the acquisition of or extinguishment of all development potential on properties containing environmentally sensitive habitat areas and properties adjacent to public parklands.. The payment may not be used to restore areas where development occurred in violation of the Coastal Act's permit requirements.

10. Removal of Natural Vegetation

Removal of natural vegetation for the purpose of fuel modification within the 50 foot zone surrounding the proposed structure(s) shall not commence until the local government has issued a building or grading permit for the development approved pursuant to this permit. Vegetation thinning within the 50-200 foot fuel modification zone shall not occur until commencement of construction of the structure(s) approved pursuant to this permit.

11. Open Space Restriction

A. No development, as defined in Section 30106 of the Coastal Act, grazing, or agricultural activities shall occur in the Open Space Area as described and depicted in an Exhibit attached to the Notice of Intent to Issue Permit (NOI) that the Executive Director issues for this permit except for:

(1) Fuel modification required by the Los Angeles County Fire Department undertaken in accordance with the final approved fuel modification plan approved pursuant to **Special Condition 3, Landscaping and Fuel Modification Plans**, or other fuel modification plans required and approved by the Commission pursuant to a different CDP(s) issued by the Commission;

(2) Drainage and polluted runoff control activities required and approved pursuant to:
   a. The drainage and runoff control plans approved pursuant to **Special Condition 2, Permanent Drainage and Runoff Control Plan,** of this permit; and

b. The landscaping and erosion control plans approved pursuant to **Special Condition 4, Interim Erosion Control & Construction Best Management Practices Plan, and Special Condition 3, Landscaping and Fuel Modification Plans,** of this permit;

(3) Planting of native vegetation and other restoration activities, if approved by the Commission as an amendment to this coastal development permit or a new coastal development permit;

(4) If approved by the Commission as an amendment to this coastal development permit or a new coastal development permit,

a. construction and maintenance of public hiking trails; and

b. construction and maintenance of roads, trails, and utilities consistent with existing easements.

B. PRIOR TO THE ISSUANCE BY THE EXECUTIVE DIRECTOR OF THE NOI FOR THIS COASTAL DEVELOPMENT PERMIT, the applicant shall submit for the review and approval of the Executive Director, and upon such approval, for attachment as an Exhibit to the NOI, a formal metes and bounds legal description and graphic depiction, prepared by a licensed surveyor, of the portion of the subject property affected by this condition, as generally described on **Exhibit 8a and 8b** attached to the findings in support of approval of this permit.

12. Site Inspection

A. By acceptance of this permit, the applicant irrevocably authorizes, on behalf of herself and her successors-in-interest with respect to the subject property, Coastal Commission staff and the staff of the Mountains Recreation and Conservation Authority (MRCA) to enter onto the property to undertake site inspections for the purpose of monitoring compliance with the Open Space Restrictions, detailed in Special Condition No. 11, and to document their findings (including, but not limited to, by taking notes, photographs, or video), subject to Commission staff or MRCA staff providing 24 hours advanced notice to the contact person indicated pursuant to paragraph B prior to entering the property, unless there is an imminent threat to coastal resources, in which case such notice is not required. If two attempts to reach the contact person by telephone are unsuccessful, the requirement to provide 24 hour notice can be satisfied by voicemail, email, or facsimile sent 24 hours in advance or by a letter mailed three business days prior to the inspection. Consistent with this authorization, the applicant and her successors: (1) shall not interfere with such inspection/monitoring activities and (2) shall provide any documents requested by the Commission staff or the staff of the MRCA that are relevant to the determination of compliance with the terms of this permit.

B. Prior to the issuance of the coastal development permit, the applicant shall submit to Commission staff the email address and fax number, if available, and the address and phone number of a contact person authorized to receive the Commission's or MRCA's notice of the site inspections allowed by this special condition. The applicant is responsible for updating this contact information, and the Commission and MRCA are entitled to rely on the last contact information provided to it by the applicant.

13. Pool and Spa Drainage and Maintenance

By acceptance of this permit, the applicant agrees to install a no chlorine or low chlorine purification system and agrees to maintain proper pool water pH, calcium and alkalinity balance to ensure any runoff or drainage from the pool or spa will not include excessive amounts of chemicals that may adversely affect water quality or environmentally sensitive habitat areas. In addition, the applicant agrees not to discharge chlorinated or non-chlorinated pool water into a street, storm drain, creek, canyon drainage channel, or other location where it could enter receiving waters.

14. Removal of Excess Excavated Material

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall provide evidence to the Executive Director of the location of the disposal site for all excess excavated material from the site. If the disposal site is located in the Coastal Zone, the disposal site must have a valid coastal development permit for the disposal of fill material. If the disposal site does not have a coastal permit, such a permit will be required prior to the disposal of material.

15. Restoration / Revegetation Plan

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the review and approval of the Executive Director, two (2) sets of final restoration plans for the approximately 10,000 sq. ft. area shown in **Exhibit 6**. The plan shall include a landscaping and erosion control plan prepared by a qualified habitat restoration consultant. The landscaping and erosion control plan shall make use of no permanent irrigation systems. The restoration and revegetation plan shall include, but not be limited to, the following criteria:

(a) A revegetation program, prepared by a qualified habitat restoration consultant, that utilizes only native chaparral plant species that are consistent with the surrounding native plant community. The plan shall specify the preferable time of year to carry out the restoration and describe the supplemental watering requirements that will be necessary, including a detailed irrigation plan. The plan shall also specify performance standards to judge the success of the restoration effort. The revegetation plan shall identify the species, location, and extent of all plant materials and shall use a mixture of seeds and container plants to increase the potential for successful revegetation. The plan shall include a description of technical and performance standards to ensure the successful revegetation of the restored slope. A temporary irrigation system may be used until the plants are established, but in no case shall the irrigation system be in place longer than two (2) years.

(b) The restoration plan shall be implemented within three hundred and sixty (360) days of the issuance of this permit. Revegetation shall meet the performance standards appropriate for chaparral habitat, as detailed in Section (a) above within five (5) years and shall be repeated, if necessary, to meet the performance standards. The Executive Director may extend this time period for good cause. Plantings shall be maintained in good growing condition throughout the life of the project and, whenever necessary,

shall be replaced with new plant materials to ensure continued compliance with the revegetation requirements.

(c) A monitoring program, prepared by a qualified environmental resource specialist. The monitoring program shall demonstrate how the approved revegetation and restoration performance standards prepared pursuant to section (b) above shall be implemented and evaluated for compliance with this Special Condition. The program shall require the applicant to submit, on an annual basis for a period of five years (no later than December 31st each year), a written report, for the review and approval of the Executive Director, prepared by an environmental resource specialist, indicating the success or failure of the restoration project. The annual reports shall include further recommendations and requirements for additional restoration activities in order for the project to meet the criteria and performance standards listed in the restoration plan. These reports shall also include photographs taken from pre-designated locations (annotated to a copy of the site plans) indicating the progress of recovery. During the monitoring period, all artificial inputs shall be removed except for the purposes of providing mid-course corrections or maintenance to ensure the long-term survival of the plantings. If these inputs are required beyond the first four (4) years, then the monitoring program shall be extended for a sufficient length of time so that the success and sustainability of the project is ensured. Successful site restoration shall be determined if the revegetation of native plant species on-site is adequate to meet the performance standards appropriate for chaparral habitat, as detailed in Section (a) above by the end of the five (5) year monitoring period and is able to survive without additional outside inputs, such as supplemental irrigation.

(d) At the end of the five year period, a final detailed report shall be submitted, for the review and approval of the Executive Director, that indicates whether the on-site landscaping is in conformance with the revegetation / restoration plan approved pursuant to this Special Condition. The final report shall include photographic documentation of plant species and plant coverage. If this report indicates that the restoration project has in part, or in whole, been unsuccessful, based on the approved performance standards, the applicant shall be required to submit a revised or supplemental restoration program to compensate for those portions of the original plan that were not successful. The revised, or supplemental, restoration program shall be processed as an amendment to this Coastal Development Permit.

16. Condition Compliance

Within 180 days of Commission action on this coastal development permit application, or within such additional time as the Executive Director may grant for good cause, the applicant shall satisfy all requirements specified in the conditions hereto that the applicant is required to satisfy prior to issuance of this permit. Failure to comply with this requirement may result in the expiration of this coastal permit approval and the institution of enforcement action under the provisions of Chapter 9 of the Coastal Act.

17. Local Approvals

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant must submit evidence that the following local approvals have been obtained for the proposed development:

(a) County of Los Angeles Department of Regional Planning, Approval in Concept,
(b) County of Los Angeles Environmental Health Services, Sewage Disposal System Design Approval,
(c) County of Los Angeles Fire Department, Preliminary Fuel Modification Plan Approval,
(d) County of Los Angeles Fire Department, Fire Prevention Engineering Approval

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

A. PROJECT DESCRIPTION AND BACKGROUND

The applicant proposes to construct a two-story, 4,327 sq. ft. single family residence, 1,348 sq. ft. detached three-car garage and workshop, 742 sq. ft. guesthouse, trellis, driveway, turnaround, septic system, swimming pool, spa, retaining walls, well, water tank, landscaping, widening of Will Geer Road from 16 ft. to 20 ft., revegetation of an approximately 10,000 sq. ft. cleared area, and approximately 344 cu. yds. of grading (222 cu. yds. cut, 122 cu. yds. fill). **(Exhibits 6 and 9 - 12)**.

The project site is a vacant 20-acre parcel located in the Mesa area of Topanga in the east-central Santa Monica Mountains. The area surrounding the project site is characterized by natural hillside terrain, as well as several custom single-family residences. The subject parcel is a rectangular lot that is bisected in a north-south direction by Will Geer Road. Slopes on the site range from near level in the northeast portion of the property, to less than 1.5:1 in the southeast corner and below the prominent ridgeline located immediately west and above the property. The majority of the site contains rolling topography with several knolls and an average slope of about 3:1. A United States Geologic Survey designated intermittent blue-line stream crosses the southern portion of the property and enters Topanga Canyon Creek approximately ½ mile downstream **(Exhibits 2, 4 and 13)**.

The subject parcel is undeveloped, but the northeast portion of the parcel, in the area of the proposed development, has been subject to substantial clearance of vegetation that includes the areas of brush clearance required for a neighboring residence, as well as approximately 2.5-acres outside of the required brush clearance area. The undisturbed portions of the property contain native chaparral vegetation contiguous with a larger area of native habitat. In addition, because the 2.5-acres of disturbance occurred without benefit of a coastal development permit, the existing disturbed and cleared areas must also be considered chaparral habitat. Therefore, the entire site is considered an environmentally sensitive habitat area (ESHA) pursuant to Section 30107.5 of the Coastal Act. Staff notes that the location of the proposed residence is the preferred alternative in order to minimize grading and disturbance to sensitive habitat onsite **(Exhibits 1, 3, 5 and 13)**.

The subject site is located in the Mesa area of Topanga, which is known for its scenic vistas of the Santa Monica Mountains. The site is located immediately west of and below Malibu-Santa Monica Mountains Land Use Plan (LUP) designated scenic ridgeline, and is visible from the Henry Ridge Trail and public viewing areas in Topanga State Park.

The creation of the subject parcel was exempt from County and State subdivision laws at the time it was created, which was prior to the January 1, 1977 effectiveness date of the Coastal Act. Therefore, the subject parcel is considered a legal lot.

