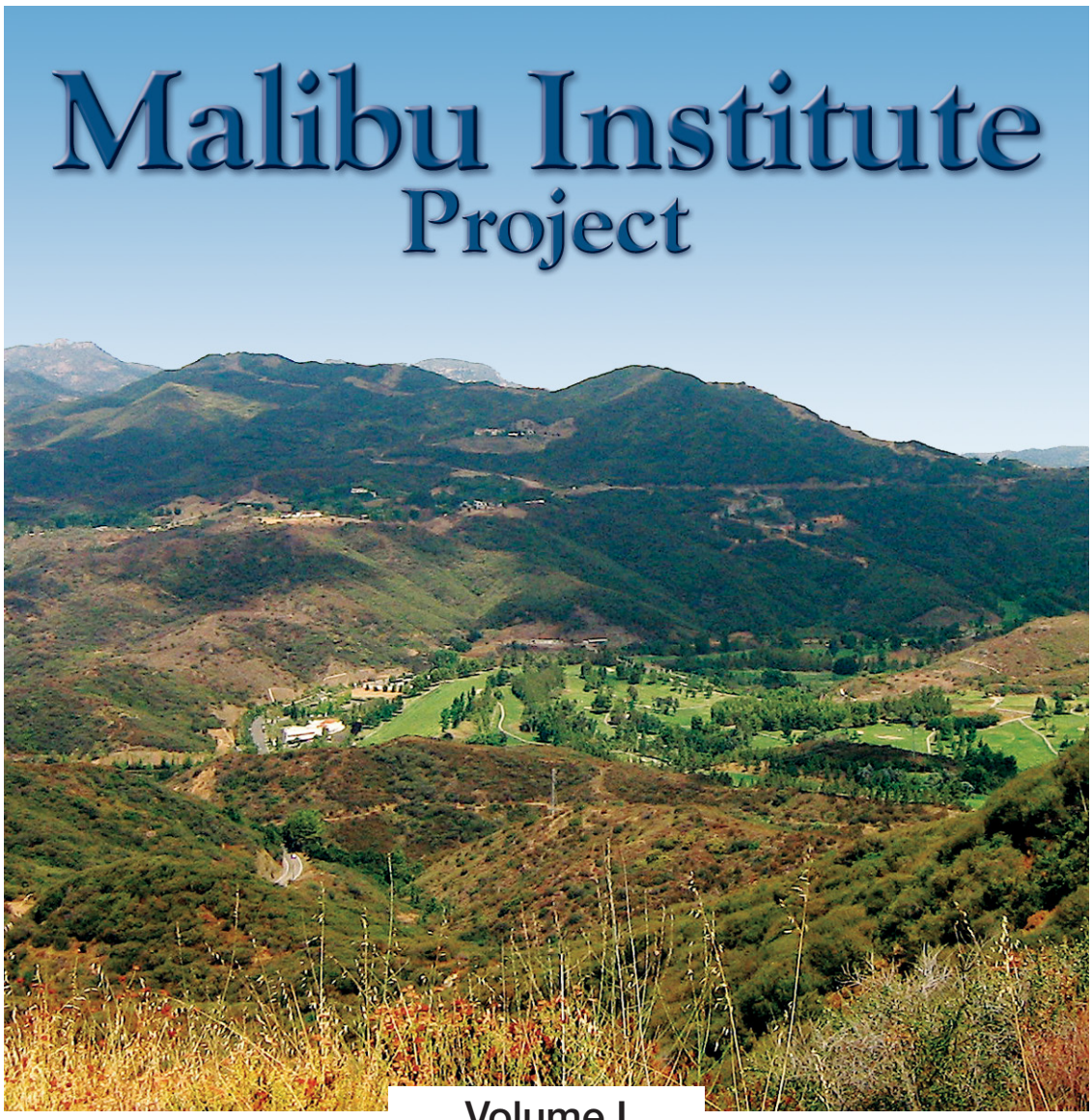
Draft Environmental Impact Report

State Clearinghouse No. 2012111068



Volume I

Prepared For:

County of Los Angeles
Department of Regional Planning
320 West Temple Street
Los Angeles, California 90012

Prepared By:

Envicom Corporation
28328 Agoura Road,
Agoura Hills, California 91301
(818) 879-4700

December 9, 2013

MALIBU INSTITUTE PROJECT
DRAFT
ENVIRONMENTAL IMPACT REPORT

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Prepared for:

COUNTY OF LOS ANGELES
Department of Regional Planning
320 W Temple Street, 13th floor
Los Angeles, California 90012

Prepared by:

ENVICOM CORPORATION
28328 Agoura Road
Agoura Hills, California 91301
Attn: Mr. Primo Tapia, Vice President
818-879-4700

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Acronyms

AB	Assembly Bill
ACM	Asbestos Containing Materials
ACOE	Army Corps of Engineers
ACWM	Asbestos Containing Waste Material
ADA	Americans with Disabilities Act
ADD	Average Daily Demand
ADT	Average Daily Trips
af	Acre foot
AMSL	Above Mean Sea Level
APN	Assessor Parcel Number
AQMP	Air Quality Management Plan
ASBS	Area of Special Biological Significance
ASCE	American Society of Civil Engineers
AST	Aboveground storage tank
ASTM	American Society for Testing and Materials
AT	Access and Transportation
ATE	Associated Transportation Engineers
AVR	Average Vehicle Ridership
BACM	Best Available Control Measures
BAT	Best Available Technology Economically Achievable
BCA	Biological Constraints Analysis
BCT	Best Conventional Pollutant Control Technology
BGS	Below Ground Surface
BIOS	Biogeographic Information and Observation System
BMP	Best Management Practices
BMP	Bicycle Master Plan
BOD	Biochemical Oxygen Demand
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
Cal FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Act
CalEEMod	California Emission Estimator Model
CalEPA	California Environmental Protection Agency
CalRecycle	California Department of Resources, Recycling, and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAT	California Climate Action Team
CBC	California Building Code
CCA	California Coastal Act
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CCC	California Coastal Commission
CCR	California Code of Regulations
CCTP	Climate Change Technology Program
CCZ	California Coastal Zone
CDFG	California Department of Fish and Game (CDFW as of 2013)
CDFW	California Department of Fish and Wildlife (formerly CDFG)

Acronyms

CDMG	California Department of Mines and Geology, now the California Geologic Survey
CE	California Endangered
CEC	Constituents of Emerging Concerns
CEHD	Community, Economic, and Human Development
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFP	California Fully Protected
CFR	Code of Federal Regulations
CGB	California Green Builder
CGS	California Geological Survey
CH_4	Methane
CIWMB	California Integrated Waste Management Board
CLAWD	County of Los Angeles Water Division
CLTA	California Land Title Association
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
COS	Conservation and Open Space
COSCA	Conejo Open Space Conservation Agency
CR	California Rare
CRC	California Residential Code
CRPR	California Rare Plant Ranking
CSMP	Construction Site Monitoring Program
CSP	California Department of Recreation and Parks "State Parks"
CSUN	California State University Northridge
CT	California Threatened
CTR	California Toxics Rule
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CWA	Clean Water Act, formerly Federal Water Pollution Control Act
dB	Decibel
dbh	Diameter at breast height
DDT	dichloro-diphenyl-trichloroethane
DEIR	Draft Environmental Impact Report
DHS	California Department of Health Services
DPS	Distinct Population Segment
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EDR	Environmental Data Resources, Inc.
EI	Education and Interpretation
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMC	Event Mean Concentration

Acronyms

EMS	Emergency Medical Services
ESA	Environmental Site Assessment
ESHA	Environmentally Sensitive Habitat Area
ESU	Evolutionary Significant Unit
EWMP	Enhanced Watershed Management Plan
FC	Federal Candidate
FE	Federal Endangered
FED	Functional Equivalent Document
FEIR	Final Environmental Impact Report
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FSC	Federal Species of Concern
FT	Federal Threatened
FTA	Federal Transportation Administration
GHG	Green House Gas
GMP	General Management Plan
GPCD	Gallons per capita per day
gpm	Gallons Per Minute
GPR	GreenPoint Rated™
GPS	Global Positioning System
GWP	Global Warming Potential
HA	Hydrologic Area
HAZNET	Hazardous Waste Information System
HDSF	High Density Single-Family
HEART	Historical Environmental Archaeological Research Team
HEC-RAS	Hydrologic Engineering Centers-River Analysis System
HFCs	hydrofluorocarbons
HMA	Hillside Management Area
HMBP	Hazardous Materials Business Plan
HR	Hydrologic Region
HSA	Hydrologic Subarea
HU	Hydrologic Unit
HVAC	Heating, Ventilation, and Air Conditioning
IBC	International Building Code
ICU	Intersection Capacity Utilization
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Planning
ITE	Institute of Transportation Engineers
IWMP	LA County Integrated Waste Management Plan
LACDPW	Los Angeles County Department of Public Works
LACFD	Los Angeles County Fire Department
LACNHM	Los Angeles County Natural History Museum
LACSD	Los Angeles County Sheriff's Department
LAFCO	Los Angeles County Local Agency Formation Commission
LCP	Local Coastal Program
LEED™	Leadership in Energy and Environmental Design
LID	Low Impact Development
LOS	Level of Service

Acronyms

LPLP	Laguna Point to Latigo Point
LPP	Land Protection Plan
LST	Local Significance Threshold
LU	Land Use
LUFT	Leaking Underground Fuel Tank
LUP	Land Use Plan
LVMWD	Las Virgenes Municipal Water District
M	Magnitude
MBTA	Migratory Bird Treaty Act
MDD	Maximum Day Demand
MEP	Maximum Extent Practicable
MFU	Multi-family Units
mgd	Million gallons per day
MLO	Model [Water Efficient] Landscape Ordinance
MLRP	Marine and Land Resource Protection
MM	Mitigation Measure
MOU	Memorandum of Understanding
MPN	Most Probable Number
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Stormwater System Permit
MSL	Mean Sea Level
MT	Metric Tons
$MTCO_2e$	Metric Tons of Carbon Dioxide Equivalents
MWDSC	Metropolitan Water District of Southern California
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
ND	New Development
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NH_3	Ammonia
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO_2	Nitrogen Dioxide
NOAA	National Oceanic and Atmospheric Administration
NOI	Noise
NOI	Notice of Intent
NOP	Notice of Preparation
NOx	Nitrous Oxide
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
O&M	Operations and Maintenance
O_3	Ozone
OCPW	Orange County Public Works
OHP	California Office of Historic Preservation
OHWM	Ordinary High Water Mark
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OTIC	Outdoor-Indoor Sound Transmission Class

Acronyms

OWRS	Onsite Wastewater Recycling System
OWS	Onsite Wastewater System
OWTF	Onsite Wastewater Treatment Facility
OWTS	Onsite Wastewater Treatment System
PAH	polycyclic aromatic hydrocarbons
Pb	Lead
PCA	Pest Control Advisor
PCB	Polychlorinated biphenyls
PCH	Pacific Coast Highway
PFC	perfluorocarbon
PGA	Peak Ground Acceleration
PHD	Peak Hour Demand
PIPP	Public Information and Participation Program
PM	Particulate Matter
POC	Pollutant of Concern
ppm	Parts Per Million
ppmv	Parts Per Million by Volume
PRC	Public Resources Code
PRV	Pressure Reducing Valve
PW	Public Works
RACM	Reasonably Available Control Measures
RCA	Recreation and Coastal Access
RCG	Resource Conservation Goals
RCP	Regional Comprehensive Plan
RCP	Reinforced Concrete Pipe
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Conditions
RMS	Root Mean Square
ROG	Reactive Organic Gasses
RPA	Registered Professional Archeologist
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWP	Recycled Water Policy
RWQCB	Regional Water Quality Control Board
SAFE	Safety
SAMP	Strategic Asset Management Plan
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCCWRP	Southern California Coastal Water Research Project
SCE	Southern California Edison
SCEC	Southern California Earthquake Center
SCH	State Clearinghouse
SCS	Sustainable Communities Strategy
SDC	Seismic Design Category
SEA	Significant Ecological Area

Acronyms

SEATAC	Significant Ecological Area Technical Advisory Committee
SERA	Sensitive Environmental Resource Areas
SF	Square Feet
SF_6	sulfur hexafluoride
SH	Scenic Highways
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SLF	Sacred Lands File
SMBBB	Santa Monica Bay Beaches Bacterial
SMMCZ	Santa Monica Mountains Coastal Zone
SMMLCP	Santa Monica Mountains Local Coastal Program
SMMNRA	Santa Monica Mountains National Recreation Area
SMU	Site Mitigation Unit
SO_2	Sulfur Dioxide
SP	Special Publications
SQMP	Stormwater Quality Management Program
SRA	State Responsibility Area
SRRE	Source Recycling and Reduction Element
SSC	California Species of Special Concern
STC	Sound Transmission Class
SUG	Seismic Use Group
SUSMP	Standard Urban Stormwater Mitigation Plan
SWA	Significant Watershed Areas
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TC	Time of Concentration
TCA	trichloroethane
TDS	Total Dissolved Solids
Tg	Teregrams
TKN	total Kjeldahl nitrogen
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TNW	Traditional Navigable Water
TP	Total phosphate
tpd	Tons per day
TRANS	Transportation
TSD	Triunfo Sanitation District
TSS	Total Suspended Solids
TWRF	Tapia Water Reclamation Facility
UBC	Uniform Building Code
UFC	Uniform Fire Code
USC	University of Southern California
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

Acronyms

UST	Underground storage tank
UWMP	Urban Water Management Plan
V/C	Volume to Capacity
VA	United States Department of Veterans' Affairs
VdB	Vibration Decibels
VE	Visitor Experience
VHFHSZ	Very High Fire Hazard Severity Zone
VOC	Volatile Organic Compound
VTTM	Vesting Tentative Tract Map
WDR	Water Discharge Requirements
WEF	Water Environment Federation
WMA	Watershed Management Area
WMC	Watershed Management Committee
WQBEL	Water Quality-Based Effluent Limitations
WSA	Water Supply Assessment
WSDR	Water System Design Report
WW	Waste and Wastewater

1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

This Draft Environmental Impact Report (DEIR) has been prepared by the County of Los Angeles to evaluate potential environmental impacts resulting from the Malibu Institute Project (Project). The Malibu Institute (Applicant) has requested County approvals in connection with the Project, which would create a sports-oriented educational retreat and remodel an existing 18-hole golf course on a 650-acre Project site currently operated as the Malibu Golf Club. The Project would include both the construction of new facilities and the removal of existing structures. The Project site is located at 901 Encinal Canyon Road within an unincorporated area of Los Angeles County.