B. GEOLOGY AND HAZARDS

The proposed development is located in the Malibu/Santa Monica Mountains area, an area historically subject to significant natural hazards including, but not limited to, landslides, erosion, flooding and wild fire. In addition, fire is an inherent threat to the indigenous chaparral community of the coastal mountains. Wild fires often denude hillsides in the Santa Monica Mountains of all existing vegetation, thereby contributing to an increased potential for erosion and landslides on property.

Section 30253 of the Coastal Act states in pertinent part that new development shall:

> ***(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.***
>
> ***(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.***

Section 30253 of the Coastal Act mandates that new development be sited and designed to provide geologic stability and structural integrity, and minimize risks to life and property in areas of high geologic, flood, and fire hazard.

The applicant has submitted a geologic report ("Preliminary Geologic & Soils Engineering Investigation – Proposed Single Family Residence, Guesthouse and Swimming Pool," Subsurface Designs, Inc., April 9, 2004, and updated report dated February 14, 2012;) that evaluates the geologic stability of the subject site in relation to the proposed development. Based on their evaluation of the site's geology and the proposed development the consultants have found that the project site is suitable for the proposed project. The project's geotechnical consultants state in their April 9, 2004 report:

> ***It is the finding of this firm, based upon the subsurface data, that the proposed residence, guesthouse, and swimming pool will not be affected by settlement, landsliding, or slippage. Further, the proposed development and grading will not have an adverse effect on off-site property.***

The submitted geology, geotechnical, and/or soils reports referenced as Substantive File Documents conclude that the project site is suitable for the proposed project based on the evaluation of the site's geology in relation to the proposed development. The reports contain recommendations to be incorporated into the project plans to ensure the stability and geologic safety of the proposed project, the project site, and the adjacent properties. To ensure stability and structural integrity and to protect the site and the surrounding sites, the Commission requires the applicant to comply with the recommendations contained in the applicable reports, to incorporate those recommendations into all final design and construction plans, and to obtain the geotechnical consultant's approval of those plans prior to the commencement of construction.

The geotechnical engineering consultants conclude that the proposed development is feasible and will be free from geologic hazard provided their recommendations are incorporated into the proposed development. The submitted geologic reports contain several recommendations to be incorporated into project construction, grading and earthwork, foundations, sewage disposal, and drainage to ensure the stability and geologic safety of the proposed project site and adjacent property. To ensure that the recommendations of the consultants have been incorporated into all proposed development the Commission, as specified in **Special Condition One (1)**, requires the applicant to comply with and incorporate the recommendations contained in the submitted geologic reports into all final design and construction, and to obtain the approval of the geotechnical consultants prior to commencement of construction. Final plans approved by the consultants shall be in substantial conformance with the plans approved by the Commission. Any substantial changes to the proposed development, as approved by the Commission, which may be recommended by the consultant shall require an amendment to the permit or a new coastal development permit.

Additionally, to minimize erosion and ensure stability of the project site, the project must include adequate drainage and erosion control measures. In order to achieve these goals, the Commission requires the applicant to submit drainage and interim erosion control plans certified by the geotechnical engineer. The Commission finds that landscaping of graded and disturbed areas on the subject site will serve to stabilize disturbed soils, reduce erosion and thus enhance and maintain the geologic stability of the site. Therefore, **Special Condition Three (3)** requires the applicant to submit landscaping plans certified by the consulting geotechnical engineer as in conformance with their recommendations for landscaping of the project site. **Special Condition Three (3)** also requires the applicant to utilize and maintain native and noninvasive plant species compatible with the surrounding area for landscaping the project site.

Further, the Commission finds that, for the project to ensure stability and avoid contributing significantly to erosion, all slopes and disturbed areas of the subject site must be landscaped, primarily with native plants, to stabilize disturbed soils and reduce erosion resulting from the development. Invasive and non-native plant species are generally characterized as having a shallow root structure in comparison with their high surface/foliage weight. The Commission notes that non-native and invasive plant species with high surface/foliage weight and shallow root structures do not serve to stabilize slopes and that such vegetation results in potential adverse effects to the stability of the project site. Native species, alternatively, tend to have a deeper root structure than non-native and invasive species, and once established aid in preventing erosion. Therefore, the Commission finds that in order to ensure site stability, all slopes and

disturbed and graded areas of the site shall be landscaped with appropriate native plant species, as specified in **Special Condition Three (3)**.

The Commission finds that controlling and diverting run-off in a non-erosive manner from the proposed structures, impervious surfaces, and building pad will also add to the geologic stability of the project site. Therefore, in order to minimize erosion and ensure stability of the project site, and to ensure that adequate drainage and erosion control is included in the proposed development, the Commission requires the applicants to submit drainage and erosion control plans certified by the geotechnical engineer, as specified in **Special Conditions Two (2)** and **Three (3)**.

In order to ensure that vegetation clearance for fire protection purposes does not occur prior to commencement of grading or construction of the proposed structures, the Commission finds that it is necessary to impose a restriction on the removal of natural vegetation as specified in **Special Condition Ten (10)**. This restriction specifies that natural vegetation shall not be removed until grading or building permits have been secured and construction of the permitted structures has commenced. The limitation imposed by **Special Condition Ten (10)** avoids loss of natural vegetative coverage resulting in unnecessary erosion in the absence of adequately constructed drainage and run-off control devices and implementation of the landscape and interim erosion control plans.

Furthermore, in order to ensure that excess excavated material is moved off site so as not to contribute to unnecessary landform alteration and to minimize erosion and sedimentation from stockpiled excavated soil, the Commission finds it necessary to require the applicant to dispose of the material at an appropriate disposal site or to a site that has been approved to accept fill material, as specified in **Special Condition Fourteen (14)**.

Although the conditions described above render the project sufficiently stable to satisfy the requirements of Section 30253, no project is wholly without risks. The proposed project is located in the Santa Monica Mountains, an area subject to an extraordinary potential for damage or destruction from wild fire. Typical vegetation in the Santa Monica Mountains consists mostly of coastal sage scrub and chaparral. Many plant species common to these communities produce and store terpenes, which are highly flammable substances (Mooney in Barbour, *Terrestrial Vegetation of California*, 1988). Chaparral and sage scrub communities have evolved in concert with, and continue to produce the potential for, frequent wild fires. The typical warm, dry summer conditions of the Mediterranean climate combine with the natural characteristics of the native vegetation to pose a risk of wild fire damage to development that cannot be completely avoided or mitigated.

Due to the fact that the proposed project is located in an area subject to an extraordinary potential for damage or destruction from wild fire, the Commission can only approve the project if the applicant assumes the liability from these associated risks. Through **Special Condition Four (4)**, the Assumption of Risk, Waiver of Liability, and Indemnity, the applicant acknowledges the nature of the fire hazards which exists on the site and which may affect the safety of the proposed development. Moreover, through acceptance of **Special Condition Four (4)**, the applicant also agrees to indemnify the Commission, its officers, agents and employees against

any and all expenses or liability arising out of the acquisition, design, construction, operation, maintenance, existence, or failure of the permitted project.

Finally, **Special Condition Eight (8)** requires the applicant to record a deed restriction that imposes the terms and conditions of this permit as restrictions on use and enjoyment of the property and provides any prospective purchaser of the site with recorded notice that the restrictions are imposed on the subject property.

For the reasons set forth above, the Commission finds that, as conditioned, the proposed project is consistent with §30253 of the Coastal Act.

C. WATER QUALITY

The Commission recognizes that new development in the Santa Monica Mountains has the potential to adversely impact coastal water quality through the removal of native vegetation, increase of impervious surfaces, increase of runoff, erosion, and sedimentation, and introduction of pollutants such as petroleum, cleaning products, pesticides, and other pollutant sources, as well as effluent from septic systems. 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, minimizing alteration of natural streams.***

The subject parcel is located in the Topanga Canyon watershed and contains slopes that are subject to soil slippage and erosion. The proposed development will result in an increase in impervious surfaces, which in turn decreases the infiltrative function and capacity of existing permeable land on site. The reduction in permeable space therefore leads 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 including 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. The discharge of these pollutants to coastal waters 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 which provide food and cover for aquatic species; disruptions to the reproductive cycle of aquatic species; and acute and sublethal toxicity in marine organisms leading to adverse changes in reproduction and feeding behavior. 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.

Therefore, in order to minimize the potential for such adverse impacts to water quality and aquatic resources resulting from runoff both during construction and in the post-development stage, the Commission requires the incorporation of Best Management Practices designed to control the volume, velocity and pollutant load of stormwater and dry weather flows leaving the developed site, including: 1) site design, source control and/or treatment control measures; 2) implementing erosion sediment control measures during construction and post construction; and 3) revegetating all graded and disturbed areas with primarily native landscaping. Critical to the successful function of post-construction structural BMPs in removing pollutants in stormwater to the Maximum Extent Practicable (MEP), is the application of appropriate design standards for sizing BMPs. The majority of runoff is generated from small storms because most storms are small. Additionally, storm water runoff typically conveys a disproportionate amount of pollutants in the initial period that runoff is generated during a storm event. Designing BMPs to accommodate (infiltrate, filter or treat) the runoff from the more frequent storms, rather than for the largest infrequent storms, results in improved BMP performance

The American Society of Civil Engineers (ASCE) and the Water Environment Federation (WEF) have recommended a numerical BMP design standard for storm water that is derived from a mathematical equation to maximize treatment of runoff volume for water quality based on rainfall/runoff statistics and which is economically sound.[1] The maximized treatment volume is cut-off at the point of diminishing returns for rainfall/runoff frequency. On the basis of this formula and rainfall/runoff statistics, the point of diminishing returns for treatment control is the 85th percentile storm event. Therefore, the Commission requires the selected post-construction structural BMPs be sized based on design criteria specified in **Special Condition Two (2)**, and finds this will ensure the proposed development will be designed to minimize adverse impacts to coastal resources, in a manner consistent with the water and marine policies of the Coastal Act.

Furthermore, interim erosion control measure implemented during construction and post construction landscaping will serve to minimize the potential for adverse impacts to water quality resulting from drainage runoff during construction and in the post-development stage. Therefore, the Commission finds that **Special Condition Three (3)** is necessary to ensure the proposed development will not adversely impact water quality or coastal resources.

Finally, the proposed development includes the installation of an on-site private sewage disposal system to serve the residence. The applicant's environmental health specialist performed infiltration tests. The County of Los Angeles Environmental Health Department has given in-concept approval of the proposed septic system, determining that the system meets the requirements of the plumbing code. The Commission has found that conformance with the provisions of the plumbing code is protective of resources. Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Section 30231 of the Coastal Act.

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[1] *Urban Runoff Quality Management*, *WEF Manual of Practice No. 23, ASCE manual and Report on Engineering Practice No. 87.* WEF, Alexandria, VA; ASCE, Reston, VA. 259 pp (1998); Urbonas, Guo, and Tucker, "Optimization of Stormwater Quality Capture Volume," in *Urban Stormwater Quality Enhancement - Source Control, Retrofitting, and Combined Sewere Technology, Proceedings of an Engineering Foundation Conference*, Harry C. Torno, ed. October 1989. New York: ASCE, pp. 94-110.

D. ENVIRONMENTALLY SENSITIVE HABITAT

Section 30240 of the Coastal Act protects environmentally sensitive habitat areas (ESHA) by restricting development in and adjacent to ESHA. 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.*

In addition, the Malibu/Santa Monica Mountains LUP provides policy guidance regarding the protection of environmentally sensitive habitats. The Coastal Commission has applied the following relevant policies as guidance in the review of development proposals in the Santa Monica Mountains.

> *P57 Designate the following areas as Environmentally Sensitive Habitat Areas (ESHAs): (a) those shown on the Sensitive Environmental Resources Map (Figure 6), and (b) any undesignated areas which meet the criteria and which are identified through the biotic review process or other means, including those oak woodlands and other areas identified by the Department of Fish and Game as being appropriate for ESHA designation.*
>
> *P63 Uses shall be permitted in ESHAs, DSRs, Significant Watersheds, and Significant Oak Woodlands, and Wildlife Corridors in accordance with Table l and all other policies of this LCP.*
>
> *P68 Environmentally sensitive habitat areas (ESHAs) shall be protected against significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas. Residential use shall not be considered a resource dependent use.*
>
> *P69 Development in areas adjacent to environmentally sensitive habitat areas (ESHAs) shall be subject to the review of the Environmental Review*

Board, 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.

P72 *Open space or conservation easements or equivalent measures may be required in order to protect undisturbed watershed cover and riparian areas located on parcels proposed for development. Where new development is proposed adjacent to Environmentally Sensitive Habitat Areas, open space or conservation easements shall be required in order to protect resources within the ESHA.*

P74 *New development shall be located as close as feasible to existing roadways, services, and existing development to minimize the effects on sensitive environmental resources.*

P82 *Grading shall be minimized for all new development to ensure the potential negative effects of runoff and erosion on these resources are minimized.*

P84 *In disturbed areas, landscape plans shall balance long-term stability and minimization of fuel load. For instance, a combination of taller, deep-rooted plants and low-growing ground covers to reduce heat output may be used. Within ESHAs and Significant Watersheds, native plant species shall be used, consistent with fire safety requirements.*

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, 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 project site is located within the Mediterranean Ecosystem of the Santa Monica Mountains. The Coastal Commission has found that the Mediterranean Ecosystem in the Santa Mountains is rare, and valuable because of its relatively pristine character, physical complexity, and resultant biological diversity. Large, contiguous, relatively pristine areas of native habitats, such as coastal sage scrub, chaparral, oak woodland, and riparian woodland have many special roles in the Mediterranean 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. Additional discussion of the special roles of these habitats in the Santa Monica Mountains ecosystem are discussed in the March 25, 2003 memorandum prepared by the Commission's Ecologist, Dr. John Dixon[2] (hereinafter "Dr. Dixon Memorandum"), which is incorporated as if set forth in full herein.

Unfortunately, the native habitats of the Santa Monica Mountains, such as coastal sage scrub, chaparral, oak woodland and riparian woodlands are easily disturbed by human activities. As discussed in the Dr. Dixon Memorandum, development has many well-documented deleterious effects on natural communities of this sort. These environmental impacts may be both direct and indirect and include, but certainly are not limited to, the effects of increased fire frequency, of fuel modification, including vegetation clearance, of introduction of exotic species, and of night lighting. Increased fire frequency alters plant communities by creating conditions that select for some species over others. The removal of native vegetation for fire protection results in the direct removal or thinning of habitat area. Artificial night lighting of development affects plants, aquatic and terrestrial invertebrates, amphibians, fish, birds and mammals. Thus, large, contiguous, relatively pristine areas of native habitats, such as coastal sage scrub, chaparral, oak woodland, and riparian woodlands are especially valuable because of their special roles in the Santa Monica Mountains ecosystem and are easily disturbed by human activity. Accordingly, these habitat types meet the definition of ESHA. This is consistent with the Commission's past findings in support of its actions on many permit applications and in adopting the Malibu LCP[3].

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

The project site is a vacant 20-acre parcel located in the Mesa area of Topanga in the east-central Santa Monica Mountains. The area surrounding the project site is characterized by natural hillside terrain, as well as several custom single-family residences. The subject parcel is a rectangular lot that is bisected in a north-south direction by Will Geer Road. Slopes on the site range from near level in the northeast portion of the property, to less than 1.5:1 in the southeast corner and below the prominent ridgeline located immediately west and above the property. The majority of the site contains rolling topography with several knolls and an average slope of about 3:1. A United States Geologic Survey designated intermittent blue-line stream crosses the southern portion of the property and enters Topanga Canyon Creek approximately ½ mile downstream.

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[2] The March 25, 2003 Memorandum Regarding the Designation of ESHA in the Santa Monica Mountains, prepared by John Dixon, Ph. D, is available on the California Coastal Commission website at http://www.coastal.ca.gov/ventura/smm-esha-memo.pdf

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

The subject parcel is undeveloped, but the northeast portion of the parcel, in the area of the proposed development, has been subject to substantial clearance of vegetation due in part to brush clearance requirements for a neighboring residence. (The Los Angeles County Fire Department requires brush to be cleared within 200 feet of existing structures.) Aerial photographs indicate that the majority of clearance occurred sometime in the last five years, and that in 2001, the cleared area contained habitat consistent with that on the remainder of the property.

The undisturbed portions of the property contain native chaparral vegetation contiguous with a larger area of native habitat, as well as some scattered Coast Live Oak trees (*Quercus agrifolia*) and a certified Malibu/Santa Monica Mountains LUP designated significant oak woodland surrounding the blue-line stream in the southeastern portion of the property. The submitted biological study update by Rachel Tierney, based on a site visit in June 2005 and February 6, 2012, outlines the area of clearance and indicates that the remainder of the site consists of the Chamise-Eastwood Manzanita series of chaparral habitat, with Coast Live Oak trees (*Quercus agrifolia*) in swales. No significant changes to the type, value or coverage of ESHA on the site were identified by the updated biological study since the subject project last came before the Commission in 2007.

In addition, because the clearance described above occurred without benefit of a coastal development permit, the existing approximately 2½ acre cleared area located outside of the required 200 foot brush clearance radius for structures on the neighboring property must also be considered chaparral habitat. Therefore, the entire site, with the exception of the area within the required 200 foot brush clearance radius for structures on the neighboring property (approximately 1.4-acres) is relatively undisturbed and part of a large, unfragmented block of chaparral and oak habitat. Due to the important ecosystem role of chaparral habitat in the Santa Monica Mountains (detailed in **Exhibit 1**), the Commission finds that the chaparral habitat on and surrounding the subject site meets the definition of ESHA under Section 30107.5 of the Coastal Act.

The Commission also considers the policies and provisions of the Malibu/Santa Monica Mountains LUP as guidance in considering development proposals. In this case, the LUP ESHA Map does not designate ESHA on the proposed project site, with the exception of an area of significant oak woodland in the southeast corner of the property. However, as provided under Policy 57 of the Malibu/Santa Monica Mountains LUP: "any undesignated areas which meet the criteria and are identified through the biotic review process or other means.." are also designated as ESHA. Based on the site specific biological analysis, the Commission determines that the chaparral habitat on the property meets the criteria and is therefore designated as ESHA.

As explained above, the project site and the surrounding area constitute an environmentally sensitive habitat area (ESHA) pursuant to Section 30107.5. Section 30240 of the Coastal Act requires that "environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas." Section 30240 restricts development on the parcel to only those uses that are dependent on the resource. The applicant proposes to construct a single-family residence on the parcel, which would result in the loss of ESHA habitat area and vegetation within the building

pad and driveway areas, as well as within those areas where fuel modification would be required for fire protection purposes. As single-family residences do not have to be located within ESHAs to function, the Commission does not consider single-family residences to be a use dependent on ESHA resources. Application of Section 30240, by itself, would require denial of the project, because the project would result in significant disruption of habitat values and is not a use dependent on those sensitive habitat resources.

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

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

In the subject case, the applicant purchased the property in December of 2002 for approximately $607,500. The parcel was designated in the County's certified Land Use Plan in 1986 for residential use (Rural Land II, which allows residential development at a maximum density of 1 dwelling unit per 5 acres). At the time the applicant purchased the parcel, the County's certified Land Use Plan (LUP) did not designate the vegetation on the site as ESHA, with the exception of the significant oak woodland in the southeast corner of the site. Based on this fact, along with the presence of existing and approved residential development on nearby parcels, the applicant had reason to believe that they had purchased a parcel on which they would be able to build a residence.

The Commission finds that in this particular case, other allowable uses for the subject site, such as a recreational park or a nature preserve, are not feasible and would not provide the owner an economic return on the investment. The parcel is twenty acres and there are other, residential developments to the north and south of the site. Public parkland and open space has been acquired in the vicinity, but there is no parkland or public open space adjacent to the project site.

There is currently not an offer to purchase the property from any public park agency. The Commission thus concludes that in this particular case there is no viable alternative use for the site other than residential development. The Commission finds, therefore, that outright denial of all residential use would interfere with reasonable investment-backed expectations and deprive the property of all reasonable economic use.

Next the Commission turns to the question of nuisance. There is no evidence that construction of a residence would create a nuisance under California law. Other houses have been constructed in similar situations in chaparral habitat in Los Angeles County, apparently without the creation of nuisances. The County's Health Department has not reported evidence of septic system failures. In addition, the County has reviewed and approved the applicant's proposed septic system, ensuring that the system will not create public health problems. Furthermore, the use that is proposed is residential, rather than, for example, industrial, which might create noise or odors or otherwise create a public nuisance. In conclusion, the Commission finds that a residential project can be allowed to permit the applicant a reasonable economic use of their property consistent with Section 30010 of the Coastal Act.

While the applicant is entitled under Section 30010 to an assurance that the Commission will not act in such a way as to take their property, this section does not authorize the Commission to avoid application of the policies of the Coastal Act, including Section 30240, altogether. Instead, the Commission is only directed to avoid construing these policies in a way that would take property. Aside from this instruction, the Commission is still otherwise directed to enforce the requirements of the Act. Therefore, in this situation, the Commission must still comply with Section 30240 by avoiding impacts that would disrupt and/or degrade environmentally sensitive habitat, to the extent this can be done without a taking of the property.

Obviously, the construction of residential development, including vegetation removal for both the development area as well as required fuel modification, grading, construction of a residence and accessory structures, and the use of the development by residents will result in unavoidable loss of ESHA. The development can be sited and designed to minimize ESHA impacts by measures that include but are not limited to: limiting the size of structures, limiting the number of accessory structures and uses, clustering structures, siting development in any existing disturbed habitat areas rather than undisturbed habitat areas, locating development as close to existing roads and public services as feasible, and locating structures near other residences in order to minimize additional fuel modification.

As the entire project site contains habitat determined to constitute ESHA (with the exception of approximately 1.4-acres of brushing required for fire protection for an off-site residence), the construction of a single family residence anywhere on the property will result in the loss of ESHA within the areas of the building pad, graded slopes, driveway, and required fuel modification. Additionally, removal of habitat area for such residential development and the presence of human activity on the site will result in impacts to the ESHA that will remain on the site through habitat fragmentation and disturbance through noise, lighting, and other impacts. The only alternative that could avoid these impacts would be the "no project" alternative. However, as discussed above, the "no project" alternative is not considered feasible as it would not afford the applicant a reasonable economic use of the property. Other alternatives considered

include siting the proposed development in different areas of the property, different sizes and designs of the proposed structures.