This DEIR was prepared in accordance with the California Environmental Quality Act (CEQA) of 1970[1] and the CEQA Guidelines[2]. The County of Los Angeles is the Lead Agency for this DEIR pursuant to Section 15367 of the CEQA Guidelines. The County will use this DEIR in its consideration of the requested approvals that would allow implementation of the Project.

A Notice of Preparation (NOP) for the Project was circulated, pursuant to CEQA Guidelines Section 15082, on November 21, 2012 for review and comment by the public, agencies, and organizations. The DEIR scoping document is provided in **Appendix A**. A public hearing to accept scoping comments was held on December 10, 2012 and written comments regarding scoping were accepted through January 21, 2013 (extended from December 24, 2012). Comments relating to the DEIR scope were taken into consideration in the preparation of this DEIR.

1.1.1 DOCUMENT FORMAT AND ORGANIZATION

This Executive Summary summarizes the project description and conclusions of the impact analyses provided in the DEIR. Section 2.0, *Introduction*, identifies the lead agency and provides an introduction to the Project including a brief overview of the site's history, the CEQA environmental review process, and a description of the organization of the DEIR. Section 3.0, *Project Description*, provides a detailed description of the Project evaluated in the DEIR. Section 4.0, *Environmental Setting*, describes the Project in the context of the regional and local setting and identifies related projects used for the cumulative impacts analyses. Section 5.0, *Environmental Impact Analysis*, addresses each of the issues that were identified in the Initial Study as requiring further analysis in the DEIR. The impact analysis for each issue area examined in this DEIR is presented in six subsections as described below:

Existing Conditions: This section describes the existing conditions and environmental setting in the Project vicinity as it pertains to a specific environmental issue. The existing conditions serve as the baseline against which the significance of potential impacts is based.

Thresholds of Significance: This section defines the criteria for determining whether an impact of the Project is considered significant.

Project Impacts: This section provides an analysis of the Project, including the identification and evaluation of direct and indirect impacts, as appropriate, which may occur during construction or operation. This section also discusses whether or not these environmental effects meet or exceed the established threshold of significance.

1 California Public Resources Code, Sections 21000, *et seq*.
2 Title 14, California Code of Regulations, Sections 15000, *et seq*.

Cumulative Impacts: This section addresses the potentially significant cumulative impacts that may result from the Project when taking into account the environmental impacts of other related, and reasonably foreseeable past, present, and future projects. For this evaluation, the related projects considered are those listed in Section 4.0 *Environmental Setting*.

Mitigation Measures: This section identifies potentially feasible mitigations that would avoid or substantially reduce significant adverse Project-related impacts.

Unavoidable Adverse Impacts: This section discusses the environmental effects of the Project after the implementation of the identified mitigation measures and indicates whether or not the resulting impact has been reduced to a less than significant level.

Section 6.0 describes alternatives to the Project and the extent to which each alternative would reduce or avoid the environmental impacts associated with the Project, and Section 7.0 identifies significant irreversible environmental changes associated with the Project. Section 8.0 describes the potential for the Project to foster additional growth in the surrounding environment.

1.2 PROJECT DESCRIPTION

1.2.1 PROJECT LOCATION

The Malibu Institute Project site is located at 901 Encinal Canyon Road, within an unincorporated area of Los Angeles County. Regionally, the site is located in the western portion of the Santa Monica Mountains approximately forty-five miles west of downtown Los Angeles. Locally, the Project site is situated northwest of the city of Malibu, and south of the cities of Thousand Oaks and Westlake Village in a rural area of the Santa Monica Mountains lying south of the primary east-west ridgeline. The majority of the Project site, those portions that lie south of Mulholland Highway, also fall within the Coastal Zone as defined by the California Coastal Act. Adjacent land uses are primarily undeveloped private and public lands with large lot rural residential development common along the northern and western boundaries.

The Project site is comprised of an irregularly shaped assemblage of 29 irregularly shaped parcels that total approximately 650 acres, spanning from Encinal Canyon Road on the south to the intersection of Mulholland Drive and Westlake Boulevard on the north. Existing development on the Project site consists of the Malibu Golf Club, a public 18-hole golf course with supporting amenities constructed in the early 1970s. Other facilities on the Project site include a clubhouse, restaurant/bar, snack shop, pro-shop, maintenance facilities, and two surface parking lots and associated driveways, which are located in the central and southern regions of the Project site. A caretaker's residence and an abandoned residence (referred to as the hunting lodge) are located in the northern portion of the Project site.

Much of the golf course area is planted with non-native and ornamental plant species. The remainder of the Project site consists of areas of native vegetation. Several areas adjacent to the golf course have been graded in the past in connection with various development phases of the golf course. The Project facilities would be constructed completely within previously disturbed areas of the existing development footprint of the Malibu Golf Club.

1.2.2 PROJECT SUMMARY

The Malibu Institute (Applicant) proposes to create a sports-oriented educational retreat affiliated with the University of Southern California to complement a remodeled 18-hole golf course on a 650-acre property

currently operated as the Malibu Golf Club in the unincorporated Malibu area of Los Angeles County. In total, the Project proposes to construct a combined 224,760 square feet of structures, which would include the reuse of the building footprint of the existing 12,475 square foot clubhouse and cart barn as part of the Institute building and the removal of 11,160 square feet of existing structures (including the abandoned residence in the northern portion of the Project site), for a total increase of 201,225 square feet of structures on the Project site. An existing 875-square foot caretaker's residence located on the northern portion of the Project site would be retained by the Project. The reconfigured 18-hole golf course would be redesigned using the acreage of 17 of the existing holes on the golf course, allowing the proposed facilities, including the redesigned golf course, to be constructed within previously disturbed areas. The Project would conserve over 450 acres of native coastal scrub and chaparral, including oak woodland forest, which would be left undisturbed and would become permanently dedicated open space.

The proposed buildings and accommodations would incorporate sustainable design features with the goal of achieving LEED™ Platinum certification (or equivalent) for all buildings on the Project site. Design features also would include green roofs on many of the Project buildings, the use of color and shade structures to reduce the heat island effect, charging stations for electric vehicles, the use of highly efficient geothermal HVAC equipment, and the use of native, drought-tolerant landscaping, and the use of a shuttle van or bus service for larger groups visiting the Project. Water conservation and design features would include low flow/ultra low-flow fixtures, energy star appliances, and the use of drip irrigation systems. The Project would use photovoltaic panels over shade structures in the expanded surface parking area to generate most of the energy needs for the Project and would replace existing outdoor overhead parking lot lighting, with lighting complying with Dark Skies initiatives and the County's Rural Lighting Outdoor Lighting District Ordinance. The Project would also replace existing septic tanks throughout the Project site and install an on-site wastewater treatment and water recycling system with effluent meeting Title 22 standards for reuse as irrigation for the remodeled golf course.

The Project would remodel the existing 18-hole public golf course using an environmentally sensitive design, including replacement of over 185,000 square feet of existing non-pervious parking lots and cart paths with pervious material to allow infiltration of storm water and improve water quality. The remodeled golf course would have a reduced turf area and utilize a more efficient irrigation system with new turf grasses selected to require less water for maintenance. Additionally, the Project would remove many non-native trees, including palm trees, which were introduced with development of the existing golf course, and provide landscaping with native, drought-tolerant species. These measures would reduce water consumption for irrigation of the golf course by approximately 32 percent.

Grading for buildout of the Project would occur within previously disturbed areas and would require approximately 120,000 cubic yards of cut and 120,000 cubic yards of fill, which would be balanced on-site. No soil import or export is proposed. Project construction activities are expected to take place over a 24-month period, during which time the existing golf facilities will be closed.

Operational Summary

The Malibu Institute would provide meeting rooms and classroom facilities within a 48,164-square foot conference building, with an emphasis on supporting research and educational programming related to the study of professional sports as a business, as well as competition aspects of various sports careers. The facilities would provide a location for academics that focus their studies in this field to meet with owners, players, and staff associated with various professional sports organizations. Programming for these activities would consist of educational conferences, seminars, and lectures, and would be available for use by educational institutions and other organizations including charitable foundations. This facility could also host non-sports related seminars, banquets, or receptions. USC would participate in collaboration

with the Malibu Institute on research projects, academic conferences and symposia, and would offer advice on development of a professional and/or continuing education curriculum. In addition to the educational facilities, the Malibu Institute conference building would include a cafeteria and lounge area. The Project would operate the proposed facilities year-round, and although the overall Project would operate 24 hours per day by providing overnight accommodations onsite; meetings and seminars held in the Malibu Institute conference building would take place predominantly during regular business hours.

The Project would provide overnight guest accommodations in 40 bungalow units to be constructed in 37 individual structures. The bungalow structures would generally be two-story designs (four would be single-story), with floor areas that range from 2,610 square feet to 2,885 square feet for those housing single bungalows, and 5,310 square feet for three structures that would consist of two bungalow units. Each bungalow would include four private bedroom/bathroom facilities and a common dining and lounging area, for a total of 160 beds provided onsite. The bungalows would not contain kitchens. As an amenity for overnight guests, the Project would include a swimming pool with an associated restroom/changing room.

A golf-oriented clubhouse would be constructed in a 30,147-square foot building providing a dining facility, lounge, fitness center, spa, and locker rooms. While the clubhouse would be open to golfers and other day-use visitors of the site, this facility would provide overnight guests with dining and fitness amenities that would otherwise require leaving the site to access.

A golf pro-shop and grill would provide retail space for golf related merchandise, a snack bar, and indoor computerized driving range bays within a 12,104-square foot building. This facility would serve golfers that are day-use visitors of the site as well as overnight guests of the Malibu Institute.

Other proposed facilities would be provided to support the Institute and golf course operations. These would include a 9,162-square foot golf cart storage building, a 4,623-square foot warehouse to store supplies, a 10,500-square foot maintenance building, and a 120-square foot security/information building.

The remodeled golf course would continue to offer an 18-hole public-use course, which would be available to day-use visitors of the site as well as overnight guests of the Project. The golf course would continue to provide a practice facility for area high school and university golf programs that currently use the existing Malibu Golf Club for that purpose.

1.2.3 PROJECT OBJECTIVES AND GOALS

The following is a list of the objectives and goals of the Project.

- Establish a financially viable sports-oriented educational retreat, which provides educational, research and employment opportunities, and invigorates the local economy of unincorporated western Los Angeles County.
- Provide a comfortable, relaxing and inspiring environment in which educational institutions, governmental organizations, non-governmental organizations, business leaders and the public can conduct meetings and conferences.
- Provide visitor-serving overnight accommodations within individual bungalow units that would include common areas within each unit to provide a casual meeting space for discussion or study groups of Project guests that would be attending conferences or on-site functions together.
- Introduce a pattern of land uses compatible with existing environmental resources and community character, while improving the social, environmental and economic well-being of overnight guests, visitors, and the community.

- Incorporate sustainable and green design features with the goal of achieving LEED™ Platinum certification (or equivalent) for all new buildings on the Project site.
- Protect environmentally sensitive native plant and animal species by dedicating open space areas on the Project site that contain sensitive and native habitat.
- Preserve and enhance the scenic beauty of the Santa Monica Mountains.
- Protect and expand access to open space recreational opportunities and resources, including incorporation of sustainable visitor-serving accommodations, which would be available for visitors of the Santa Monica Mountains National Recreation Area.
- Protect a unique public recreational resource of unincorporated western Los Angeles County consisting of an 18-hole golf course located within the Santa Monica Mountains and in the vicinity of the Santa Monica Mountains National Recreation Area.
- Construct proposed site improvements within a clustered area to minimize off-site view impacts while locating visitor-serving facilities including overnight accommodations in a manner that maximizes guests' views of the remodeled golf course and natural areas of the Santa Monica Mountains and provides separation between bungalow structures as feasible within the development area.
- Provide an all-inclusive retreat destination in the Santa Monica Mountains with visitor-serving components connected by a network of paths for pedestrian or electric cart use, so guests could access those Project features without the need for personal vehicle use.
- Design and construct a state-of-the-art 18-hole golf course using features and standards that will minimize impacts to the existing environment for sustainable coexistence between golf and nature.
- Recognize and avoid natural hazards, and protect paleontological, archaeological and historic resources.
- Protect the unique cultural and social characteristics of the region's rural residential communities.
- Eradicate non-native aquatic species in the man-made ponds onsite.
- Improve water quality in the portion of Trancas Canyon Creek leaving the Project site.

1.3 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table 1-1 summarizes the Project's environmental impacts and the measures identified to mitigate these impacts. The table also notes the significance of impacts before and after mitigation is implemented. Impacts are classified as follows:

- Class I – Significant impact that cannot be reduced to a less than significant level with implementation of mitigation measures.
- Class II – Significant impacts that can be reduced to a less than significant level with implementation of mitigation measures.
- Class III – Less than significant impacts. Mitigation measures are not required but may be recommended.
- Class IV – Beneficial impacts.

As identified in **Section 5.0, Environmental Impact Analysis,** after implementation of the required mitigation measures, the Project would result in no significant and unavoidable impacts. Therefore, after mitigation, there are no impacts requiring a Statement of Overriding Considerations.