In this case, there is an existing residence on the adjacent parcel to the north of the subject site. Brushing required to provide fire protection for this existing residence extends onto the subject site. This approximately 1.4-acre brushed area does not meet the criteria of ESHA. Clustering the proposed residence and garage/guesthouse structure in the northeast area of the site where the brushed area is located, would allow for an overlap in fuel modification and brushing areas required for the existing residence and the proposed residence, thereby reducing the total amount of vegetation removal required. Additionally, siting development in this area would minimize impacts to the blue line stream and Malibu/Santa Monica Mountains LUP designated significant oak woodland that are located in the southern portion of the site. Further, this alternative would minimize impacts from landform alteration that would be required to place development on steeper slopes on either the eastern area of the site or on the western half of the property (across Will Geer Road). In addition to siting, other project alternatives were considered. Staff identified several modifications to the applicant's original proposal designed to cluster the proposed structures, including moving the guesthouse structure closer to the residence, reconfiguring the driveway, and deleting a pool cabana. An alternative project incorporating these modifications is now the project proposed by the applicant herein. This alternative clusters all structures within a proposed development area, excluding the area of the driveway and turnaround, of approximately 9,556 sq. ft. The Commission has determined, in past permit actions, that a maximum development area of 10,000 sq. ft. for a residence on a parcel zoned for residential development in this area of the Santa Monica Mountains is an appropriate amount of development to be approved within ESHA, in order to avoid a taking of property. So, the proposed project would conform to the maximum amount of development that the Commission has typically allowed in similar situations on sites containing ESHA.

However, although the development area would be limited to 9,556 sq. ft., the impacts of the development on ESHA will be far in excess of the development area because of the fuel modification that will be required to provide protection from wildfire. The Commission has found in past permit actions, that a new residential development within ESHA with a full 200 foot fuel modification radius will result in impact (either complete removal, irrigation, or thinning) to ESHA habitat of four to five acres. In this case, approximately 3-acres of ESHA will be directly impacted by the required fuel modification (in addition to the existing 1.4-acres of brushing already existing on the site).The following discussion of ESHA impacts from new development and fuel modification is based on the findings of the Malibu LCP[4].

Fuel modification is the removal or modification of combustible native or ornamental vegetation. It may include replacement with drought tolerant, fire resistant plants. The amount and location of required fuel modification would vary according to the fire history of the area, the amount and type of plant species on the site, topography, weather patterns, construction design, and siting of structures. There are typically three fuel modification zones applied by the Fire Department:

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

> Zone A (Setback Zone) is required to be a minimum of 20 feet beyond the edge of protected structures. In this area native vegetation is cleared and only ground cover, green lawn, and a limited number of ornamental plant species are allowed. This zone must be irrigated to maintain a high moisture content.
>
> Zone B (Irrigated Zone) is required to extend from the outermost edge of Zone A to a maximum of 80 feet. In this area ground covers may not extend over 18 inches in height. Some native vegetation may remain in this zone if they are adequately spaced, maintained free of dead wood and individual plants are thinned. This zone must be irrigated to maintain a high moisture content.
>
> Zone C (Thinning Zone) is required to extend from the outermost edge of Zone B up to 100 feet. This zone would primarily retain existing native vegetation, with the exception of high fuel species such as chamise, red shank, California sagebrush, common buckwheat and sage. Dead or dying vegetation must be removed and the fuel in existing vegetation reduced by thinning individual plants.

Thus, the combined required fuel modification area around structures can extend up to a maximum of 200 feet. If there is not adequate area on the project site to provide the required fuel modification for structures, then brush clearance may also be required on adjacent parcels.

Notwithstanding the need to protect structures from the risk of wildfire, fuel modification results in significant adverse impacts that are in excess of those directly related to the development itself. Within the area next to approved structures (Zone A), all native vegetation must be removed and ornamental, low-fuel plants substituted. In Zone B, most native vegetation will be removed or widely spaced. Finally, in Zone C, native vegetation may be retained if thinned, although particular high-fuel plant species must be removed (Several of the high fuel species are important components of the coastal sage scrub community). In this way, for a large area around any permitted structures, native vegetation will be cleared, selectively removed to provide wider spacing, and thinned.

Obviously, native vegetation that is cleared and replaced with ornamental species, or substantially removed and widely spaced will be lost as habitat and watershed cover. Additionally, thinned areas will be greatly reduced in habitat value. Even where complete clearance of vegetation is not required, the natural habitat can be significantly impacted, and ultimately lost. For instance, in coastal sage scrub and chaparral habitat, the natural soil coverage of the canopies of individual plants provides shading and reduced soil temperatures. When these plants are thinned, the microclimate of the area will be affected, increasing soil temperatures, which can lead to loss of individual plants and the eventual conversion of the area to a dominance of different non-native plant species. The areas created by thinning between shrubs can be invaded by non-native grasses that will over time out-compete native species.

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 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 (mourning dove, American crow, Western scrub-jay, Northern mockingbird)[5]. 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[6].

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[7]. The Argentine ant competes with native harvester ants and carpenter ants displacing them from the habitat[8]. 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[9]. In addition to specific effects

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[5] 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.

[6] 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.

[7] 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.

[8] 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.

[9] 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.

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[10]. 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 predator species are seen and more exotic arthropod species are present than in undisturbed habitats[11].

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.[12] 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[13].

The cumulative impacts of development on legal lots containing ESHA in the Santa Monica Mountains, including the required fuel modification and/or brushing is substantial. As discussed above, these impacts can be reduced by considering project alternatives and mitigation measures, but they cannot be completely avoided. The proposed project would be sited to minimize the amount of required fuel modification by overlapping with the adjacent residence, and the proposed structures have been clustered within a development area of 9,556 sq. ft. However, the Commission can only find that this project alternative minimizes ESHA impacts if the remaining ESHA on the site is preserved to the extent possible. As such, this project alternative, as a whole, will minimize impacts to ESHA to the maximum extent feasible if the remaining ESHA is protected.

This project is inconsistent with Section 30240 of the Coastal Act, and is only being allowed to avoid a taking of private property for public use. The Commission finds that for the project to be consistent with Section 30240 to the maximum extent feasible, while providing a reasonable economic use, this project must constitute the maximum amount of ESHA destruction on the site and the remaining ESHA on the property must be preserved in perpetuity. To permanently ensure that no further development occurs on the site outside of the proposed development area, **Special Condition Eleven (11)** prohibits all development outside of the proposed development area and beyond Zone B of the applicant's Fuel Modification Plan as shown in **Exhibit 5.** Several exceptions are provided to the open space restriction that allow for fuel modification and drainage systems pursuant to the requirements of this permit, and, if approved as an amendment

[10] 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.
[11] Longcore, T.R. 1999. Terrestrial arthropods as indicators of restoration success in coastal sage scrub. Ph.D. Dissertation, University of California, Los Angeles.
[12] Christian, C. 2001. Consequences of a biological invasion reveal the importance of mutualism for plant communities. Nature 413:635-639.
[13] 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.

to this coastal development permit or a new coastal development permit, for the planting of native vegetation and other restoration activities, construction and maintenance of public hiking trails, equestrian facilities in fuel modification Zones B and C that do not expand fuel modification beyond what is required for the approved residence, and roads, trails, and utilities within existing easements. The proposed Open Space area required by **Special Condition Eleven (11)** is depicted in **Exhibit 8a and 8b.**

Special Condition Eight (8) requires the applicant to record a deed restriction that imposes the terms and conditions of this permit as restrictions on use and enjoyment of the property and provides any prospective purchaser of the site with recorded notice of the conditions of this permit, including the restrictions imposed on open space and future development on the subject property.

To ensure that Special Condition 11 is properly implemented, **Special Condition Twelve (12)** is required, which irrevocably authorizes Coastal Commission staff and the staff of the Mountains Recreation and Conservation Authority (MRCA) to enter onto the property to undertake site inspections for the purpose of monitoring compliance with the open space restrictions of Special Condition No. 11, subject to Commission staff or MRCA staff providing 24 hours advanced notice prior to entering the property. It is the intent of the Commission that MRCA staff will monitor this aspect of permit condition compliance, and MRCA already has indicated agreement with that approach, as has the applicant.

The MRCA is a partnership between the Santa Monica Mountains Conservancy, the Conejo Recreation and Park District, and the Rancho Simi Recreation and Park District. The MRCA is dedicated to the preservation and management of open space, parkland, watershed lands, trails, and wildlife habitat. The MRCA manages and provides ranger services for almost 50,000 acres of public lands and parks that it owns or are owned by the Santa Monica Mountains Conservancy. The Commission finds that it is appropriate to provide for the MRCA to monitor compliance with the open space restrictions because it is a public agency that has park rangers and other staff active in the Santa Monica Mountains. The MRCA acquires and manages properties for recreation and conservation purposes in the Santa Monica Mountains. MRCA staff and park rangers routinely monitor properties under MRCA management in the Santa Monica Mountains and enforce State law and local ordinances. As conditioned to restrict the use of the property outside of the development area and Zone B of the fuel modification area to open space uses, and to provide for site inspection to monitor compliance with this restriction, impacts to ESHA within the open space area will be minimized.

As described above, the proposed project will be sited to minimize the amount of required fuel modification by overlapping with fuel modification required for the adjacent residence, the proposed structures are clustered within a development area of 9,556 sq. ft., and development has been restricted on the remainder of the property. However, while direct impacts to ESHA through the removal of vegetation would be avoided on the site outside of the development and fuel modification areas, through the open space and conservation easement, indirect impacts to habitat within the open space area will still result from the presence of the proposed development and human activities taking place on the site. The placement of development within an ESHA area will result in habitat fragmentation. Wildlife either living on the site or migrating across the

property will undoubtedly avoid areas with noise, lighting or other human activity. As described above and in Exhibit 1, fuel modification activities result in conversion of habitat and impacts to insects, birds, and other organisms even outside of the fuel modification area. Further, even though no development will be permitted within the open space area, there will be a net loss of ESHA area on the project site. The Commission finds that there are feasible mitigation measures available that would compensate for the loss of chaparral ESHA resulting from the removal, conversion, or modification of natural habitat for new development including the development area, fuel modification and brush clearance. The acreage of habitat that is impacted must be determined based on the size of the required fuel modification zone.

In this case, the applicants' fuel modification plan is the same plan as the plan previously approved by the Los Angeles County Fire Department on April 8, 2005. The proposed fuel modification plan shows the use of the standard three zones of vegetation modification, with a reduced Zone B. Zone "A" (setback zone) extends 20 feet from the proposed residence and garage. Zone "B" (irrigation zone) extends approximately 80 feet beyond Zone "A"; however, the applicant has stated that the Fire Department has given verbal approval to reducing Zone "B" to a width of 30 feet, and is awaiting receipt of approved plans reflecting this reduction. Zone "C" (thinning zone) extends from Zone "B" to 200 feet from the proposed residence and garage. No brush clearance will be required on adjacent properties. However, approximately two feet of additional clearance will be required on either side of the widened Will Geer Road. To ensure that approval from the Fire Department for the proposed fuel modification plan is received prior to issuance of the Coastal Development Permit, **Special Condition Seventeen (17)** is recommended, requiring that all local planning, utility, and fire department approvals are received prior to CDP issuance.

As noted above, because disturbance to the on-site chaparral habitat occurred without benefit of a coastal development permit, the existing approximately 2½ acre cleared area located outside of the required 200 foot brush clearance radius for structures on the neighboring property must also be considered chaparral habitat. Therefore, the entire site, with the exception of the area within the required 200 foot brush clearance radius for structures on the neighboring property is considered an environmentally sensitive habitat area (ESHA) pursuant to Section 30107.5 of the Coastal Act, and the provisions for ESHA designation under Policy 57 of the Malibu/Santa Monica Mountains LUP. Therefore, the ESHA areas that will be impacted by the proposed project are the areas of proposed construction and road widening, as well as fuel modification and brush clearance required for the proposed structures and widened road, with the exception of those areas within the required 200 foot brush clearance radius for structures on the neighboring property. The precise area of ESHA that will be impacted by the proposed development has not been calculated. Therefore, the Commission finds that it is necessary to require the applicant to delineate the ESHA both on and offsite that will be impacted by the proposed development including the areas affected by fuel modification and brushing activities, as required by **Special Condition Nine (9)**.