Table 1-1
Summary of Impacts and Mitigation Measures

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
AESTHETIC QUALITIES AND VISUAL RESOURCES (SEE SECTION 5.1)			
Impacts on Scenic Views The Project would introduce buildings that individually would be visually consistent with the size of the existing buildings on the site, and would use earthtone colors and natural exterior materials such as wood and stone, and incorporate vegetated "green roofs" to blend with the surrounding vegetation palette. The proposed buildings would be placed at varying elevations and would follow the existing contours of the Project site and the adjacent slopes rising to the west in order to blend into the viewshed. The structures would be located at lower elevations than the designated scenic highways and public viewpoints from which they could be viewed and at such distances that they would not block views of designated scenic elements or intrude into the skyline above significant ridgelines, so that all aspects of the proposed structural development would be subordinate to the surrounding environment. The Project also would remove an abandoned residence from a blufftop in the northern portion of the site, which would remove an existing structure that is inconsistent with the surrounding color palette of the natural features of the viewshed. As such, the Project would have a less than significant impact on scenic vistas.	Less Than Significant	The Project is not expected to result in significant impacts on scenic views. However, the following measures are recommended to further reduce impacts. **MM5.1-1** Building materials compatible in color tone and/or texture with the surrounding natural terrain shall be employed on the exteriors of all structures and retaining walls, with the exception of solar panels to be installed above the parking lot shade structures. **MM5.1-2** Aesthetically compatible native landscaping shall be provided along the Project entrance (Clubhouse Drive) to screen vehicle lights within onsite parking and driveway areas from Encinal Canyon Road. **MM5.1-3** The applicant's detailed landscape plan shall be designed to provide aesthetically compatible accenting to and/or visual screening of the Project's hardscape features and walls, as viewed from the identified public viewpoints. With the exception of the golf course greens and turf, the majority of the landscaping shall use native species of plants, shrubs and grasses. Prior to the issuance of building permits, the landscaping plan shall be reviewed and approved by the County of Los Angeles Department of Regional Planning and Fire Department and shall address the following: • Landscaping shall be provided in a manner consistent with fire safety needs as well as to help conceal visible linear elements and hard edge surface effects resulting from site grading, the use of retaining walls and the construction of new buildings.	Less than Significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		• Street trees and median trees, compatible with the adjacent undeveloped areas, shall be planted along Clubhouse Drive, and at the main entrance adjacent to Encinal Canyon Drive. • Appropriate landscaping, including trees and vegetated walls, shall be planted to minimize views of retaining walls. • Project landscaping shall consist of native fire retardant species included on the Los Angeles County Fire Department Fuel Modification Plan Guidelines, located to partially screen views of the structural components of the Project from identified public viewpoint areas from designated Scenic Highways and Trails. Landscaping shall be compatible with the character of the surroundings and architectural style of the structures.	
Impacts on Scenic Resources There are no designated scenic resources that exist onsite. The proposed development would occupy the lower elevations of the Project site, which consists of a bowl-like depression surrounded by high ridgelines. As such, the Project would not block public views of offsite designated scenic resources, which consist of significant ridgelines, a rocky outcrop that forms one of those ridgelines, or views from scenic highways. Therefore, the Project would have less than significant impacts on visual resources.	Less Than Significant	No mitigation required or proposed.	Less Than Significant
Visual Character As with most development, the Project would increase the scale of the built environment on the site, however, design features have been incorporated into the Project, such that the proposed structures would be consistent with the existing conditions regarding building height, bulk, pattern, and character. In addition, the preservation of 450 acres of the Project site as protected open space would be consistent with the existing visual	Less than significant	See recommended mitigation measures MM5.1-1 through MM5.1-3, above.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
character of the site. As such, the Project would not substantially degrade the visual character of the site, and thus impacts in this regard would be less than significant.			
Light and Glare Impacts *Outdoor Lighting* The Project facilities would introduce additional lighting sources for security and safety along walkways and parking areas as compared to existing conditions, including proposed overnight accommodations. All new outdoor lighting provided for the Project would be fully shielded and would also be consistent with other requirements of the Rural Outdoor Lighting District Ordinance to prevent light trespass and limit sky glow as defined by the Ordinance. Additionally, existing outdoor lighting for parking and driveways would be replaced with fixtures that are fully shielded and compliant with the requirements of the Rural Outdoor Lighting District Ordinance. As with the existing Malibu Golf Club, the Project would not provide lighting for any golfing activities including night golfing or driving range practice. Therefore, potential outdoor lighting impacts related to aesthetics are considered to be less than significant. *Glare Effects* The Project site is located at lower elevations than roadways from which the site can be viewed, which minimizes the potential for reflected sunlight to cause glare impacts along those roadways, as well as to the scattered residences in the area which are also located at higher elevations than the structural development area of the Project site. Therefore, potential glare impacts related to aesthetics are considered to be less than significant.	Less Than Significant	No mitigation required or proposed.	Less Than Significant
Cumulative Impacts Most related projects listed in Table 4-1 are located in the cities of Malibu or Agoura Hills, at distances from the Project site ranging from approximately 3.5 miles to over 9 miles, with intervening significant ridgelines that prevent these projects from having a cumulative visual impact in connection with the Project. Of the two related	Less Than Significant	No mitigation required or proposed.	Less Than Significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
projects identified (as listed in Table 4-1) that are located in the unincorporated area of Los Angeles County, one is a subdivision of land for two single-family residences that would not be located within the same viewshed as the Project and, as such, would not factor into the Project's cumulative visual impacts. The other related project in the Project vicinity is the Camp Kilpatrick Replacement Project, which is located approximately one mile from proposed Project structures, and is not visible within the same viewshed with the exception of an existing water tank, which would remain. Therefore, cumulative impacts to visual resources and scenic views would not differ from those of the Project. The Camp Kilpatrick site is currently occupied by a secure detention facility with existing night lighting to deter escape that produces noticeable sky glow in the vicinity. The replacement of Camp Kilpatrick is to be of similar size and scale as the existing facility, and as such existing sky glow impacts could be expected to continue to be produced at that location. The Project would be located at a significant distance and lower elevation and all new outdoor lighting provided for the Project would be fully shielded and would also be consistent with other requirements of the Rural Outdoor Lighting District Ordinance to prevent light trespass and limit sky glow as defined by the Ordinance. As such, the Project would not result in a cumulatively considerable impact regarding outdoor lighting.			
AIR QUALITY (SEE SECTION 5.2)			
Construction Period Impacts *Construction-Related Fugitive Dust Emissions* Emissions estimation for Project-specific fugitive dust sources is characterized by a considerable degree of imprecision because of the inherent uncertainty in the predictive factors for estimating fugitive dust generation. Average daily PM-10 emissions during site grading and other disturbance are shown in the CalEEMod.2011.1.1 computer model to be about 10 pounds per acre. This estimate presumes the use of reasonably available control measures (RACMs) as shown in MM5.2-1. The	Potentially significant	**MM5.2-1** The applicant shall prepare a Construction Management Plan to comply with SCAQMD established minimum requirements for construction activities to reduce fugitive dust emissions. The Plan shall include the following dust control measures: • The simultaneous mass grading disturbance area shall be limited to 10 acres per day. Application of soil stabilizers to inactive areas according to manufacturers specifications	Less Than Significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
SCAQMD requires the use of best available control measures (BACMs) for fugitive dust from construction activities. In addition, the Project would comply with SCAQMD Rule 403 (Fugitive Dust), which would require measures to control fugitive dust and ensure fugitive dust would not significantly impact offsite receptors. The Project's peak daily construction activity dust emissions (PM-10 and PM-2.5) are below their respective SCAQMD CEQA significance thresholds.		(previously graded areas inactive for ten days or more); • Preparation of a high wind dust control plan, implementation of plan elements, and termination of soil disturbance when winds gusts exceed 25 mph; • Stabilization of previously disturbed areas if subsequent construction is delayed; • Covering all stockpiles with tarps if left unattended for more than 48 hours; • All trucks hauling dirt, sand, soil or other loose materials are to be covered; • Appoint a construction relations officer to act as community liaison concerning on-site construction activity including resolution of issues related to PM-10 generation. • Portions of the site that are undergoing surface earth moving operations shall be watered. Exposed surfaces and haul roads will be watered three times/day. • Vegetative cover to be utilized onsite shall be planted as soon as possible to reduce the disturbed area subject to wind erosion. Irrigation systems required for these plants shall be installed as soon as possible to maintain good ground cover and to minimize wind erosion of the soil. • Any construction access roads (other than temporary access roads) shall be paved as soon as possible and cleaned after each workday. The maximum vehicle speed on unpaved roads shall be 15 mph. Grading operations shall be suspended during any first stage ozone episodes.	

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Construction-Related Exhaust Emissions Exhaust emissions would result from on- and off-site heavy equipment. The types and numbers of equipment would vary among contractors such that estimated emissions cannot be quantified with certainty. No import or export of fill material would be required for the Project and earthwork would be balanced on site. Initial site preparation and grading would gradually shift toward infrastructure development, followed by paving and painting, resulting in variations in daily and annual construction emissions as construction of the Project progresses. The Project's peak daily construction activity exhaust emissions are below their respective SCAQMD CEQA significance thresholds.	Less Than Significant	No Mitigation Required. However, MM5.2-2 is recommended to further reduce potential construction emissions. **MM5.2-2** Non-particulate construction activity emissions are not predicted to exceed SCAQMD CEQA thresholds. Nonetheless, the following control measures shall be implemented: • Construction parking shall be configured to minimize the potential for traffic interference and vehicle idling. • Any construction equipment using direct internal combustion engines shall use a diesel fuel with a maximum of 0.05 percent sulfur and a four-degree retard. • Equipment and vehicle engines shall be maintained in good condition and in proper tune, according to manufacturer's specifications and per SCAQMD rules, to minimize exhaust emissions. Tier 3 rated engines shall be used for all equipment during site grading, if available. • Equipment whose engines are equipped with diesel oxidation catalysts shall be utilized, if available. Construction operations affecting off-site roadways shall minimize obstruction of through-traffic lanes and shall be limited to off-peak hours, as permitted. Truck deliveries occurring during construction shall be consolidated to the extent feasible. • Idling trucks or heavy equipment shall turn off their engines if the expected duration of idling exceeds five (5) minutes as required by law. • On-site heavy equipment used during grading and construction shall be	Less Than Significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		equipped with diesel particulate filters if feasible. • All building construction shall comply with energy use guidelines in Title 24 of the California Code of Regulations. • Construction equipment operations shall be suspended during any first stage smog alert. • Low VOC architectural and asphalt coatings shall be used on site and shall comply with AQMD Rule 1113-Architectural Coatings.	
Operational Impacts Operation of the Project would result in emissions of air pollutants generated directly by mobile and stationary sources, as well as indirectly from off-site sources such as electricity generation facilities. Direct emissions from mobile sources would be generated by transportation for staff and guests of the Project. Operation of the Project's facilities, including overnight accommodations, would generate area source emissions derived from organic compounds from cleaning products and landscape equipment. The Project's operation would also result in indirect emissions produced by electrical generation plants operated by Southern California Edison (SCE). Such off-site emissions would be substantially reduced, as the Project would provide photovoltaic panels above parking structures with the goal of providing renewable energy to meet most of the Project's needs. Even without inclusion of Project design features, the Project's emissions would not exceed significance thresholds. As such, the Project's operational emissions, both unmitigated and mitigated, would be less than significant.	Less than significant	Operational Impacts on air quality are less than significant. However, to reduce the potential for impacts, MM5.2-3 is recommended. **MM5.2-3** Operational emissions are not predicted to exceed SCAQMD CEQA thresholds. Nonetheless, to further reduce potential operational emissions, the applicant shall install gas lines for any hearth applications and prohibit wood burning in Project hearths.	Less than significant
Micro-Scale Emissions Impacts There is a direct relationship between traffic congestion and carbon monoxide (CO) impacts since exhaust fumes from vehicular traffic are the primary source of CO. The highest CO concentrations are typically found in areas directly adjacent to congested roadway intersections where vehicle exhaust has the potential to accumulate in create pockets of elevated levels of CO which are called	Less than significant	No mitigation required or proposed.	Less than significant.

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
"hot spots". A CO screening analysis was performed at the intersection of Mulholland Highway and Kanan Road, which is the intersection that experiences the highest level of congestion in the vicinity of the Project area as evaluated in the Project's traffic report (Appendix H). The results of the microscale impact analysis showed with Project implementation, inclusive of the local background concentration, maximum one-hour concentration would be 4.1 ppm, which would be well below the one-hour standard of 20 ppm. The maximum ambient 8-hour CO concentration with the Project would be 1.9 ppm inclusive of the background concentration, which is below the 9 ppm significance threshold. Therefore, micro-scale (CO hot spots) air quality impacts would be less than significant.			
Health Risk Assessment The majority of diesel exhaust would occur during the grading phase, a period of approximately six months. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over a period of several years due to the lack of health risk associated with such a brief exposure.	Less than significant	No mitigation required or proposed.	Less than significant
Local Significance Impacts Local Significance Thresholds (LST) are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours, such as a residence, hospital or convalescent facility. To present a thorough analysis of the Project's air quality impacts, emissions resulting from all project construction activities were evaluated for LST impacts. The LST analysis was based on the nearest sensitive receptors to the proposed grading areas, which are residences, located approximately 1,200 feet west of the development area. On-site emissions would be well below the LST for construction activities based on the acreage to be disturbed and the distance to sensitive receptors.	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Objectionable Odors The nearest off-site sensitive receptor would be residences located to the west of the Project site along Mulholland Highway at a distance of at least 2,600 feet (approximately 0.5 miles) from the wastewater treatment and water recycling system. As a commercial enterprise designed to accommodate guests for overnight stays, the Project would provide a system that would not result in odor generation that would be considered objectionable within the proposed development area, or at off-site receptors.	Less than significant	No mitigation required or proposed.	Less than significant
Cumulative impacts A project would have a less-than-significant cumulative air quality impact if it were consistent with an adopted General Plan designed to evaluate regional conditions. The Project would not create any substantial increase in regional emissions not already anticipated in SCAG's Regional Comprehensive Plan. The Project would provide multi-occupant shuttle services from major airports and from meeting participant employment centers to raise the Average Vehicle Ridership to above the recommended performance standard.	Less than significant	No mitigation required or proposed.	Less than significant
BIOLOGICAL RESOURCES (SEE SECTION 5.3)			
Special Status Plant Species			
Proposed tee box and pathway A proposed tee box and the proposed pathway to the tee box would intersect approximately 0.02 acres of native chaparral habitat containing the Plummer's mariposa lily (*Calochortus plummerae*) [CRPR 4.2, L.A. County] on the lower south-facing slope of an isolated hill surrounded by the developed golf course. The Plummer's mariposa lily is a County of Los Angeles locally sensitive plant species. Construction of the tee box and pathway would potentially result in loss or injury to a relatively small but unknown number of individuals of this species, loss of a portion of its seed bank, and loss of suitable Plummer's mariposa lily habitat.	Potentially Significant but Mitigable	**MM5.3-2** To compensate for the loss of the locally sensitive Plummer's mariposa lily, Plummer's mariposa lilies shall be replaced at a minimum 2:1 ratio within suitable habitats on the Project site in an area to be preserved as permanent open space. A Plummer's Mariposa Lily Mitigation and Monitoring Plan that provides for the replacement of the Plummer's mariposa lilies impacted by Project construction shall be developed by a qualified biologist and approved by LACDRP prior to issuance of the grading permit for the Project. The Plan shall specify the following: • a summary of impacts; • the location of the mitigation site; • methods for harvesting seeds or	