While impacts resulting from development within ESHA can be reduced through siting and design alternatives for new development and by ensuring that the remaining ESHA on the site is permanently protected, they cannot be completely avoided, given the location of ESHA on and

around the project site, the high fire risk in the Santa Monica Mountains, and the need to modify fuel sources to protect life and property from wildfire.

Fuel modification is the removal or modification of combustible native or ornamental vegetation. It may include replacement with drought tolerant, fire resistant plants. The amount and location of required fuel modification will vary according to the fire history of the area, the amount and type of plant species on the site, topography, weather patterns, construction design, and siting of structures. There are typically three fuel modification zones applied by the Los Angeles County Fire Department, which include a setback zone immediately adjacent to the structure (Zone A) where all native vegetation must be removed, an irrigated zone adjacent to Zone A (Zone B) where most native vegetation must be removed or widely spaced, and a thinning zone (Zone C) where native vegetation may be retained if thinned or widely spaced although particular high-fuel plant species must be removed. The combined required fuel modification area around structures can extend up to a maximum of 200 feet. If there is not adequate area on the project site to provide the required fuel modification for structures, then brush clearance may also be required on adjacent parcels. In this way, for a large area around any permitted structures, native vegetation will be cleared, selectively removed to provide wider spacing, and thinned. The Commission has found in past permit actions, that a new residential development (with a 10,000 sq. ft. development area) within ESHA with a full 200 foot fuel modification radius will result in impact (either complete removal, irrigation, or thinning) to ESHA habitat of four to five acres.

Obviously, native vegetation that is cleared and replaced with ornamental species or substantially removed and widely spaced will be lost as habitat and watershed cover. As discussed in the Dr. Dixon Memorandum[14], 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. Further, fuel modification can result in changes to the composition of native plant and wildlife communities, thereby reducing their habitat value. Although the impacts from habitat removal cannot be avoided, the Commission finds that the loss of ESHA resulting from the removal, conversion, or modification of natural habitat for new development including the building site area, and fuel modification can be mitigated in order to ensure that ESHA impacts are minimized to the extent feasible.

The Commission has identified three appropriate methods for providing mitigation for the unavoidable loss of ESHA resulting from development; namely, habitat restoration, habitat conservation, and payment for mitigation. The Commission finds that any of these measures is appropriate in this case to mitigate the loss of ESHA on the project site. The first method is to provide mitigation through the restoration of an area of degraded habitat (either on the project site, or at an off-site location) that is equivalent in size to the area of habitat impacted by the development. A restoration plan must be prepared by a biologist or qualified resource specialist and must provide performance standards, and provisions for maintenance and monitoring. The restored habitat must be permanently preserved through the recordation of an open space easement.

[14] The March 25, 2003 Memorandum Regarding the Designation of ESHA in the Santa Monica Mountains, prepared by John Dixon, Ph. D, is available on the California Coastal Commission website at http://www.coastal.ca.gov/ventura/smm-esha-memo.pdf

The second habitat impact mitigation method is habitat conservation. This includes the conservation of an area of intact habitat of a similar type as that impacted equivalent to the area of the impacted habitat. The parcel containing the habitat conservation area must be restricted from future development and permanently preserved. If the mitigation parcel is larger in size than the impacted habitat area, the excess acreage could be used to provide habitat impact mitigation for other development projects that impact ESHA.

The third habitat impact mitigation option is the payment for mitigation of impacts to habitat. The payment is based on the habitat types in question, the cost per acre to restore or create comparable habitat types, and the acreage of habitat affected by the project. The Commission has, in past permit decisions, determined the appropriate payment for the restoration or creation of chaparral and coastal sage scrub habitat, based on research carried out by the Commission's biologist. A range of cost estimates was obtained that reflected differences in restoration site characteristics including topography (steeper is harder), proximity to the coast (minimal or no irrigation required at coastal sites), types of plants (some plants are rare or difficult to cultivate), density of planting, severity of weed problem, condition of soil, etc.

The acreage of ESHA that is impacted must be determined based on the size of the development area, required fuel modification (as identified on the fuel modification plan approved by the Los Angeles County Fire Department) on the site, and required brush clearance off-site. The Commission finds that it is necessary to condition the applicant to delineate the total acreage of ESHA on the site (and offsite brush clearance areas, if applicable) that will be impacted by the proposed development, and provide mitigation to compensate for this loss of habitat, through one of the three methods described above. Only as conditioned will the proposed project minimize impacts to ESHA, pursuant to Section 30240 of the Coastal Act.

The Commission has determined that the appropriate mitigation for loss of or chaparral ESHA should be based on the actual installation of replacement plantings on a disturbed site, including the cost of acquiring the plants (seed mix and container stock) and installing them on the site (hydroseeding and planting). Three cost estimates were obtained for the installation of plants and seeds for one-acre of restoration. These estimates were $9,541, $12,820, and $13,907 per acre of plant installation. The Commission finds it appropriate to average the three estimates of plant installation to arrive at the reasonable in-lieu fee to mitigate for the loss of ESHA associated with the approval of development within an ESHA. Based on this averaging, the required in-lieu fee for habitat mitigation is $12,000 (rounded down from the average figure of $12,089 to simplify administration) per acre of habitat.

The Commission finds that the in-lieu fee of $12,000 per acre is appropriate to provide mitigation for the habitat impacts to ESHA areas where all native vegetation will be removed (building site and the "A" zone required for fuel modification), and where vegetation will be significantly removed and any remaining vegetation will be subjected to supplemental irrigation (the "B" zone or any other irrigated zone required for fuel modification). In these areas, complete removal or significant removal of ESHA, along with irrigation completely alters the habitat and eliminates its value to the native plant and animal community.

ESHA modified for the "C" zone that is thinned but non-irrigated (required for fuel modification) is certainly diminished in habitat value, but unlike the building site, "A" zone, "B" zone, and any other irrigated zone, habitat values are not completely destroyed. Native vegetation in the "C" zone is typically required to be thinned, and shrubs must be maintained at a certain size to minimize the spread of fire between the individual plants. This area is not typically required to be irrigated, although in this case, as discussed below, temporary irrigation may be required in order to re-establish chaparral vegetation that had previously been removed by dirt bike and all-terrain vehicle use. As such, the Commission finds that it is not appropriate to require the same level of in-lieu fee mitigation for impacts to ESHA within a non-irrigated "C" zone required for fuel modification. Although the habitat value in the "C" zone (or any other non-irrigated zone) is greatly reduced, it is not possible to precisely quantify the reduction. The Commission's biologist believes that the habitat value of non-irrigated fuel modification zones is reduced by at least 25 percent (and possibly more) due to the direct loss of vegetation, the increased risk of weed invasion, and the proximity of disturbance. The Commission finds that it is also less costly and difficult to restore chaparral habitat when some of the native vegetation remains, rather than when the entire native habitat is removed. Because of the uncertainty and the inability to precisely quantify the reduction in habitat value, the Commission concludes that it is warranted to impose a mitigation fee of $3,000 per acre (one quarter of the cost of full restoration) for the "C" zone or other non-irrigated fuel modification zone.

In this case, the applicant's proposed fuel modification plan shows the use of the standard three zones of vegetation modification, with a reduced Zone B. Zone "A" (setback zone) extends 20 feet from the proposed residence and garage. Zone "B" (irrigation zone) extends approximately 80 feet beyond Zone "A"; however, the applicant has stated that the Fire Department gave verbal approval for a reduction of Zone "B" to a width of 30 feet. Zone "C" (thinning zone) extends from Zone "B" to 200 feet from the proposed residence and garage. No brush clearance will be required on adjacent properties. However, approximately two feet of additional clearance will be required on either side of the widened Will Geer Road. To ensure that approval from the Fire Department for the proposed fuel modification plan is received prior to issuance of the Coastal Development Permit, **Special Condition Seventeen (17)** is recommended, requiring that all local planning, utility, and fire department approvals are received prior to CDP issuance.

As noted above, because disturbance to the on-site chaparral habitat occurred without benefit of a coastal development permit, the existing approximately 2½ acre cleared area located outside of the required 200 foot brush clearance radius for structures on the neighboring property must also be considered chaparral habitat. Thus, the entire site, with the exception of the area within the required 200 foot brush clearance radius for structures on the neighboring property is considered an environmentally sensitive habitat area (ESHA) pursuant to Section 30107.5 of the Coastal Act, and the provisions for ESHA designation under Policy 57 of the Malibu/Santa Monica Mountains LUP. Therefore, the ESHA areas that will be impacted by the proposed project are the areas of proposed construction and road widening, as well as fuel modification and brush clearance required for the proposed structures and widened road, with the exception of those areas within the required 200 foot brush clearance radius for structures on the neighboring property. The appropriate in-lieu fee calculation would then be based on $12,000 per acre for any irrigated fuel modification area (the "A" and "B" Zones) and $3,000 per acre of non-irrigated

fuel modification area (zone "C") outside of the existing 200 foot brush clearance radius for the neighboring property to the north.

Should the applicant choose the in-lieu fee mitigation method, the fee shall be provided to the Mountains Recreation and Conservation Authority for the acquisition or permanent preservation of natural habitat areas within the coastal zone. This mitigation method is provided for in **Special Condition Nine (9)**, **subpart C**.

The Commission finds that the use of non-native and/or invasive plant species for residential landscaping results in both direct and indirect adverse effects to native plants species indigenous to the Malibu/Santa Monica Mountains area. Adverse effects from such landscaping result from the direct occupation or displacement of native plant communities by new development and associated non-native landscaping. Indirect adverse effects include offsite migration and colonization of native plant habitat by non-native/invasive plant species (which tend to outcompete native species) adjacent to new development. The Commission notes that the use of exotic plant species for residential landscaping has already resulted in significant adverse effects to native plant communities in the Malibu/Santa Monica Mountains area. Therefore, in order to minimize adverse effects to the indigenous plant communities of the Malibu/Santa Monica Mountains area, **Special Condition Three (3)** requires that all landscaping consist primarily of native plant species and that invasive plant species shall not be used.

As noted above, disturbance and removal of approximately 2.5-acres of chaparral habitat has occurred on the project site without benefit of a coastal development permit. This area is in addition to brush clearance that has been carried out on the site in order to provide the required fire protection clearance within a 200-foot radius around existing structures on adjacent parcels. The proposed development area, all structures, driveway, and turnaround will all be located within the 2.5-acre disturbed area. Further, the required fuel modification for the proposed residence, garage, and guesthouse will be located within the disturbed area. Finally, there is an area of approximately 10,000 sq. ft. area that is located outside of both the fuel modification radius for the proposed development and the brush clearance radius for the existing residence to the north. The applicant proposes, as part of this project, to restore the 10,000 sq. ft. area with native chaparral plant species. In past permit actions on residential development in the Santa Monica Mountains the Commission has allowed habitat restoration within chaparral ESHA and has required disturbed chaparral ESHA to be restored, provided that restoration and revegetation is implemented successfully and in a manner consistent with all ESHA protection policies.