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		salvaging and transplantation of individual bulbs to be impacted; • measures for propagating plants or transferring living bulbs from the salvage site to the mitigation site; • site preparation procedures for the mitigation site; • a schedule and action plan to maintain and monitor the mitigation area; • criteria and performance standards by which to measure the success of the mitigation, including replacement of impacted lilies at a minimum 2:1 ratio; • measures to exclude unauthorized entry into the mitigation areas; and • contingency measures such as replanting or weeding in the event that mitigation efforts are not successful. The performance standards for the Plummer's Mariposa Lily Mitigation and Monitoring Plan shall be at a minimum the following: • Within five years after introducing the Plummer's mariposa lily to the mitigation site, the number of established, reproductive plants shall be no less than 2x the number of those lost to Project construction, and; • Non-native species relative cover shall be no more than 5% through the term of the restoration. The mitigation project shall be initiated prior to development of the Project, and shall be implemented over a five-year period following occupancy or until performance standards are met, whichever period is longer. The mitigation project shall incorporate an iterative process of annual monitoring and evaluation of progress, and	

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		allow for adjustments to the Plan, as necessary, to achieve desired outcomes and meet performance standards. Annual reports discussing the implementation, monitoring, and management of the mitigation project shall be submitted to LACDRP. Five years after the start of the mitigation project, a final report shall be submitted to LACDRP, which shall at a minimum discuss the implementation, monitoring and management of the mitigation project over the five-year period, and indicate whether the mitigation project has, in part, or in whole, been successful based on established performance standards. The annual reports and the final report shall include as-built plans submitted as an appendix to the report. The mitigation project shall be extended if performance standards have not been met to the satisfaction of LACDRP at the end of the five-year period.	
Proposed helicopter pad The proposed helicopter pad would be sited within a formerly graded area containing disturbed native habitat and a population of native annual slender combseed (*Pectocarya linearis* ssp. *ferocula*) [L.A. County]. The proposed helicopter pad would encompass 79 individuals (based on the number of live plants observed in Spring of 2013) and a seed bank of this plant, as well as 0.11 acres of suitable slender combseed habitat. The preparation of the helicopter pad, construction of a proposed waterline to the helicopter pad, and installation of a proposed fire hydrant at the helicopter pad would not involve grading or substantial ground disturbance such that the annual slender combseed population would be significantly and adversely affected.	Less than significant	No mitigation required or proposed.	Less than significant
Superficial ground disturbance and routine mowing of native and non-native vegetation associated with the use and maintenance of the helicopter pad.	Beneficial impact	No mitigation required or proposed.	Beneficial impact

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Special-Status Wildlife Species			
Ground and vegetation disturbing activities necessary to construct the tee box, construct the pathway to the tee box, and maintain the helipad would impact chaparral and disturbed coastal sage scrub, which could result in potentially significant but mitigable impacts caused by direct mortality or injury to the following potentially occurring special-status species (with varying probabilities ranging from high to very low depending on the species): Trask shoulderband snail, coast horned lizard, western pond turtle, and coast patch nosed snake.	Significant but mitigable	**MM5.3-1** Prior to the issuance of a grading permit, a qualified biologist shall be retained by the Applicant as the lead biological monitor subject to the approval of the LACDRP and CDFW. That person shall ensure that impacts to all biological resources are minimized or avoided, and shall conduct (or supervise) pre-grading field surveys for species that may be avoided, affected, or eliminated as a result of grading or any other site preparation activities. The lead biological monitor shall ensure that all surveys are conducted by qualified personnel (e.g. avian biologists for bird surveys, herpetologists for reptile surveys, etc.) and that they possess all necessary permits and memoranda of understanding with the appropriate agencies for the handling of potentially-occurring special-status species. The lead biological monitor shall also ensure that daily monitoring reports (e.g., survey results, protective actions, results of protective actions, adaptive measures, etc) are prepared, and shall make these monitoring reports available to LACDRP and CDFW at their request. **MM5.3-3** Pre-construction Biological Surveys and Biological Monitoring Prior to commencement of ground or vegetation disturbing activities, including but not limited to grading, pond maintenance, and landscaping activities in native chaparral, coastal sage scrub, riparian, or aquatic habitats, as well as in landscaped areas, a qualified biologist shall conduct weekly pre-construction surveys for special-status wildlife species beginning no less than thirty (30) and ending no more	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		than three (3) days prior to the commencement of disturbance. The pre-disturbance surveys shall incorporate methods to detect the special-status wildlife species that could potentially occur at the site. To the extent feasible, special-status species shall be avoided. If avoidance is not feasible, the species shall be captured and transferred to an appropriate habitat and location where they would not be harmed by Project activities. Two-striped garter snakes shall be relocated to permanent aquatic habitats that are downstream and as close as feasible to the Project site. **MM5.3-4** Pre-construction Surveys for Shoulderband Snails Prior to construction of the Project, a qualified biologist shall conduct a habitat assessment to locate all suitable chaparral, coastal sage scrub, and coastal scrub habitats within and directly adjacent to the limits of disturbance that may potentially support the Trask shoulderband snail (Helminthoglypta traskii traskii). Prior to ground or vegetation disturbing activities, a terrestrial snail specialist shall conduct surveys in suitable habitats for the Trask shoulderband snail. The surveys shall be conducted in the winter to maximize the potential for detecting live snails. The project area shall be subject to a minimum of five (5) visual surveys, preferably spaced one (1) week apart, although surveys spaced more frequently may be acceptable in order to take advantage of wet weather. Surveys may be conducted during periods of rain, dense fogs, or heavy dews, but shall not be conducted during dry weather conditions.	

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		Each survey shall involve a general search for key features and likely places for snails followed by more intensive searching of areas with key habitat features. Surveys shall focus on careful examination of soil, leaf litter, downed wood, debris piles, beneath rocks and vegetation, and the undersides of branches and leaves. The U.S. Fish and Wildlife Morro shoulderband snail (Helminthoglypta walkeriana) Protocol Survey Guidelines (June 2003) may be referred to for additional guidance on surveying for Helminthoglypta snails. If Trask shoulderband snails are found, they shall be moved to suitable habitat on the Malibu Institute property, such that the snails would not be subject to direct or indirect harm by the project, and would not migrate back into the Project area. Handling time shall be minimized and attractants shall not be used, so as to avoid inadvertently attracting vandals or predators of the snail. The survey shall be valid for two years. Following the two-year period, surveys shall be required prior to new ground or vegetation disturbance in suitable habitat. Prior to the issuance of a grading permit, the surveying biologist shall provide a report to LACDRP covering the survey methods and results, including maps, photographs, and field notes documenting the area surveyed and any Trask shoulderband snails that were identified and relocated.	
Ground and vegetation disturbing activities necessary to construct the modified golf course, including the removal and installation of turf and landscaping could result in potentially significant but mitigable impacts caused by direct mortality or injury to the western pond turtle.	Significant but mitigable	See MM 5.3-1 and MM 5.3-3, above.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
The proposed grading and maintenance, i.e., sediment and vegetation removal, of the golf course ponds would impact aquatic, wetland, and riparian habitats, which would result in potentially significant but mitigable impacts caused by direct mortality or injury to resident western pond turtles.	Significant but mitigable	See MM 5.3-1 and MM 5.3-3, above. **MM5.3-5** Capture, Management, and Release of Western Pond Turtles A Western Pond Turtle Mitigation and Monitoring Plan for the avoidance of impacts to the western pond turtle shall be prepared by a qualified biologist and approved by LACDRP and the CDFW prior to issuance of the grading permit for the Project. The Plan shall involve the capture of all western pond turtles at the Project site, the temporary containment and maintenance of the captured turtles at a suitable on-site or off-site location, and the release of the turtles back to the ponds at an appropriate time when the ponds would provide suitable habitat and the turtles would no longer be threatened by Project activities. The Plan shall at a minimum specify the following: • timing and methods of capture and removal of the turtles, and turtle eggs if applicable, from the golf course ponds and elsewhere within the Project limits; • site conditions necessary for the release of the turtles back to the ponds; • methods for release to the ponds; • monitoring program to document the status and condition of the turtle population following the release of the turtles back into the ponds; • a schedule and action plan for monitoring and reporting on the status of the turtle mitigation project; • criteria and performance standards by which to measure success; and, • contingency measures in the event that the mitigation effort is not successful.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		Alternatively, if feasible, the temporary containment of all or part of the turtle population at the golf course ponds may be avoided if it can be demonstrated that the timing and duration of the period that the ponds would be unsuitable for the species (i.e., lacking water, cover, or food supply) coincides with the seasonal periods that the turtles would move to upland habitats and if the safe dispersal of the turtles between the ponds and the native habitats in the surrounding area could be ensured throughout Project construction. In this case, the Plan shall also specify the timing and duration of the period that the ponds would be unsuitable and methods and monitoring activities to ensure that both direct impacts to individuals and the population of turtles at the Project site would be avoided. Annual reports discussing the implementation, monitoring, and management of the western pond turtle mitigation project shall be submitted to LACDRP and the CDFW. The fifth annual report shall discuss the implementation, monitoring and management of the mitigation project and indicate whether the mitigation project has, in part, or in whole, been successful based on established performance standards. If performance standards have been satisfied, the mitigation shall be considered complete, and no further reporting shall be required. If performance standards have not been met, mitigation efforts shall be extended, with the incorporation of contingency measures, as identified in the Western Pond Turtle MMP.	
The proposed grading and maintenance of the golf course ponds could result in potentially significant but mitigable impacts caused by direct mortality or injury to	Significant but mitigable	See MM 5.3-1 and MM 5.3-3, above.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
the following potentially occurring special-status species (with varying probabilities ranging from high to very low depending on the species): California legless lizard, two-striped garter snake, California mountain kingsnake, and tree-roosting special-status bats.			
Loss and modification of habitat Many of the special-status wildlife species with potential to occur within the proposed limits of disturbance likely would occur only rarely or occasionally and would not be significantly affected by habitat loss and habitat modification that would result from development of the Project, as impacts to suitable habitats would represent an exceedingly small proportion of the available suitable habitat within their ranges. These species include residents, as well as migrants and other rare and uncommon visitors that may rarely or occasionally forage on the site, including the least Bell's vireo, willow flycatcher, bank swallow, golden eagle, northern harrier, American peregrine falcon, burrowing owl, western least bittern, short-eared owl, long-eared owl, black swift, Vaux's swift, olive-sided flycatcher, purple martin, yellow warbler, yellow-breasted chat, summer tanager, as well as several additional potentially occurring species of birds considered "special animals". Impacts to suitable native habitat would not have a substantial adverse effect on these species, due to the small acreage of habitat that would be lost or modified, the relatively low importance of the habitat within the limits of disturbance to their survival, and because these species can be expected to adapt and utilize other available habitat in the surrounding area or in the region. The following special-status species with potential to occur on the Project site may use all or a portion of habitat within the disturbance limits to meet their life history requirements for refuge, breeding and foraging: Trask shoulderband snail, Santa Monica grasshopper, coastal whiptail, coast horned lizard, California legless lizard, San Bernardino ringneck snake, coast patch-nosed snake, white-tailed kite, loggerhead shrike, all potentially occurring bat species, and several additional potentially occurring species of birds considered "special	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
animals" (e.g., Cooper's hawk and southern California rufous crowned sparrow). The native habitats within the limits of disturbance are not particularly important or essential for the survival of a population of any of these species and the acreage of suitable habitat for these species that would be impacted would be small, particularly when compared to the amount of remaining suitable habitat on the Project site, which would be protected as permanently dedicated open space as a component of the Project. Therefore, impacts to these species resulting from habitat loss would be less than significant.			
Dewatering of the ponds The proposed dewatering and drying of the ponds and the removal of vegetation from the ponds could have a potentially significant adverse effect on the western pond turtle, and may have a significant adverse effect on the two-striped garter snake, if the two-striped garter snake is present at the site. These species are identified as special-status species by the CDFW.	Significant but mitigable	See MM 5.3-5 and MM5.3-3, above.	Less than significant
Roosting special-status bats The demolition of uninhabited structures and the felling of trees, particularly larger trees, could result in direct morality, injury, or disturbance to roosting bats, including hibernating bats or bats raising young.	Significant but mitigable	**MM5.3-6** Special-Status Roosting Bats To avoid the direct loss of bats that could result from removal of trees or structures that may provide maternity roost habitat (e.g., in cavities or under loose bark) or structures that contain a hibernating bat colony, the following steps shall be taken: • To the extent feasible, tree removal, tree relocation, and demolition of vacant buildings and other suitable man-made structures shall be scheduled between October 1 and February 28, outside of the maternity roosting season. • If trees must be removed during the maternity season (March 1 to September 30), or structures must be removed at any time of the year, a qualified bat specialist shall conduct a pre-construction survey to identify	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		those trees or structures proposed for disturbance that could provide hibernacula or nursery colony roosting habitat for bats. • Each tree or structure identified as potentially supporting an active maternity roost and each structure potentially supporting a hibernating shall be closely inspected by the bat specialist no greater than 7 days prior to disturbance to the tree or structure to more precisely determine the presence or absence of roosting bats. • If bats are not detected, but the bat specialist determines that roosting bats may be present at any time of year, it is preferable to push any tree down using heavy machinery rather than felling it with a chainsaw. In order to ensure the optimum warning for any roosting bats that may still be present, the tree shall be pushed lightly two to three times, with a pause of approximately 30 seconds between each nudge to allow bats to become active. The tree shall then be pushed to the ground slowly and shall remain in place until it is inspected by a bat specialist. Trees that are known to be bat roosts shall not be sawn up or mulched immediately. A period of at least 48 hours shall elapse prior to such operations to allow bats to escape. Bats shall be allowed to escape prior to demolition of buildings. This may be accomplished by placing one way exclusionary devices into areas where bats are entering a building that allow bats to exit but not enter the building. • Maternity season lasts from March 1 to September 30. Trees or structures determined to be maternity roosts shall	

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		be left in place until the end of the maternity season. A structure containing a hibernating colony shall be left in place until a qualified biologist determines that the bats are no longer hibernating. The bat specialist shall document all demolition monitoring activities and prepare a summary report to the County upon completion of tree disturbance or building demolition activities. **MM5.3-7** Bat Relocation If confirmed occupied or formerly occupied bat roosting habitat is destroyed, artificial bat roosts of comparable size and quality shall be constructed and maintained at a suitable undisturbed area, preferably on the Malibu Institute property. The design and location of the artificial bat roosts shall be determined by the bat specialist in consultation with CDFW. In exceptional circumstances, such as when roosts cannot be avoided and bats cannot be evicted by non-invasive means, it may be necessary to capture and transfer the bats to appropriate natural or artificial bat roosting habitat in the surrounding area. Bats raising young or hibernating shall not be captured and relocated. Capture and relocation shall be performed by the bat specialist in coordination with CDFW, and shall be subject to approval by LACDRP and CDFW. A monitoring plan shall be prepared for the replacement roosts, which shall include performance standards for the use of the replacement roosts by the displaced species, as well as provisions to prevent harassment,	

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		predation, and disease of relocated bats. Annual reports detailing the success of roost replacement and bat relocation shall be prepared and submitted to LACDRP and CDFW for five years following relocation or until performance standards are met, whichever period is longer.	
Nesting Birds Birds may nest within the Project impact area in trees, shrubs, dense herbaceous vegetation, and on or within suitable man-made structures. Certain Project activities including but not limited to grading, tree and vegetation removal, maintenance of the golf course ponds, and demolition of structures conducted during the nesting bird season (February 1 through September 15), could potentially impact nesting birds protected under the MBTA and Fish and Game Code. The large number of trees that would be removed or relocated could potentially result in substantial direct mortality or injury to nesting birds. Some special-status bird species and numerous non-special-status bird species may nest within or in the vicinity of the Project site and would be directly impacted if present in vegetation or suitable structures during Project activities. Additionally, birds nesting in the vicinity of Project activities may potentially be disturbed by noise, lighting, dust, and human activities associated with the Project, which could result in nesting failure and the loss of eggs or nestlings. Project impacts to nesting birds are therefore significant, but mitigable.	Significant but mitigable	**MM5.3-8** Nesting Bird Surveys Proposed Project activities including, but not limited to, staging and disturbances to native and nonnative vegetation, structures, and substrates shall occur outside of the avian breeding season which generally runs from February 1-August 31 (as early as January 1 for some raptors) to avoid take of birds or their eggs. Take means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill (Fish and Game Code Section 86), and includes take of eggs or young resulting from disturbances which cause abandonment of active nests. Depending on the avian species present, a qualified biologist may determine that a change in the breeding season dates is warranted. If avoidance of the avian breeding season is not feasible, beginning thirty days prior to the initiation of construction activities, a qualified biologist with experience in conducting breeding bird surveys shall conduct weekly bird surveys to detect protected native birds occurring in suitable nesting habitat that is to be disturbed, including but not limited to site preparation, grading, construction, tree removal, landscaping removal, pond or detention basin maintenance, or building demolition and (as access to adjacent areas allows) any other such habitat within 300 feet of the disturbance area (within 500 feet for	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		raptors). The surveys shall continue on a weekly basis with the last survey being conducted no more than 3 days prior to the initiation of Project activities. If a protected native bird is found, the Project proponent shall delay all Project activities within 300 feet of on- and off-site suitable nesting habitat (within 500 feet for suitable raptor nesting habitat) until August 31. Alternatively, the qualified biologist could continue the surveys in order to locate any nests. If an active nest is located, Project activities within 300 feet of the nest (within 500 feet for raptor nests) or as determined by a qualified biological monitor, must be postponed until the nest is vacated and juveniles have fledged and there is no evidence of a second attempt at nesting. Flagging, stakes, or construction fencing shall be used to demarcate a buffer of 300 feet (or 500 feet) between the Project activities and the nest. Project personnel, including all contractors working on site, shall be instructed on the sensitivity of the area. The Project proponent shall provide LACDRP the results of the recommended protective measures described above to document compliance with applicable State and Federal laws pertaining to the protection of native birds. If the biological monitor determines that a narrower buffer between the Project activities and observed active nests is warranted, he / she shall submit a written explanation as to why (e.g., species-specific information; ambient conditions and birds' habituation to them; and the terrain, vegetation, and birds' lines of sight between the Project activities and the nest and	

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		foraging areas) to LACDRP and, upon request, CDFW. Based on the submitted information, LACDRP (and CDFW, if CDFW requests) will determine whether to allow a narrower buffer. The biological monitor shall be present on site during all grubbing and clearing of vegetation to ensure that these activities remain outside the demarcated buffer and that the flagging / stakes / fencing is being maintained, and to minimize the likelihood that active nests are abandoned or fail due to Project activities. The biological monitor shall send weekly monitoring reports to LACDRP during the grubbing and clearing of vegetation, and shall notify LACDRP immediately if Project activities damage active avian nests.	
Invasive Animals Invasive animals confirmed present in aquatic habitats on the Project site include crayfish, mosquito fish, and predatory fish, including non-native catfish and largemouth bass. The aquatic habitats on the Project site would be temporarily dewatered to eradicate invasive animals, including predatory fish, crayfish, and mosquito fish.	Beneficial impact	No mitigation required or proposed.	Beneficial impact
Vegetation and CDFW Sensitive Plant Communities No plant communities that meet criteria of CDFW sensitive plant communities would be impacted by the Project.	Less than significant	No mitigation required or proposed.	Less than significant
Environmentally Sensitive Habitat Area (ESHA) There are two designated ESHAs on the Project site, including a Willow/Sycamore/Coast Live Oak woodland community and an area of non-native tree plantings and disturbed areas associated with a residence and the former hunting lodge, which lacks notable or sensitive native habitat and therefore appears to have been erroneously mapped. The Willow/Sycamore/Coast Live Oak ESHA is located upstream and approximately 970 feet from the limits of disturbance. The	Significant but mitigable	**MM5.3-9** The following measures shall be implemented during the construction phase to avoid impacts to ESHAs and other sensitive habitats located adjacent to the Project limits of disturbance, as well as the flora and fauna associated with the ESHAs: a) Prior to all ground disturbing and construction activities, the Applicant shall demarcate the Project limits of	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Willow/Sycamore/Coast Live Oak ESHA would not be impacted by the Project. The Project, including all proposed grading, landscaping, tree removals, and vacant structure demolition, would be sited within areas that do not qualify as ESHA based on the Malibu LCP policy, the Coastal Act definition, or Dixon Memo criteria. The Project would be sited almost entirely within existing developed and disturbed areas, and the native habitats that would be affected by the Project do not qualify as ESHA based on their being isolated from large, extensive areas of native habitat or due to substantial previous or ongoing disturbance. Development activities along the margins of the golf course would occur in close proximity to ESHA habitats, which could be degraded by inadvertent encroachment of construction activities or by excessive levels of construction noise, dust, or lighting, which could have adverse effects on native flora and fauna within those habitats. Although impacts would be temporary, Project development is anticipated to last for two years and a relatively large area would be subject to ground disturbance to create the remodeled golf course.		disturbance with sturdy exclusionary fencing to prevent encroachment of Project activities into native habitats adjacent to the Project limits of disturbance and to dissuade wildlife from entering the construction area. The fencing shall be marked with highly visible flagging and signed as a sensitive area. The LACDRP shall verify the fencing has been correctly installed prior to the start of ground disturbance or construction activities. The temporary fencing shall be routinely inspected and maintained in functional condition for the duration of Project construction. b) All construction and maintenance activities, except in an emergency, shall be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday. c) If construction lighting is required, then lighting shall be pointed away from native habitats and shall be pointed downward and shielded to the extent practicable. d) All on-site construction equipment shall have properly operating mufflers. e) All pets shall be on a leash and shall not be allowed to enter native habitats at the Project site. f) All food-related trash shall be disposed of in closed containers.	
<u>Artificial Night Lighting Impacts on ESHA</u> Native habitats located adjacent to the limits of disturbance also could be permanently degraded if subject to excessive noise or artificial night lighting during the Project's operational phase, which could affect the normal behavior of wildlife and cause some species to avoid the area. Given the proposed height of buildings and the locations of areas to be developed relative to surrounding native habitats combined with the	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
restrictions of the L.A. County Rural Outdoor Lighting District Ordinance, significant encroachment and glare within ESHAs would not be expected.			
Noise Impacts on ESHA The Project is not expected to be a noise generator as it primarily consists of passive educational and recreational activities, with the remodeled golf course being a continuation of an existing use. However, the Project would continue to host occasional events, and some of these events could be held outdoors and involve the use of amplified sound.	Significant but mitigable	See MM5.10-4 in Section 5.10, Noise.	Less than significant
Invasive Plant Species Ground disturbance associated with Project development, including grading, landscaping, pond maintenance, tree removals, and construction activities, could facilitate the introduction and/or spread of non-native, invasive plant species.	Significant but mitigable	**MM5.3-10** Invasive Plant Species and Landscaping, Bio-detention Basins, and Bio-swales Prior to the issuance of a grading permit, a Landscaping Plan shall be reviewed and approved by LACDRP to ensure that only non-invasive ornamental plant species or appropriate native plant species are used in landscaping, bio-detention basins, and bio-swales in future development of the Project site. The review shall include a comparison of proposed plants with the following lists of invasive plant species: the California Invasive Plant Inventory (California Invasive Plant Council 2006, 2007), the California Invasive Plant Council Watchlist (December 2011), the Federal Noxious Weed List (December 10, 2010), the California Department of Food and Agriculture Pest Ratings of Noxious Weed Species and Noxious Weed Seed (January 2010), the Significant Ecological Area Draft Design Manual list of "L.A. County Non-Native Species to Avoid in Landscaping," (December 2012), and the draft Santa Monica Mountains Local Coastal Program list of "Plants to Avoid in the Santa Monica Mountains." The Landscaping Plan shall include all plant species that would be planted as part of the	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		proposed project, including but not limited to plant species that would be planted within bio-detention basins and bio-swales and the drought-tolerant grasses for the golf course. Species used in bio-detention basins and bio-swales shall be locally-indigenous natives. Drought-tolerant grasses for the golf course shall be non-invasive and shall not be capable of hybridizing with native grasses in the surrounding habitat. LACDRP shall conduct site inspections to ensure the appropriate plant materials have been planted and are maintained through the life of the Project. **MM5.3-11** Pest and Invasive Species Management Plan A Pest and Invasive Species Management Plan shall be developed and implemented that emphasizes eradication and control of problem species within the development limits and fuel modification zones, including pests and invasive plant and animal species that could adversely affect the quality of native habitats in the surrounding area. If invasive species from the Project site spread to natural areas, control of invasive species shall extend to those areas as well. The Plan shall incorporate sustainable methods, avoid or minimize the use of chemical fertilizers, insecticides, herbicides, fungicides, and rodenticides, and ensure that toxic chemicals or excessive nutrient loads do not adversely affect native habitats and wildlife. Success criteria shall be tied to the control and eradication of problem species, and the lack of adverse effects of pest management practices (and fertilizer use) on sensitive species and habitats both at the Project site and in the surrounding area, including downstream from the Project site. The Plan shall allow for adaptation of management	

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		strategies, as necessary, and shall include periodic monitoring, reporting, and evaluation of progress.. In broad terms, the Plan shall at a minimum include: • Specific objectives; • Target species and problem areas; • Prioritization of threats; • Success criteria; • Management strategies that would prevent the establishment of problem species; • Management strategies that would result in eradication and/or control of problem species; • Implementation plan; • Monitoring plan; and, • Contingency measures. The Plan shall incorporate but shall not be limited to the following practices and conditions: • Use of chemical fertilizers, insecticides, herbicides, and fungicides shall be avoided or minimized; • Pesticides and herbicides used within or near aquatic habitats shall be designated for use in aquatic habitats and shall be applied with techniques that avoid over-spraying and control application to avoid excessive concentrations; Biological and organic controls shall be used to the maximum extent feasible; • Chemical pesticides and fertilizers shall be limited to the immediate vicinity of buildings and exotic landscape plantings; • Bt (Bacillus thuringiensis kursaki) or non-native predatory snails (i.e., decollate snails) shall not be used for pest control;	

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		• Rodent eradication efforts shall emphasize the use of traps and shall avoid chemical controls, unless otherwise directed by the Department of Health Services (DOHS); • Anticoagulant rodenticides shall not be used, as they are a risk to non-target species and have been identified as a factor in the deaths of large predators in the Santa Monica Mountains; and, • Application of non-anticoagulant rodenticides shall be limited to the vicinity of buildings, facilities, and developed areas and shall not extend to the landscaped areas on the golf course grounds. The plan shall be adhered to for the life of the Project and shall be updated every ten years. The plan shall be prepared by qualified specialists in coordination with personnel responsible for pest and invasive species management at the Malibu Institute, and shall be approved by the Director of Planning prior to issuance of a grading permit for the Project. Implementation of the Plan shall begin with commencement of ground disturbance for the project. Biannual reports shall be prepared by qualified specialists, which document methods, treatments, and monitoring, and evaluate the implementation of the Plan and whether success criteria have been met. The reports shall be submitted by December 31 to the Los Angeles County Director of Planning for review who will ensure the Plan has been fully implemented and that the success criteria have been met.	
<u>Pollutants Discharged to Habitats within the Trancas Canyon Watershed</u> Sensitive habitats within the Trancas Canyon Watershed, including designated stream and riparian woodland	Significant but mitigable.	See MM5.3-11, Pest and Invasive Species Management Plan, above. As part of the normal Department of Public Works	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
ESHAs, could be impacted by the Project if pollutants were transported downstream from the Project site by stormwater runoff or other means. Pollutants originating from the Project site also could impact special-status wildlife species in downstream habitats, including the federally Endangered southern steelhead and tidewater goby, and the California newt, western pond turtle, and the two-striped garter snake, which are California Species of Special Concern. Pollutants originating from the Project site also could impact special-status wildlife species in downstream habitats, including the federally Endangered southern steelhead and tidewater goby, and the California newt, western pond turtle, and the two-striped garter snake, which are California Species of Special Concern. Pollutants could be discharged to Trancas Creek during grading, landscaping, and construction activities during the construction phase of the Project, or during routine activities such as golf course maintenance during the operational phase of the Project. Pollutants discharged to offsite habitats within the Trancas Canyon Watershed could have substantial adverse effects on riparian habitat identified by the CDFW, conflict with local Malibu LCP policies protecting ESHAs, and have substantial adverse effects directly and through habitat modifications on special-status species identified by the USFWS and CDFW. These impacts are significant, but mitigable. Implementation of MM5.3-11, which would require implementation of a Pest and Invasive Species Managmeent Plan, as well as compliance with existing County codes and regulations (as discussed in Section 5.8, Hydrology and Water Quality), which would require implementation of a SWPPP during construction, implementation of best management practices during construction and operations and compliance with the County's MS4 permit requirements, would reduce potential impacts to a less than significant level.		plancheck process and condition of approval, the Applicant shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP), and BMPs in compliance with County Code and regulations as discussed in Section 5.8, Hydrology and Water Quality, of this DEIR.	