Therefore, in order to ensure that the proposed revegetation is successfully implemented in a manner that is protective of chaparral ESHA, **Special Condition Fifteen (15)** requires the applicant to submit a final restoration/revegetation plan that includes provisions for remedial planting of native species compatible with the surrounding chaparral plant community. In order to ensure that the proposed restoration is successful, **Special Condition Fifteen (15)** requires the applicants to submit annual performance reports during a five-year monitoring period. If the restoration is in part, or in whole, unsuccessful, **Special Condition Fifteen (15)** requires the applicants to submit a revised or supplemental restoration plan.

However, as the majority of unpermitted vegetation clearance has occurred within the 200-foot fuel modification radius for the proposed development, full restoration of the habitat is not feasible given fuel modification requirements. Nonetheless, it is possible to restore some chaparral vegetation to areas within Zone "B" (the irrigated zone) and Zone "C" (the thinning zone), consistent with the spacing and flammability requirements of the Los Angeles County Fire Department, and therefore recover, in diminished form, some of the habitat value of the chaparral community that was removed. Therefore, in order to minimize impacts on chaparral habitat on the subject site, **Special Condition Three (3)** requires the applicant to plant areas within Zone "B" (the irrigated zone) and Zone C (the thinning zone) that have been previously disturbed and/or cleared with chaparral species consistent with the surrounding chaparral habitat and with spacing and flammability requirements of the Los Angeles County Fire Department (Forestry Division). Temporary irrigation, for a period of time not to exceed two (2) years, may be used to establish chaparral habitat in Zone C.

The Commission notes that streams and drainages, such as the numerous swales and the unnamed blue-line stream located in the southeastern portion of the subject site, provide important habitat for wetland and riparian plant and animal species. Section 30231 of the Coastal Act provides that the quality of coastal waters and streams shall be maintained and restored whenever feasible through means such as: controlling runoff, preventing interference with surface water flows and alteration of natural streams, and by maintaining natural vegetation buffer areas. In past permit actions the Commission has found that new development adjacent to coastal streams and natural drainages results in potential adverse impacts to riparian habitat and marine resources from increased erosion, contaminated storm runoff, introduction of non-native and invasive plant species, disturbance of wildlife, and loss of riparian plant and animal habitat. The Commission finds that potential adverse effects of the proposed development on riparian habitat and marine resources may be further minimized through the implementation of a drainage and polluted runoff control plan, which will ensure that erosion is minimized and polluted run-off from the site is controlled and filtered before it reaches natural drainage courses within the watershed. Therefore, the Commission requires **Special Condition Two (2)**, the Permanent Drainage and Polluted Runoff Control Plan, which requires the applicant to incorporate appropriate drainage devices and Best Management Practices (BMPs) to ensure that run-off from the proposed structures, impervious surfaces, and building pad area is conveyed offsite in a non-erosive manner and is treated/filtered to reduce pollutant load before it reaches coastal waterways.

In addition, the Commission has found that night lighting of areas in the Malibu/Santa Monica Mountains area creates a visual impact to nearby scenic roads, parks, and trails. In addition, night lighting may alter or disrupt feeding, nesting, and roosting activities of native wildlife species. The subject site contains environmentally sensitive habitat. Therefore, **Special Condition Seven (7)**, the Lighting Restriction, limits night lighting of the site in general; limits lighting to the developed area of the site; and specifies that lighting be shielded downward. The restriction on night lighting is necessary to protect the nocturnal rural character of this portion of the Santa Monica Mountains consistent with the scenic and visual qualities of this coastal area. In addition, low intensity security lighting will assist in minimizing the disruption of wildlife traversing this area at night that are commonly found in this rural and relatively undisturbed area.

Thus, the lighting restrictions will attenuate the impacts of unnatural light sources and reduce impacts to sensitive wildlife species.

Furthermore, fencing of the site would adversely impact the movement of wildlife through the chaparral ESHA on this parcel. Therefore, the Commission finds it is necessary to limit fencing to the building pad area as required in **Special Condition Three (3)**.

In addition, rodenticides containing anticoagulants have been linked to the death of sensitive predator species including mountain lions and raptors. Therefore, in order to avoid adverse impacts to sensitive predator species, **Special Condition Three (3)** prohibits the use of any rodenticides containing anticoagulants on the subject site.

Finally, the Commission finds that the amount and location of any new development that may be proposed in the future on the subject site is significantly limited by the unique nature of the site and the environmental constraints discussed above. Therefore, to ensure that any future structures, additions, change in landscaping or intensity of use at the project site, that may otherwise be exempt from coastal permit requirements, are reviewed by the Commission for consistency with the resource protection policies of the Coastal Act, **Special Condition Six (6)**, the future development restriction, has been required. **Special Condition Eight (8)** requires the applicant to record a deed restriction that imposes the terms and conditions of this permit as restrictions on use and enjoyment of the property and provides any prospective purchaser of the site with recorded notice that the restrictions are imposed on the subject property.

For the reasons set forth above, the Commission finds that the proposed project, as conditioned, is consistent with Sections 30230, 30231, and 30240 of the Coastal Act**.**

E. VISUAL RESOURCES

Coastal Act Section 30210 states:

> *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Coastal Act Section 30212.5 states:

> *Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.*

Coastal Act Section 30213 states:

> *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.*

Coastal Act Section 30223 states:

> *Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.*

Coastal Act Section 30252 states:

> *The location and amount of new development should maintain and enhance public access to the coast 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.*

The Coastal Act mandates that maximum public access and recreational opportunities be provided and that development not interfere with the public's right to access the coast. Additionally, the Coastal Act mandates that lower cost visitor and recreational facilities, such as public hiking and equestrian trails, shall be protected, encouraged, and provided, where feasible. The subject site is located within a rural area characterized by expansive, naturally vegetated mountains and hillsides.

In the Malibu/Santa Monica Mountains area, the existing system of heavily used historic trails located on private property has been adversely impacted by the conversion of open lands to housing. In an effort to preserve and formalize the public's right to use these trails, Los Angeles County adopted the Riding and Hiking Trails Master Plan for the Santa Monica Mountains, which is adopted by ordinance into the highway element of the County's 1982 General Management Plan for the Santa Monica Mountains National Recreation Area as updated in 1984 as the Land Protection Plan. The trail system is mapped as part of the 1986 certified Land Use Plan (LUP) for the Malibu/Santa Monica Mountains Area, a component of the County's Local Coastal Program. This trail system has become an important and commonly used recreational asset and a means of providing access to and links between natural, scenic, and recreational areas in the mountains.

The subject site is located in the Mesa area of Topanga, which is known for its scenic vistas of the Santa Monica Mountains. The site is located immediately west of and below Malibu-Santa Monica Mountains Land Use Plan (LUP) designated scenic ridgeline, and is visible from the Henry Ridge Trail and from public viewing areas in Topanga State Park.

The applicant proposes to construct a two story, 30 foot high, 4,327 sq. ft. single family residence, 1,348 sq. ft. detached three-car garage and workshop, 742 sq. ft. guesthouse, trellis, driveway, turnaround, septic system, swimming pool, spa, retaining walls, well, water tank,

landscaping, widening of Will Geer Road from 16 ft. to 20 ft., and approximately 344 cu. yds. of grading (222 cu. yds. cut, 122 cu. yds. fill). The applicant has minimized the proposed grading for the project, which includes only minor grading in the immediate area of the building pad, driveway, and Will Geer Road. The proposed residence, garage, and guesthouse are not excessive in height or size and are compatible with other existing residential development in the area. However, the proposed development will be in an area characterized by vacant land and undisturbed hillside terrain. As the proposed residence will be unavoidably visible from scenic viewing areas, the Commission finds it necessary to require mitigation measures to minimize visual impacts associated with development of the project site.

Requiring the residence to be finished in a color consistent with the surrounding natural landscape and, further, by requiring that windows of the proposed structure be of a non-reflective glass type, can minimize impacts on public views. To ensure visual impacts associated with the colors of the structure and the potential glare of the window glass are minimized, the Commission requires the applicant to use colors compatible with the surrounding environment and non-glare glass, as detailed by **Special Condition Five (5).**

Visual impacts associated with proposed development can be further reduced by the use of appropriate and adequate landscaping. Thus, **Special Condition Three (3)** requires the applicant to prepare a landscape plan relying mostly on native, noninvasive plant species to ensure that the vegetation on site remains visually compatible with the native flora of surrounding areas. Implementation of **Special Condition Three (3)** will soften the visual impact of the development from public views. To ensure that the final approved landscaping plans are successfully implemented, **Special Condition Three (3)** also requires the applicant to revegetate all disturbed areas in a timely manner and includes a monitoring component to ensure the successful establishment of all newly planted and landscaped areas over time.

As noted above, the chaparral habitat on site has been disturbed and cleared without benefit of a coastal development permit, in part due to brush clearance requirements for a neighboring property north of the subject site. The cleared areas are visually incompatible with the surrounding chaparral habitat. The applicant proposes to revegetate an approximately 10,000 sq. ft. area that was cleared without benefit of a coastal development permit, and that is located outside of both the fuel modification radius for the proposed development and the brush clearance radius for the existing residence to the north. In past permit actions on residential development in the Santa Monica Mountains the Commission has allowed habitat restoration within chaparral ESHA and has required disturbed chaparral ESHA to be restored, provided that restoration and revegetation is implemented successfully and in a manner consistent with all ESHA protection and visual resource policies.

Therefore, in order to ensure that the proposed revegetation is successfully implemented in a manner that minimizes impacts to public views, **Special Condition Fifteen (15)** requires the applicant to submit a final restoration/revegetation plan that includes provisions for remedial planting of native species compatible with the surrounding chaparral plant community. In order to ensure that the proposed restoration is successful, **Special Condition Fifteen (15)** requires the applicants to submit annual performance reports during a five-year monitoring period. If the

restoration is in part, or in whole, unsuccessful, **Special Condition Fifteen (15)** requires the applicants to submit a revised or supplemental restoration plan.

However, as the majority of vegetation clearance has occurred within the 200-foot fuel modification radius for the proposed development, full restoration of the habitat is not feasible given fuel modification requirements. However, it is possible to restore some chaparral vegetation to areas within Zone "B" (the irrigated zone) and Zone "C" (the thinning zone), consistent with the spacing and flammability requirements of the Los Angeles County Fire Department, and therefore recover, in diminished form, some of the visual and habitat value of the chaparral community that was removed. Therefore, in order to minimize impacts on chaparral habitat on the subject site, **Special Condition Three (3)** requires the applicant to plant areas within Zone "B" (the irrigated zone) and Zone C (the thinning zone) that have been previously disturbed and/or cleared with chaparral species consistent with the surrounding chaparral habitat and with spacing and flammability requirements of the Los Angeles County Fire Department (Forestry Division). Temporary irrigation, for a period of time not to exceed two (2) years, may be used to establish chaparral habitat in Zone C.

The Commission notes that additional development could significantly increase the visual impacts of the project. Therefore, in order to permanently ensure that no further development occurs on the site, the Commission finds it necessary to prohibit all development outside of the proposed development area. As detailed in **Special Condition Eleven (11),** the Open Space Restriction will prohibit all development, with the exception of fuel modification and drainage control activities carried out in accordance with **Special Condition Two (2)** and **Special Condition Three (3). Special Condition Eleven (11)** allows planting of native vegetation and other restoration activities, and construction and maintenance of public hiking trails, if approved by the Commission as an amendment to this coastal development permit, or as a new coastal development permit. In addition, as the more gently rolling areas adjacent to the proposed residence may be appropriate for equestrian facilities, **Special Condition Eleven (11)** allows equestrian facilities in fuel modification Zones B and C, provided that the facilities do not expand fuel modification beyond what is required for the approved residence, and are approved as an amendment to this coastal development permit or as a new coastal development permit. **Special Condition Eleven (11)** also makes an exception for existing road, trail, and utilities easements.