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Pesticides, Herbicides, Fertilizers, and Pest and Rodent Control Pesticides, herbicides, fungicides, toxic chemicals, fertilizers (nutrients), and poisons used for pest and rodent control used at the Project site could be released to the environment, including aquatic and terrestrial systems. If left uncontrolled, chemicals and fertilizers could have substantial adverse effects on riparian habitats and sensitive natural communities identified by the CDFW and special-status species identified by the CDFW and USFWS, either directly or through habitat modifications, and conflict with local policies protecting biological resources (SWA, ESHAs), which would be a significant, but mitigable impact.	Significant but mitigable	See MM5.3-11, Pest and Invasive Species Management Plan, above.	Less than significant
Jurisdictional Wetlands, Waters, and Habitat Grading to construct the redesigned golf course would permanently impact a man-made drainage (Drainage 2) on the golf course grounds, which would permanently impact a total of 0.032 acres of jurisdictional area. The impacts to Drainage 2 would have a substantial adverse effect on riparian habitat identified by the CDFW and federally protected wetlands as defined by Section 404 of the Clean Water Act.	Significant but mitigable	**MM5.3-12** Prior to issuance of the grading permit, the Applicant shall prepare and submit to the USACE for verification a "Preliminary Delineation Report for "waters of the U.S."" and a Streambed Alteration Notification package to the CDFW for alterations to USACE jurisdictional "waters of the U.S." and CDFW jurisdictional streambed and habitat. A Clean Water Act Section 404 permit shall be obtained from the USACE, and the Applicant shall comply with the permit conditions. A Streambed Alteration Agreement shall be entered into with the CDFW under Section 1602 of the California Fish and Game Code, and the Applicant shall comply with the associated conditions. A Clean Water Act Section 401 Water Quality Certification shall be obtained from the RWQCB, and the Applicant shall comply with the certification conditions. Mitigation for unavoidable impacts to USACE jurisdictional "waters of the U.S." and CDFW jurisdictional streambed and habitat shall be provided through implementation	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		of the Habitat Mitigation and Monitoring Program, as required by MM5.3-13. **MM5.3-13** The Project shall implement the requirements of the final approved Habitat Mitigation and Monitoring Program, which shall mitigate for permanent impacts to 0.032 acres of CDFW jurisdictional habitat, 0.002 acres of USACE wetland "waters of the United States", and 0.03 acres of USACE non-wetland "waters of the United States" at a 2:1 ratio. Due to the overlap of the jurisdictional areas that would be permanently impacted, a total of 0.032 acres consisting of 0.002 acres of wetland "waters of the United States"/CDFW jurisdictional habitat and 0.03 acres of non-wetland "waters of the United States"/CDFW jurisdictional habitat shall be mitigated. Also as part of the Habitat Mitigation and Monitoring Program, the Project shall mitigate for temporary impacts to 4.42 acres of CDFW jurisdictional habitat, 2.19 acres of USACE wetland "waters of the United States", 1.63 acres of USACE non-wetland "waters of the United States", and 4.10 acres of single-parameter wetlands at a 2:1 ratio. Due to the overlap of jurisdictional areas that would be temporarily impacted, a total of 4.42 acres consisting of 0.32 acres of CDFW jurisdictional habitat, 0.28 acres of CDFW jurisdictional habitat/single-parameter wetlands, 2.19 acres of USACE wetland "waters of the United States"/CDFW jurisdictional habitat/single-parameter wetlands, and 1.63 of non-wetland "waters of the United States"/CDFW jurisdictional habitat/single-parameter wetlands shall be mitigated.	

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		The Habitat Mitigation and Monitoring Program shall mitigate for permanent and temporary impacts to jurisdictional areas by the on-site or off-site restoration of degraded in-kind wetland and riparian habitats, or by a contribution to an in-lieu fee program approved by the LACDRP, USACE, and the CDFW. Restoration should be implemented only where suitable conditions exist to support viable wetland and riparian habitat. If the mitigation will be performed off-site, to the extent feasible the restoration should be implemented within the Trancas Canyon Watershed. Also to the extent feasible, in-lieu fees shall be used for the restoration of in-kind wetland and riparian habitat within the Trancas Canyon Watershed. The final Habitat Mitigation and Monitoring Program shall be developed by a qualified biologist, restoration ecologist or resource specialist and submitted to and approved by the LACDRP, USACE, RWQCB, and CDFW, in compliance with Clean Water Act Sections 401 and 404 and California Fish and Game Code 1602 and supporting regulations, prior to issuance of a grading permit for the Project. The Program shall be based on the USACE Final Mitigation Guidelines and Monitoring Requirements (April 19, 2004) and the Los Angeles District's Recommended Outline for Draft and Final Compensatory Mitigation and Monitoring Plans. In broad terms, this Program shall at a minimum include: • Description of the project/impact and mitigation sites; • Specific objectives; • Success criteria; • Plant palette;	

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		• Implementation plan; • Maintenance activities; • Monitoring plan; and • Contingency measures. Success criteria shall at a minimum be evaluated based on appropriate survival rates and percent cover of planted native species, as well as eradication and control of invasive plant and animal species within the restoration area. The target species and native plant palette, as well as the specific methods for evaluating whether the Project has been successful at meeting the above-mentioned success criteria shall be determined by the qualified biologist, restoration ecologist or resource specialist and included in the mitigation program. To the extent possible, the mitigation project or in-lieu fee contribution shall be initiated prior to development of the Project. If the compensatory mitigation involves the restoration of on-site wetland and riparian habitats that were removed or disturbed by Project grading or pond maintenance, the mitigation project shall be initiated as the earliest possible date, but shall not interfere with Project development or the planned eradication of invasive animals from aquatic habitats at the site. The mitigation project shall be implemented over a five-year period and shall incorporate an iterative process of annual monitoring and evaluation of progress and allow for adjustments to the program, as necessary, to achieve desired outcomes and meet success criteria. Annual reports discussing the implementation, monitoring, and management of the mitigation project shall be submitted to the LACDRP, USACE, and the CDFW. Five	

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		years after Project start, a final report shall be submitted to the LACDRP, USACE, and CDFW, which shall at a minimum discuss the implementation, monitoring and management of the mitigation project over the five-year period, and indicate whether the mitigation project has, in part, or in whole, been successful based on established success criteria. The annual reports and the final report shall include as-built plans submitted as an appendix to the report. The mitigation project shall be extended if success criteria have not been met at the end of the five-year period to the satisfaction of the Director of Regional Planning, USACE, and the CDFW.	
Temporary Impacts to USACE "Waters of the United States," CDFW Jurisdictional Habitat, and CCC Single-Parameter Wetlands Grading to construct the redesigned golf course would temporarily impact wetland "waters of the United States," CDFW jurisdictional habitat, and CCC single-parameter wetlands at three of the four ponds (Pond 1, Pond 2, and Pond 3) on the golf course grounds. Also, the temporary de-watering and drying of the golf course ponds, as well as removal of sediment and vegetation from the ponds would temporarily impact wetland "waters of the United States", non-wetland "waters of the United States", CDFW jurisdictional habitat, and CCC single-parameter wetlands at all four of the ponds on the golf course grounds (Pond 1, Pond 2, Pond 3, and Pond 4). The grading of portions of Pond 1, Pond 2, and Pond 3, as well as the dewatering and removal of vegetation and sediment from Pond 1, Pond 2, Pond 3, and Pond 4 would temporarily impact a total of 4.42 acres of jurisdictional area.	Significant but mitigable	See MM 5.3-12 and MM 5.3-13, above.	Less than significant
Wildlife Movement and Habitat Linkages The Project would not remove or modify habitat within an important habitat linkage or wildlife movement	Less than significant	No mitigation proposed or required.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
corridor, and the Project would not isolate habitat or construct or create permanent barriers that would impede wildlife movement, migration, or significantly disrupt the capacity of the habitat linkage on the Project site to provide opportunities for dispersal of fauna (and flora) over the short or long-term.			
Oak Woodlands The Project would avoid all oak trees, including their canopies and root protection zones, and oak woodlands.	Less than significant	No mitigation proposed or required.	Less than significant
Protected Oak Trees No native oaks in the genus *Quercus* would be removed and/or encroached upon by the Project.	Less than significant	No mitigation proposed or required.	Less than significant
Significant Ecological Areas (SEAs) and Buffers The Project site includes a small portion of the Los Angeles County designated Zuma Canyon Significant Ecological Area Buffer (SEA Buffer 3A) on the far northeastern portion of the Project site. SEA Buffer 3A is approximately 1,850 feet from the limits of disturbance. Also, the Zuma Canyon Significant Ecological Area (SEA 3) is outside of the Project site to the south and east, and approximately 2,265 feet from the limits of disturbance. Because of the distance between the limits of disturbance and SEA 3 and SEA Buffer 3A, and the terrain and drainage network of the area, a significant nexus between the Project area and SEA 3 or SEA Buffer 3A is not expected.	Less than significant	No mitigation proposed or required.	Less than significant
Cumulative Impacts The surrounding area includes fourteen currently planned projects, eight are in the Coastal Zone. The planned mitigation measures for this Project's impacts to biological resources would reduce all potential Project impacts to biological resources to a less than significant level. The anticipated residual impacts are of sufficiently low level such that the Project's potential contribution to a cumulative impact would not be cumulatively considerable.	Significant but mitigable	Implementation of this Project's planned mitigation measures.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
CULTURAL RESOURCES (SEE SECTION 5.4)			
Archaeological Resources CA-LAN-527 Using GPS equipment and archaeological base maps on file at the SCCIC, the suspected location of CA-LAN-527 was plotted within 100 feet of the 18th green within the fairway. No site record exists for this resource; therefore, it is not known what type of resource was documented at this location, the size and depth of the site, the age of the resource, or whether testing or excavation had occurred prior to the construction of the existing golf course. To be conservative, this analysis presumes at least some portion of the resource site still exists under the existing fairway near the 18th green. With implementation of the Project, this area would remain part of the remodeled golf course. If resources were found during the implementation of the Project, potential impacts to the resource would be considered potentially significant but could be mitigated to less than significant levels.	Significant but mitigable	**MM5.4-1** A protective fence shall be installed and maintained surrounding site CA-LAN-527 prior to all earth moving activities that occur within 100-feet of the site (within the existing fairway for Hole #18, approximately 100 feet from the green). **MM5.4-2** A qualified archaeologist shall monitor all stripping and other earthmoving activities occurring within 100-feet of site CA-LAN-527 (within the existing fairway for Hole #18, approximately 100 feet from the green). **MM5.4-3** In the event unknown archaeological resources are discovered during Project construction, all ground-disturbing activities within the vicinity of the find shall cease until a qualified archaeological or paleontological monitor inspects the resources, identifies appropriate treatment, and documents the resource as necessary. The archaeologist shall record all recovered archaeological resources on the appropriate California Department of Parks and Recreation Site Forms to be filed with the California Historical Resources Information System–South Central Coastal Information Center, evaluate the significance of the find, and if significant, determine and implement the appropriate mitigation in accordance with the U.S. Secretary of the Interior and California Office of Historic Preservation guidelines, including but not limited to a Phase III data recovery and associated documentation. The archaeologist shall prepare a final report about the find to be filed with the Applicant, the County of Los Angeles Department of Regional Planning, and the California Historical Resources Information System–South Central Coastal	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		Information Center, as required by the California Office of Historic Preservation. The report shall include documentation of the resources recovered, a full evaluation of the eligibility with respect to the California Register of Historical Resources, and treatment of the resources recovered. In the event of a find, archaeological and Native American monitoring shall be provided thereafter for any ground-disturbing activities within the boundary of the archaeological site. **MM5.4-4** In the event human remains are encountered during construction activities, all ground-disturbing activities within the area of the human remains shall cease and the County coroner shall be notified. In the event the remains are determined to be of Native American descent, the coroner shall notify the California Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall identify the person(s) thought to be the Most Likely Descendant of the deceased Native American, who shall have 48 hours from notification by the Native American Heritage Commission to inspect the site of the discovery of Native American remains and to recommend to the Applicant or landowner means for the treatment and disposition of the human remains and any associated grave goods. The Applicant or landowner shall reinter the remains and associated grave goods with appropriate dignity on the property in a location not subject to further disturbance. In the event Native American remains are found, Native American monitoring shall be provided thereafter for any ground-disturbing activities in the area of the remains.	

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Archaeological Resources *CA-LAN-528* Using GPS equipment, the cultural resource identified as CA-LAN-528 on archaeological base maps on file at the SCCIC, was determined to be at the location of the abandoned residence dating to the 1920s in the northern portion of the Project site along Mulholland Highway on a bluff overlooking the existing golf course. The SCCIC did not have active files for this resource, and site records for this resource could not be located during the record search.	Less than significant	No mitigation proposed or required.	Less than significant
Historical Resources *CA-LAN-528* Due to evidence that trespassing has occurred within this unmaintained, abandoned residence, its state of disrepair, and its infestation by rats, the Project would remove this structure from the site for public safety and security reasons. Because there is a lack of a prehistoric component observed at this site, and due to prior disturbances of the site as evidenced by the existing structure, this site is not considered sensitive for prehistoric resources. Additionally, due to a lack of historical value and structural integrity, the abandoned residence at this site is not eligible for listing and is not considered a significant historic resource under CEQA. *Caretaker's Residence* The 1920s era residence located at 32926 Mulholland Highway is not identified as a potential resource by the SCCIC. There is no indication that this building meets any criteria for listing in the California Register as discussed above in Section 5.4.2, Regulatory Setting. Because of this, and due to alterations that were previously made to the building, this residence is not eligible for listing and is not considered a significant historic resource under CEQA. In any event, the Project would retain the caretaker's residence.	Less than significant	No mitigation is proposed or required.	Less than significant
Paleontological Resources	Significant but mitigable	**MM5.4-5** A paleontological monitor, supervised by a qualified paleontologist, shall monitor	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Surface grading or shallow excavations in the previously disturbed artificial fill and alluvium soils of the Project's development footprint are unlikely to uncover significant fossil vertebrate remains. However, any substantial excavations in the sedimentary deposits in the central-southern portion of the Project site would have the potential of encountering significant vertebrate fossils, which if damaged or destroyed would represent a significant adverse impact on the region's paleontological resources.		all excavation activities within previously undisturbed sedimentary soils (Quaternary Alluvium) in the lower lying central-southern portion of the site. If fossils are found, the paleontological monitor shall be authorized to halt the ground-disturbing activities within 25 feet of the find in order to allow evaluation of the find and determination of appropriate treatment in accordance with Society of Vertebrate Paleontology guidelines for identification, evaluation, disclosure, avoidance or recovery, and curation, as appropriate. Any fossils recovered during mitigation shall be deposited in an accredited and permanent scientific institution for the benefit of current and future generations. The paleontologist shall prepare a final report on the monitoring. If fossils are identified, the report shall contain an appropriate description of the fossils, treatment, and curation. A copy of the report shall be filed with the Applicant, County of Los Angeles Department of Regional Planning, and the Natural History Museum of Los Angeles, and shall accompany any curated fossils.	
Human Remains The Project component areas were studied by site visits and by records investigations to determine if cultural resources were likely to exist. There was no evidence discovered that would indicate human remains are interred on the site either formally or informally. Nevertheless, given the historical habitation of the area surrounding the Project site, mitigation would be implemented in the event of a discovery of Native American human remains to mitigate the potential impact to less than significant.	Significant but mitigable	See MM5.4-4, above.	Less than significant
Cumulative Impacts Over time, cultural resources may be impacted either	Significant but mitigable	See MM5.4-1 through MM5.4-5, above.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
through natural events or as a result of development projects or other human activities. With any development, there is the potential to disrupt unknown resources, especially given the large number of known sites within the Malibu area. However, related projects in the vicinity also would be reviewed under CEQA, and appropriate mitigation would be applied to protect and/or record potential cultural resources found during Project development.			
GEOLOGY AND SOILS (SEE SECTION 5.5)			
Fault Rupture There are no known active or inactive faults traversing the Project site. While existing active faults are located in proximity to the site (e.g., Santa Monica fault zone, Malibu Coast fault zone, and Anacapa/Dume fault), ground ruptures have historically been associated solely with ground immediately above either the main fault or the path of a fault splay. Since the site has no known feature of this type on or in the immediate vicinity of the Project site, the fault rupture hazard is considered negligible and would be less than significant.	Less than significant	No mitigation proposed or required.	Less than significant
Strong Seismic Ground Shaking Like most of southern California, the Project site is susceptible to ground shaking from the several known active faults in the region. The closest active faults capable of generating a seismic event in excess of a magnitude 6 earthquake are located approximately two miles from the Project site. One of these (Anacapa/Dume) is thought to be capable of generating a magnitude 7.5 earthquake with an intensity of 1g; however, the Project site is not expected to experience an intensity of ground shaking greater than 0.43g, which is within acceptable design parameters for the types of structures contemplated for the site. This difference in the magnitude of ground shaking is due to the site's distance from the most proximate faults and the characteristics of the soil and bedrock that underlay the Project site. The assessment of seismic risk at the Project site, completed by Sladden Engineering in 2012 and documented in the Project's Geotechnical	Less than significant	No mitigation proposed or required.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Investigation, approved by the County Department of Public Works, concluded that the combination of shallow seated bedrock beneath structures together with the proper application of California Building Code (CBC) seismic design requirements and the implementation of the measures recommended by the Project's geologist for grading, building pad preparation and foundation design would minimize the potential for the collapse of buildings, the failure of any proposed fill slopes, and collapse of retaining walls. The potential for seismically induced slope instability affecting the development area of the Project site is not a significant adverse impact due to the distance between such slopes and the proposed development area. The Project shall comply with all applicable Building Code requirements as they relate to Geotechnical issues. With implementation of Building Code and regulatory requirements and grading and structural design recommendations, overall effects of ground shaking the Project would be less than significant.			
Seismic-Related Ground Failure <u>Liquefaction</u> Liquefaction refers to the loss of strength in saturated, cohesionless soils due to the build-up of pore water pressures during dynamic loading. Liquefaction can cause substantial local settlement, particularly where heavy building loads overlie vulnerable substrates. The 2001 CGS Seismic Hazard Report for the Point Dume Quadrangle included an assessment of susceptibility to liquefaction within the Quadrangle and provided a map indicating the location of liquefaction-prone areas. The Project site is not located within any liquefaction-prone area identified in the CGS Report. The liquefaction potential of natural deposits on the site is considered minimal and the impact of liquefaction would be less than significant.	Less than significant	No mitigation proposed or required.	Less than significant
Lateral Spreading Liquefaction-induced lateral spreading is lateral displacement of gently sloping ground as a result of pore	Less than significant	No mitigation proposed or required.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
pressure build-up or liquefaction in a shallow underlying deposit during an earthquake. Lateral spreading refers to more moderate movements of gently sloping ground than would characterize landslides, which involve large down-slope movements or "flow" of completely broken soils over relatively long distances. Liquefaction-induced lateral spreading occurs on mild slopes of 0.3 to 5 percent underlain by loose sands and a shallow water table. These conditions are frequently found along streams and other waterfronts in recent alluvial or deltaic deposits, as well as in loosely placed, saturated sandy fills. Subsurface infrastructure, such as pipelines, is particularly vulnerable to the effects of lateral spreading, as are streets and other paved areas where misalignments are created. The Project site is not located in an identified liquefaction-prone area within the Point Dume Quadrangle. Accordingly, liquefaction-induced lateral spreading would not be anticipated at the Project site and impacts would be less than significant.			
Ground Lurching and Cracking Ground lurching is the horizontal movement of soil, sediments, or fill located on relatively steep embankments or scarps as a result of seismic activity, forming irregular ground surface cracks. The potential for lurching is highest in areas underlain by soft, saturated materials, especially where bordered by steep banks or adjacent hard ground. However, as part of the Project, soft surficial earth materials with potential for saturation as a result of over-irrigation would be removed and replaced with competent soils that are adequately compacted as required by the recommendations contained in the Project's Geotechnical Investigation (2012), approved by the County Department of Public Works. Compliance with all geotechnical recommendations contained in the Project's Geotechnical Investigation(s) and County-enforced seismic Code requirements would reduce potential hazards to people and structures due to ground lurching and cracking to a less than significant level.	Less than significant	No mitigation proposed or required	Less than significant
Landslides	Less than significant	No mitigation proposed or required.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Landslides can include rockfalls, deep slope failures, and shallow debris falls. Landslides that have occurred near the coast have blocked Encinal Canyon Road, Decker Canyon Road, and Mulholland Highway during and after seismic activity or heavy rain. However, the Project site is underlain by very shallow alluvium and undocumented fills spread over volcanic bedrock. Steep slopes on the Project site that could be susceptible to landslide or rock fall are located well outside the proposed development area. Because of the distance between steep slopes and the Project's development area, landslides, rock falls, and mudflows are unlikely to adversely impact structures or persons within the Project's development area. The Project's Geotechnical Investigation, approved by the County Department of Public Works, found no evidence of landslide, rock falls or debris falls within the valley area where Project development would occur. Therefore, potential adverse effects associated with landslides would be less than significant.			
Erosion and Loss of Topsoil *Erosion* Construction Phase: The County Department of Public Works requires implementation of temporary Best Management Practices (BMPs) during construction as a means to control erosion of exposed soils due to construction activities. Specific BMPs and statutory requirements to reduce or prevent soil erosion during construction are discussed in Section 5.8, Hydrology and Water Quality. These BMPs and statutory requirements are incorporated into this analysis by reference. The Project would comply with all State, federal, and local requirements for erosion control during construction. Compliance with applicable Code and regulatory requirements would reduce potential construction phase erosion impacts to less than significant.	Less than significant	No mitigation proposed or required.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Erosion Operational Phase: The Project would be landscaped, parking lots would be paved with a combination of pervious and impervious pavement, and pathways would be paved or otherwise stabilized. All constructed slopes would be planted and maintained pursuant to the Project's approved landscape plan. County Code requires NPDES compliance, including compliance with the County's MS4 Permit requirements, with provisions for post-construction erosion and sediment control.	Less than significant	No mitigation proposed or required.	Less than significant
Loss of Topsoil Construction Phase: During construction, there is a potential for the loss of topsoil. The County's requirements for BMPs would be incorporated into the Project's LSWPPP and Grading Plan, implemented in the course of construction, and adequately maintained until permanent construction is completed, paving is installed, and permanent landscape is installed and established with a minimum of 50 percent coverage. These same measures, taken to reduce or eliminate erosion impacts during the construction phase, also would also retain topsoil, where possible, given the requirements of the Project. Loss of topsoil due to wind-induced erosion would be mitigated through hydroseeding exposed soils, the use of straw blankets, where necessary, and tarping dirt stockpiles. With implementation of the Project's LSWPPP, in compliance with County Code and regulations, the Project's impacts would be reduced to less than significant.	Less than significant	No mitigation proposed or required**.**	Less than significant
Loss of Topsoil Operational Phase: During the Project's operation phase, topsoil would be restored when replanting occurs. The Project would conform to applicable recommendations for green waste	Less than significant	No mitigation proposed or required.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
management contained in the County's Green Waste Management Resource Guide for Los Angeles Residents and Businesses (DPW-Environmental Programs Division, 2013) and would implement a green waste program as part of the long term management strategy of the golf course and Project landscape maintenance. Green waste would be gathered and composted on site for reuse as a soil amendment and to mulch exposed ground to avoid both moisture evaporation and loss of soil due to wind or water. Replacement of topsoil as part of the Project's landscape and revegetation plan, the use of effective water conserving irrigation systems as discussed in Section 5.14, Utilities, of this DEIR, and the use of the products of ongoing green waste management to provide natural soil cover, would reduce the Project's impacts regarding loss of topsoil during the operational phase to a less than significant level.			
Unstable Soils *Soil Stability* The presence of soft and compressible near surface soil and relatively shallow bedrock would require the use of remedial grading at the Project site to ensure stable soils that can safely support proposed structures. The Project's Geotechnical Investigation, approved by the County Department of Public Works, requires the over-excavation and/or re-compaction of all uncertified artificial fill soil, the primary foundation bearing soil, and any bedrock encountered at the planned footing elevations of each new structure. The County Code and regulations require the Project's grading plans incorporate all recommendations included in the Project's soils engineering and geology report(s), which is included in the Project's Geotechnical Investigation, through which the geotechnical engineer's recommendations are treated as regulatory requirements. Compliance with the provisions of the County Building Code would ensure ensure soil stability and reduce potential impacts to less than significant.	Less than significant	No mitigation proposed or required.	Less than significant
Consolidation and Settlement Consolidation of soils and subsequent settlement beneath building foundations can result in structural damage.	Less than significant	No mitigation proposed or required	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
The materials of the underlying shallow seated bedrock on the Project site have a high density and low compressibility. The Project's Geotechnical Investigation, approved by the County Department of Public Works, includes recommendations for placement of engineered fill to construct building pads. Settlement would be less than one inch with recommended building loads and total settlement would be within the tolerances required by the County Building Code. Compliance with the County's Building Code and required incorporation of the recommendations of the Project's geologist into the Project's grading plan would reduce the hazard to buildings due to consolidation and settlement to a less than significant level.			
Subsidence and Collapse Subsidence is the sinking or gradual lowering of the earth's surface. Collapse is the sudden lowering of the surface. Both subsidence and collapse can occur from either natural or manmade causes. Overdraft of groundwater accounts for approximately 80 percent of subsidence and collapse in California while the majority of the balance is the result of prior mining or oil and petroleum extraction. The Project site does not overlay a groundwater basin identified by the USGS as subject to subsidence due to groundwater pumping. Neither mining nor gas and oil production have ever taken place on or in the immediate vicinity of the Project site. Accordingly, the manmade or natural causes of subsidence are absent from the Project site. Compliance with statutory requirements and mandatory incorporation of the recommendations of the Project's geotechnical engineer into the Project's grading plans, would address other potential causes of subsidence, reducing the potential impacts associated with subsidence to less than significant.	Less than significant	No mitigation proposed or required.	Less than significant
Indirect Offsite Soils and Slope Stability There is an active landslide area near the intersection of Encinal Canyon Road at Pacific Coast Highway, and a potential for landslides also exists at the southern ends of	Less than significant	No mitigation proposed or required.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Decker Canyon Road and Kanan Dume Road at their intersections with Pacific Coast Highway located south of the Project site, and along Mulholland Highway north of the site. Since Encinal Canyon Road is the primary paved access to the site, its blockage as a result of a landslide could have a potentially significant indirect impact on the Project unless other paved access is available as is the case with the Project site. The existing paved connections from Encinal Canyon Road to Decker Canyon Road via Lechusa Road, and also to Kanan Dume Road via Mulholland Highway, provide alternate egress routes from the Project site to the southwest and northeast, respectively. While portions of Decker Canyon Road and Kanan Dume Road are susceptible to landslide, neither of these roads appeared to be affected by the 1994 Northridge Earthquake. The Encinal Canyon connection to Kanan Dume Road also traverses a portion of Mulholland Highway northeast of the site. While portions of this road also are susceptible to landslide, there is no historic record of blockage due to seismic-induced landslide, rock, or debris falls. Lastly, as Decker Canyon extends north from the connection to Encinal Canyon road, it becomes Westlake Boulevard (State Route 23) within the Conejo Valley, where it makes a connection to the 101 Freeway. Kanan Dume Road is also a cross-mountain road, extending north into the Conejo Valley, and making similar connections to the north, as well as connecting to Pacific Coast Highway (PCH) to the south. Simultaneous blockage of all of the several routes to the site by seismically induced landslide, rock slide, or debris flows is highly unlikely and the presence of multiple routes for evacuation of the site or access to the site by emergency vehicles would reduce the potential indirect impacts of off-site landslides to less than significant.			