Regarding future developments or improvements, certain types of development to the property, normally associated with a single-family residence, which might otherwise be exempt, have the potential to impact scenic and visual resources in this area. It is necessary to ensure that any future development or improvements normally associated with the entire property, which might otherwise be exempt, are reviewed by the Commission for compliance with the scenic resource policy, Section 30251 of the Coastal Act. **Special Condition Six (6)**, the Future Development Restriction, will ensure that the Commission will have the opportunity to review future projects for compliance with the Coastal Act. Finally, **Special Condition Eight (8)** requires the applicant to record a deed restriction that imposes the terms and conditions of this permit as restrictions on use and enjoyment of the subject property and provides any prospective purchaser with recorded notice that the restrictions are imposed on the subject property.

The proposed project, as conditioned, will not result in a significant adverse impact to scenic public views or character of the surrounding area. Therefore the Commission finds that, as conditioned, the proposed development is consistent with Section 30251 of the Coastal Act.

F. UNPERMITTED DEVELOPMENT

Development has occurred on the subject site without the required coastal development permit, including, but not limited to, removal of approximately 2½ acres of chaparral habitat outside of the required 200 foot brush clearance radius for structures on the adjacent property to the north of the subject site.

The applicant proposes to construct the proposed project within the area of unpermitted vegetation removal. The majority of the approximately 2½ acre area of chaparral vegetation clearance is located within the 200-foot fuel modification radius required by the Los Angeles County Fire Department and thus is addressed in **Special Condition Three (3)** (Landscaping and Erosion Control Plans). The applicant proposes to revegetate the remaining approximately 10,000 sq. ft. area of unauthorized clearance. In order to ensure that the matter of unpermitted development is resolved in a timely manner, **Special Condition Sixteen (16)** requires that the applicant satisfies all conditions of this permit that are prerequisite to the issuance of this permit within 180 days of Commission action, or within such additional time as the Executive Director may grant for good cause.

Although development has occurred prior to submission of this permit application, consideration of this application by the Commission has been based solely upon the Chapter 3 policies of the Coastal Act. Commission review and action on this permit application does not constitute a waiver of any legal action with regard to the alleged violation nor does it constitute an admission as to the legality of any development undertaken on the subject site without a coastal 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 Development Permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program, which conforms to Chapter 3 policies of the Coastal Act. The preceding sections provide findings that the proposed projects will be in conformity with the provisions of Chapter 3 if certain conditions are incorporated into the projects and are accepted by the applicant. As conditioned, the proposed development will avoid

or minimize adverse impacts and is found to be consistent with the applicable policies contained in Chapter 3. The following special conditions are required to assure the project's consistency with Section 30604 of the Coastal Act:

Special Conditions 1 through 17

Therefore, the Commission finds that approval of the proposed development, as conditioned, will not prejudice the County of Los Angeles' ability to prepare a Local Coastal Program for this area which is also consistent with the policies of Chapter 3 of the Coastal Act, as required by Section 30604(a).

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. As discussed in detail above, project alternatives and mitigation measures have been considered and incorporated into the project. Five types of mitigation actions include those that are intended to avoid, minimize, rectify, reduce, or compensate for significant impacts of development. Mitigation measures required as part of this coastal development permit include the avoidance of impacts to ESHA through clustering structures, prohibiting development outside of the approved development area as required by the open space restriction, and identifying appropriate location for disposal of excess cut material. Mitigation measures required to minimize impacts include requiring drainage best management practices (water quality), interim erosion control (water quality and ESHA), limiting lighting (ESHA), restricting structure color (visual resources), requiring future improvements to be considered through a CDP, and employing non-chlorine water purification for the swimming pool (water quality). Restoration of an unpermitted grading area is required as a mitigation measure to rectify impacts to ESHA. Finally, the habitat impact mitigation condition is required to compensate for impacts to ESHA.

The Commission finds that the proposed project, as conditioned, will not have any significant adverse effects on the environment, within the meaning of the California Environmental Quality Act of 1970, that could be substantially reduced by an available, feasible alternative or an additional feasible mitigation measure. Therefore, the proposed project, as conditioned, has been adequately mitigated and is determined to be consistent with CEQA and the policies of the Coastal 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 incorporates its findings on Coastal Act consistency at this point as if set forth in full. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As discussed in detail above, project alternatives and mitigation measures have been considered and incorporated into the project. Five types of mitigation actions include those that are intended to avoid, minimize, rectify, reduce, or compensate for significant impacts of development. Mitigation measures required as part of this coastal development permit include the avoidance of impacts to ESHA through clustering structures, and by prohibiting development outside of the approved development area as required by the recording an open space deed restriction. Mitigation measures required to minimize impacts include requiring drainage best management practices (water quality), interim erosion control (water quality and ESHA), limiting lighting (ESHA), restricting structure color (visual resources), and requiring future improvements to be considered through a CDP. Finally, the habitat impact mitigation condition is a measure required to compensate for impacts to ESHA.

The following special conditions are required to assure the project's consistency with Section 13096 of the California Code of Regulations:

Special Conditions 1 through 17

As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found to be consistent with the requirements of the Coastal Act to conform to CEQA.

STATE OF CALIFORNIA – THE RESOURCES AGENCY GRAY DAVIS, GOVERNOR

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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.4-12-037
ESHA Memo

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

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

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

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

Ecosystem Context of the Habitats of the Santa Monica Mountains

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

California's coastal sage scrub, chaparral, oak woodlands, and associated riparian areas have analogues in just a few areas of the world with similar climate. Mediterranean ecosystems with their wet winters and warm dry summers are only found in five localities (the Mediterranean coast, California, Chile, South Africa, and south and southwest Australia). Throughout the world, this ecosystem with its specially adapted vegetation and wildlife has suffered severe loss and degradation from human development. Worldwide, only 18 percent of the Mediterranean community type remains 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

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[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

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[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

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[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

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[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.

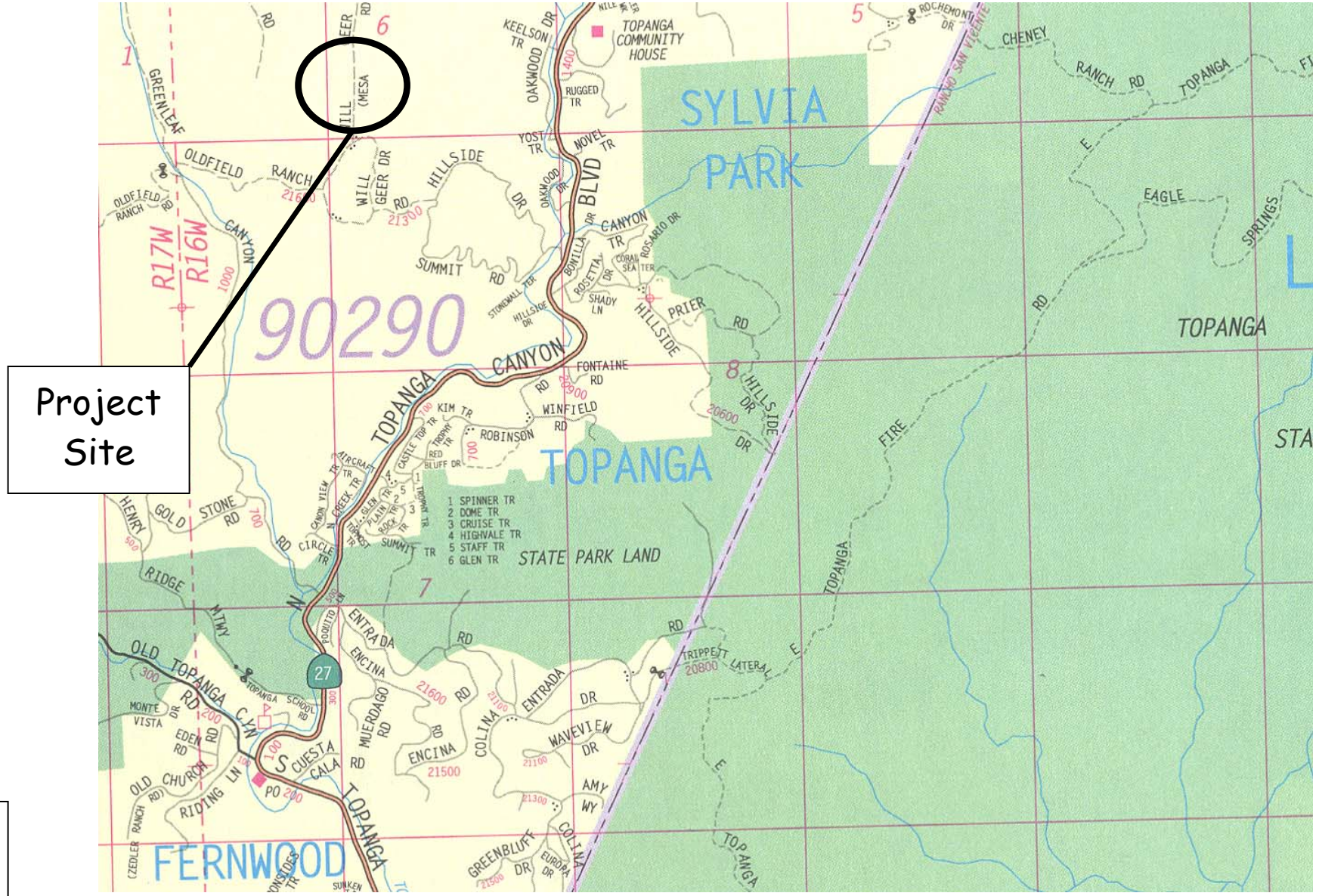


Exhibit 2
CDP No.4-12-037
Vicinity Map

Exhibit 3
CDP No.4-12-037
LUP ESHA map

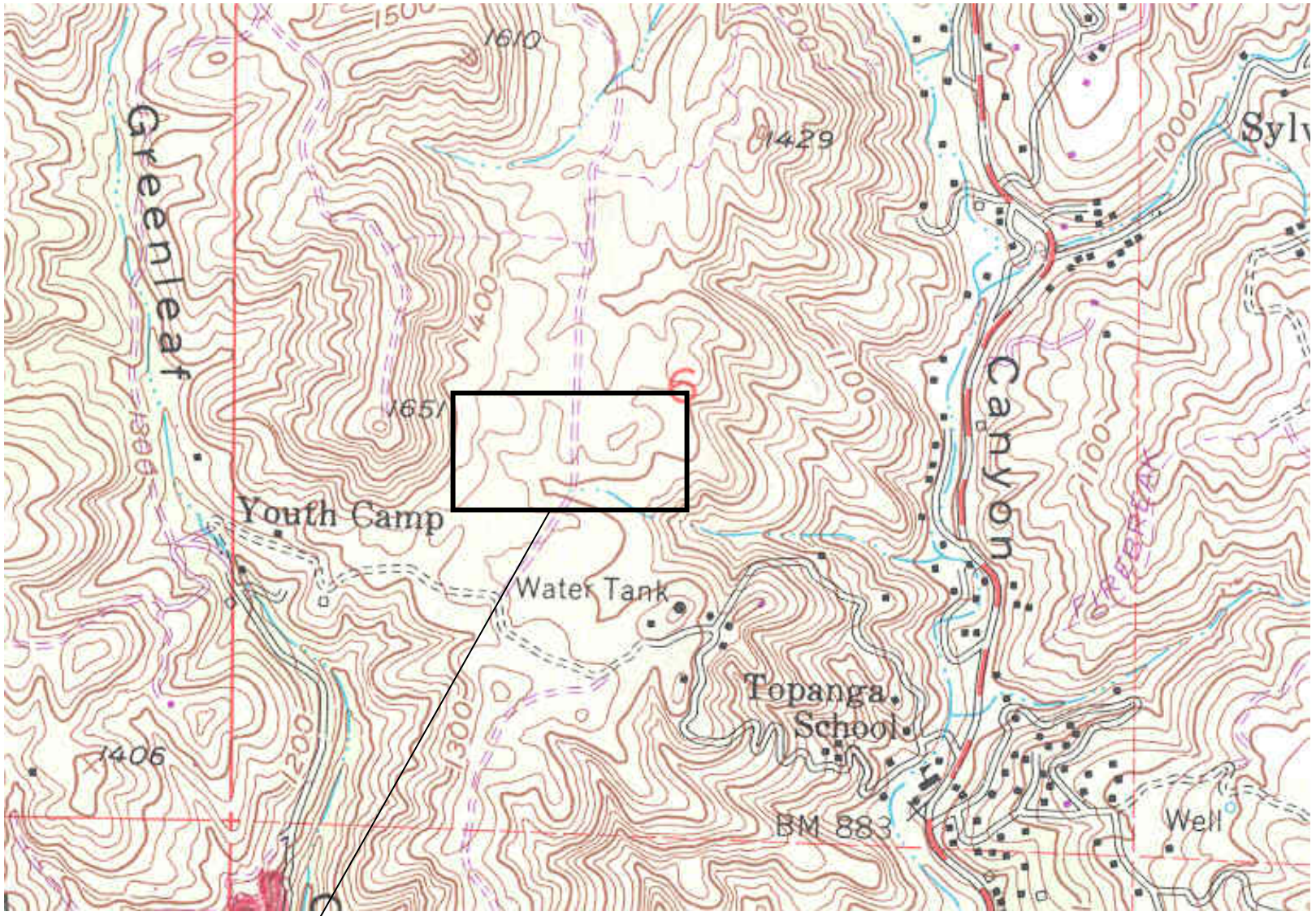


Exhibit 4
CDP No.4-12-037
USGS map

Brush Clearance Radii for Neighboring Property

Southern Limit of Vegetation Clearance

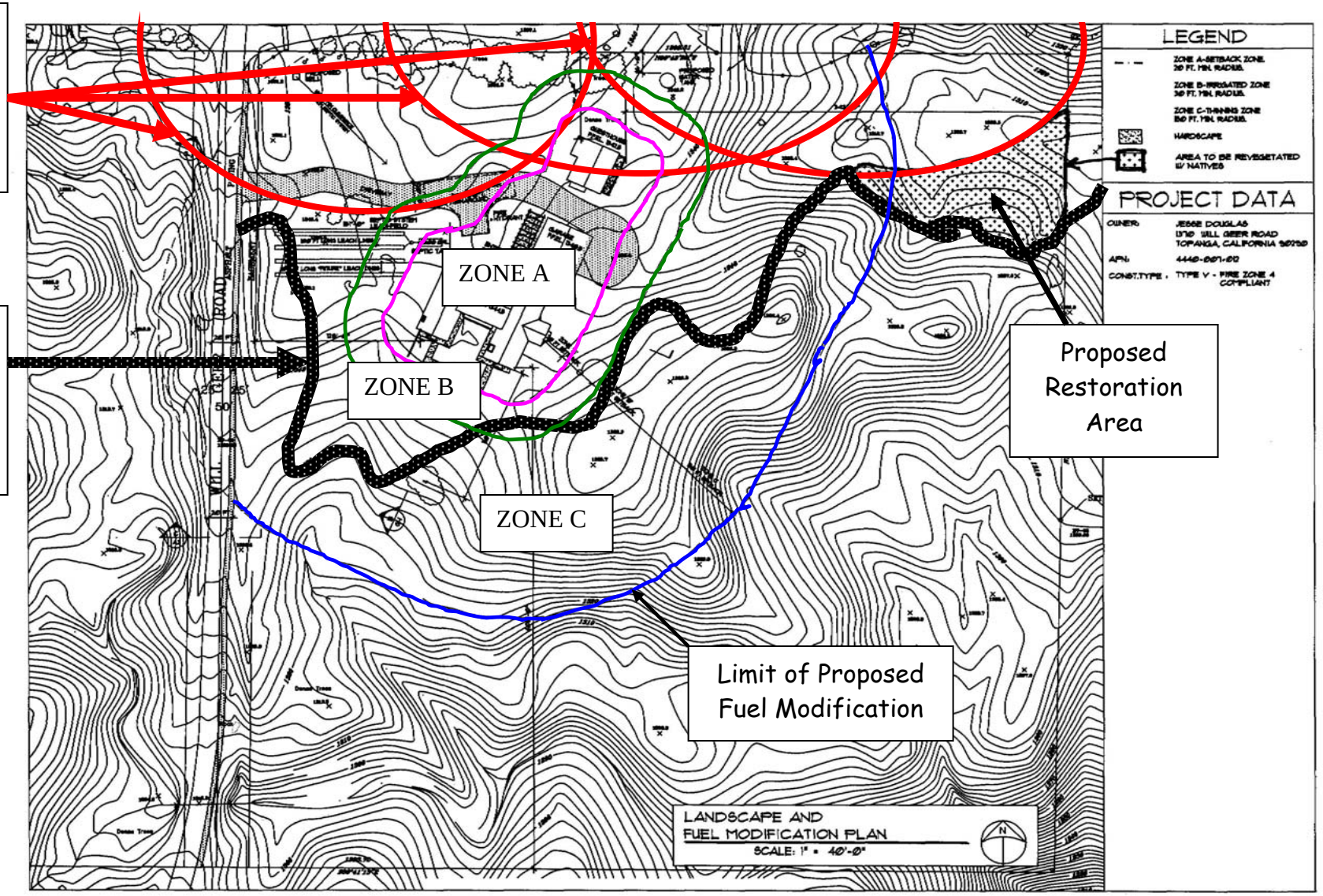
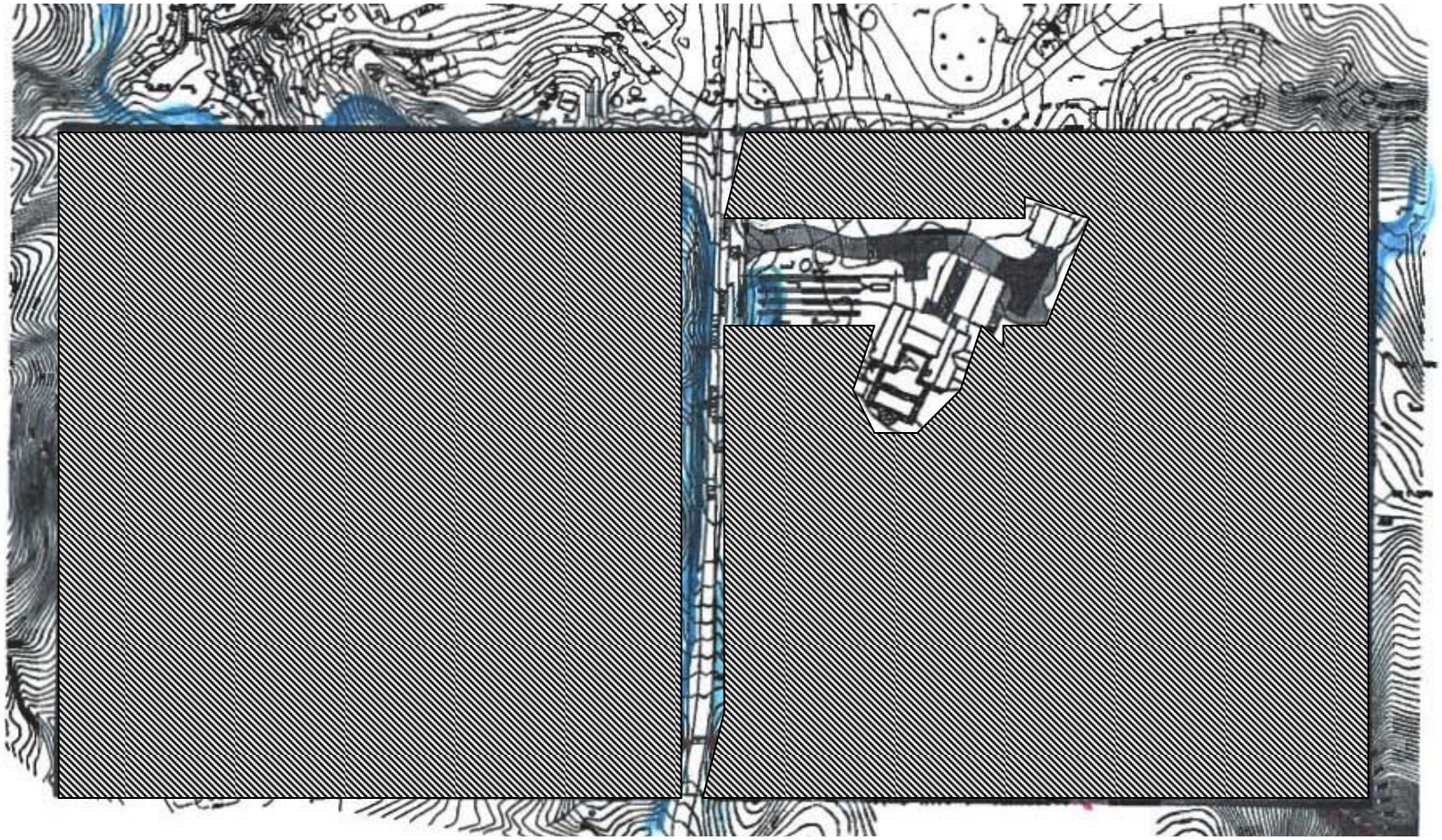


Exhibit 5
CDP No.4-12-037
Clearance Areas

Exhibit 6
CDP No.4-12-037
Proposed Restoration Area

Exhibit 7
CDP No.4-12-037
Biological Resources



OPEN SPACE CONSERVATION EASEMENT AREA

(Includes all areas outside of the proposed development area, driveway, turnaround, and Will Geer Road. Boundaries shown are approximate.)

Exhibit 8
CDP No.4-12-037
Open Space Easement Area

Exhibit 9
CDP No.4-12-037
Grading and Drainage Plan

Exhibit 10
CDP No.4-12-037
Floor Plan

Exhibit 11
CDP No.4-12-037
Elevations

Cary W. Capper & Associates, ARCHITECTS, INC

Sheet Title
GUEST HOUSE FLOOR PLAN & ELEVATIONS

Job Name
J. DOUGLAS
NEW RESIDENCE
13749 WILL GEER RD.
TOPANGA, CA 90290

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Sheet
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of

Exhibit 12
CDP No.4-12-037
Guest House Plan

PROJECT SITE

Exhibit 13
CDP No.4-12-037
Aerial View