<u>Expansive Soils</u> Expansion index testing of soil samples show the site's expansion indices vary from 28 to 55 and 60, depending upon the location from which the soil sample was taken.	Less than significant	No mitigation proposed or required.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Based on these results, the Project site's development footprint has a low to medium expansion potential. The Project's Geotechnical Investigation, approved by the County Department of Public Works, recommends the removal and/or over-excavation of expansive materials and their replacement with compacted engineered fill. Any residual expansion impacts would be mitigated through the use of appropriately designed footings and slabs. The County Department of Public Works has issued guidelines for the design of foundations on expansive soils. These guidelines require foundation and near building design that satisfy these requirements. Compliance with the recommendations of the Project's Geotechnical Investigation and the provisions of the County Building Code Section 1803.5.3 (Expansive Soils) pursuant to County Information Bulletin P/BC 2011-116 would provide uniform bearing surfaces to support all occupied structures and provide foundations designed to reduce potentially adverse impacts of expansive soils to less than significant.			
Capacity to Support Onsite Wastewater Treatment Systems The existing Malibu County Club includes a septic system for waste disposal. The Project would replace the majority of the site's septic system with an onsite wastewater treatment facility that would provide recycled water for use in irrigating the golf course. Only one septic tank would remain in place to serve an existing 900-square foot caretaker's residence near Mulholland Highway. There have been no documented problems with the septic system at the one remaining location. Project impacts associated with this threshold would be less than significant.	Less than significant	No mitigation proposed or required.	Less than significant
Hillside Management Area Ordinance Analysis of the Project's consistency with the County's Hillside Management Area Ordinance and hillside design standards is provided in Section 5.9, Land Use, as part of the Los Angeles County General Plan	Less than significant	No mitigation proposed or required.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
consistency analysis. As discussed in that section, the Project would not be in conflict with the ordinance or standards regarding hillside development, and, as such, impacts related to this threshold would be less than significant.			
Cumulative Impacts Most geologic, geotechnical, and seismic impacts associated with the development of the Project site would be localized and would not directly or indirectly affect offsite areas. Direct impacts to persons and property on the site as a result of exposure to seismic and geologic hazards would be reduced to a less than significant level through the implementation of the recommendations in the Project's Geotechnical Investigation in the design of buildings, compliance with County Code, and implementation of the BMPs to control construction phase erosion impacts. There is, however, one potential indirect cumulative impact associated with geotechnical and soils conditions to which Project development may contribute. The Project's location in the Santa Monica Mountains makes it vulnerable in the event that landslides and rock falls impact roads providing access to the Project site. Since development continues in the Santa Monica Mountains, exposure to the hazards of full or partial road closures due to landslides and rock falls is a potentially significant indirect cumulative impact. With the addition of classroom facilities and guest bungalows to the Project site, implementation of the Project would increase the number of people who may be required to use these roads to evacuate or emergency medical personnel who may need to reach the Project site in the event of an earthquake or other cause. As previously noted, most roads providing access to the Project site traverse areas that are susceptible to landslides, rock falls, and debris flows that have the potential to cause partial or permanent blockage for significant periods of time. Two active slides, which are located on Decker and Encinal Canyon Roads, have	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
been responsible for road blockage absent any seismic inducement. All of the roads providing access to the Project site may be vulnerable to blockage caused by seismically induced landslides, based on the CGS Seismic Hazards Map – Landslides (2001). However, as previously noted, there are multiple routes to and from the Project site from Pacific Coast Highway to the south and from the Conejo Valley to the north. The likelihood of all of these routes being blocked simultaneously by landslide, rock fall, or debris/mud flows is slight. Therefore, while the addition of classrooms and guest bungalows to the Project site would result in an increase in the number of people on the site at any given time, the number of access routes to/from the site in multiple directions would allow project-generated traffic to safely disburse and provide multiple means of access for emergency personnel. Accordingly, the Project's contribution to cumulative impacts related to landslides would be considered less than cumulatively considerable.			
GREENHOUSE GAS EMISSIONS (SEE SECTION 5.6)			
Construction Activity GHG Emissions During construction activities, the Project would result in GHG emissions from the burning of fossil fuels due to the use of power equipment. The Project's total CO_2e emissions of 1,831.6 MT from construction activities, which is below the significance threshold of 3,000 MT/year, would result in an amortized amount of 61.1 MT of CO_2e per year. Therefore, Global Climate Change impacts from construction of the Project would be less than significant.	Less than significant	No mitigation proposed or required.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Construction Activity GHG Emissions During construction activities, the Project would result in GHG emissions from the burning of fossil fuels due to the use of power equipment. The Project's total CO_2e emissions of 1,831.6 MT from construction activities, which is below the significance threshold of 3,000 MT/year, would result in an amortized amount of 61.1 MT of CO_2e per year. Therefore, Global Climate Change impacts from construction of the Project would be less than significant.	Less than significant	No mitigation proposed or required.	Less than significant
Project Operational GHG Emissions Operational GHG emissions were calculated for the Project using CalEEMod. Total Project GHG emissions are less than the recommended SCAQMD significance threshold of 3,000 CO_2e MT/year with the application of Project design features proposed by the Applicant. Project emissions would be expected to be even less than 2,706.2 MT/year CO_2e as the Project is seeking LEED™ Platinum certification or equivalent, which would require substantial energy use reductions relative to County requirements and those modeled in the CalEEMod report. To accurately calculate net new Project impacts, this existing use was modeled separately in CalEEMod. When current GHG emissions from the existing golf course use are considered, the Project-related net increase would be 2,833 MT CO_2e/year, and less than 2,200 MT CO_2e/year with design features proposed to improve irrigation efficiency, which would be below the threshold of significance.	Less than significant	No mitigation proposed or required.	Less than significant
Additional Project design features have been included with the proposed facilities to achieve greater energy efficiency and reduce water use, which would reduce the Project's GHG emissions. These additional reductions cannot be modeled in the existing version of CalEEMod, however, these design features are noted in Section 5.6 and would further reduce GHG emissions associated with the use of electricity, gas, and water.	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Cumulative Impacts Given that global climate would not be affected adversely by the emission of GHGs by a single project, potential GHG impacts on global climate are the result of the increased accumulation of GHGs in the atmosphere from all sources on a worldwide scale. Based on significance thresholds provided by SCAQMD, the Project would not result in a cumulatively considerable contribution to global climate change impacts, and proposed efficiency features listed above in Section 5.6.4 would further reduce GHG emissions.	Less than significant	No mitigation required or proposed.	Less than significant
HAZARDS AND HAZARDOUS MATERIALS (SEE SECTION 5.7)			
Asbestos Containing Materials (ACMs) The Project would demolish the existing clubhouse and maintenance sheds, the large residential structure south of Mulholland Highway in the northern portion of the Project site, and the restrooms currently located on the golf course. ACMs could be present in the building materials of these structures and could potentially be exposed during demolition. Federal and State regulations govern the renovation and demolition of structures where ACMs are present and all demolition activities that could result in the release of ACMs must be conducted according to federal and State standards. If ACMs are found, abatement of asbestos is required prior to any demolition activities. For this reason, the County requires that any person or entity applying for a demolition permit for an existing building with potential to contain ACMs provide a copy of the qualifications/license of the asbestos abatement contractor that will perform the abatement or removal of any asbestos to the County of Los Angeles Department of Public Works Building and Safety Division. This information must be provided prior to the issuance of a demolition permit. If required, the Applicant would also prepare and submit a Hazardous Building Materials Demolition Assessment and Management Plan to the SCAQMD for review and approval to ensure compliance with all applicable federal, State, and local laws and regulations. With testing and remediation for ACMs	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
during demolition activities in accordance with the applicable regulations cited in Section 5.7, Hazards and Hazardous Materials, potential impacts regarding asbestos exposure would be reduced to less than significant.			
Lead Exposure Because of the age of some of the buildings to be demolished, there is a potential for demolition workers or handlers of the resultant debris to be exposed to lead that may be within any lead-based building materials, including lead-based paint, if these materials are improperly disturbed, removed, or disposed. Building components and fixtures with a potential for lead-containing coatings include, but are not limited to, walls, windows, doors, window/door jambs, railings, poles, parking lot striping, and heating, ventilation and air conditioning (HVAC) equipment. With testing and remediation for lead-based substances during demolition activities in accordance with the regulatory requirements cited in Section 5.7, Hazards and Hazardous Materials, and compliance with County of Los Angeles Department of Public Health regulations requiring removals by firms and individuals licensed to do such work pursuant to applicable regulations the Project's potential impacts regarding lead exposure would be less than significant.	Less than significant	No mitigation required or proposed.	Less than significant
Pond Sediments During construction of the remodeled golf course, the Project would clean out the basins of onsite ponds, which are currently water features of the existing golf course to eradicate non-native species, including crayfish. While prior testing of the ponds did not indicate levels of contaminants above action levels, there is a potential to encounter contaminants during clean out of the ponds. With implementation of mitigation, the potential impact would be reduced to less than significant.	Significant but mitigable	**MM5.7-1** If previously unidentified soil contamination is observed by sight or smell or indicated by testing by a qualified professional using a portable volatile organic compound analyzer during excavation and grading activities associated with removal of pond sediments or in areas used for storage of fuels or pesticides, excavation and grading within such an area shall be temporarily halted and redirected around the area until the appropriate evaluation and follow-up measures are implemented, as contained in the South Coast Air Quality Management	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		District's Rule 1166, to make the area suitable for grading activities to resume. In the event contamination is found, the Applicant shall notify the Los Angeles County Fire Department, the South Coast Air Quality Management District, and/or the California Department of Toxic Substances Control, as applicable. The contaminated soil shall be evaluated and excavated/disposed of, treated in-situ (in-place), or otherwise managed and disposed of in accordance with all applicable federal, State, and local laws and regulations.	
Biological Hazard (hantavirus) During demolition of the abandoned hunting lodge building, the disturbance of large amounts of rat feces and urine could potentially pose a biological hazard (e.g., hantavirus). With implementation of mitigation, the potential impact would be reduced to less than significant.	Significant but mitigable	**MM5.7-2** Prior to the commencement of demolition of the abandoned residence/hunting lodge building, appropriate biological samples shall be collected and analyzed to determine if conditions represent a biological hazard (e.g. hantavirus) due to large amounts of rat feces and urine. Prior to entering the building, appropriate personal protection equipment shall be worn by all personnel.	Less than significant
Soil Contamination (spilled fuel) An evaluation of the Project site in November 2012 reported some staining on the top and sides of an aboveground storage tank containing diesel fuel. This could be an indication that the soil in the vicinity of the tank may have absorbed some quantity of diesel fuel. If so, soils in this vicinity could potentially be classified as hazardous materials. With implementation of mitigation, the potential impact would be reduced to less than significant.	Significant but mitigable	See MM5.7-1, above.	Less than significant
Use and Storage of Hazardous Materials Implementation of the Project would continue to involve the use and storage of some hazardous materials to be used on the Project site. The Project also would continue to store propane in onsite tanks for heating and cooking purposes. The risks associated with such materials are limited to those typically associated with commercial and residential uses (e.g., cleaning supplies,	Potentially significant but mitigable	**MM5.7-3** All hazardous materials within the Project site shall be acquired, handled, used, stored, transported, and disposed of in accordance with all applicable federal, State, and local requirements. **MM5.7-4** Prior to any storage or usage of regulated hazardous materials on-site (including pool maintenance chemicals, fertilizers,	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
swimming pool maintenance, landscaping equipment and materials) and storage of heating fuels in residential areas where natural gas is not provided by a regional utility. With implementation of mitigation, the potential impact would be reduced to less than significant.		herbicides, pesticides, insecticides, lubricants, etc.), the Applicant shall obtain approval from the Los Angeles County Fire Department for a Hazardous Materials Business Plan (HMBP) covering the use and storage of all regulated hazardous chemicals and materials to be used and/or stored onsite. Qualified environmental personnel or safety engineers shall develop and implement a business plan and a health and safety plan in order to ensure that compliance issues regarding the proper containment, usage, disposal and transportation practices are used, if required.	
There are no existing or proposed schools or hospitals in the development area of the Project site. The nearest sensitive land use to the Project site are single-family residences located along the northern and western Project site boundary. The nearest of these residences is located approximately 1,200 feet west of the Project development area.	Less than significant	No mitigation required or proposed.	Less than significant
Airports or Airstrips The Project site is not located within an airport land use plan or, within two miles of a public airport or private airstrip.	Less than significant	No mitigation required or proposed.	Less than significant
Fire Hazard Based on Project Location The Project site is located in a Very High Fire Hazard Severity Zone as is the majority of development within the Santa Monica Mountains. Fire hazard risks and mitigations regarding access, and fire flow water pressure are discussed in Section 5.14.1, Public Services – Fire Protection. There is no development of industrial facilities such as refineries, flammables, and explosives manufacturing in the vicinity that would pose a dangerous fire hazard.	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Although the Project would develop land uses in an area subject to wildfires, its occupants and/or property would be adequately protected from wildfires by incorporation of sprinkler systems, green roofs, adequate emergency vehicle access, fuel modification zones for vegetation management, and emergency helicopter access.	Less than significant	No mitigation required or proposed.	Less than significant
The increase in the number of visitors to the Project site with completion of the Project would not substantially increase the possibility of an occurrence of human-caused wildfires following the implementation of the Project plan and provisions.	Less than significant	No mitigation required or proposed.	Less than significant
Project area roadways would typically not be used for emergency evacuations for City of Malibu residents, which would use Pacific Coast Highway to the east and west rather than mountain roads such as Encinal Canyon Road.	Less than significant	No mitigation required or proposed.	Less than significant
<u>Cumulative Impacts</u> As the Project would develop land uses in an area subject to wildfires, each additional development creates greater demands on existing fire protection resources. As such, the Project would generate a cumulative impact to fire protection services, to which the payment of a Development Impact Mitigation Fee would be required. The developer fee revenues supplement funds available to the Consolidated Fire Protection District of Los Angeles County to provide for the acquisition, construction, improvement and equipping of facilities necessary for the District to deliver fire protection services within the County's Areas of Benefit.	Significant but mitigable	**MM5.7-5** Prior to occupancy, the payment of a Development Impact Mitigation Fee for the benefit of the Consolidated Fire Protection District would be required, for the purpose of supplementing funds for the acquisition, construction, improvement and equipping of facilities necessary to deliver fire protection services within the County. The fee shall be based on the applicable County of Los Angeles Developer Fee Program, last updated on November 27, 2012, to be effective February 1, 2013. The current Developer Fee Program for Area of Benefit 1, which includes the Project site, provides for collection of $0.9292 per square foot for new floor area development. Administration and collection of the Developer Fee shall be the responsibility of the Consolidated Fire Protection District of Los Angeles County.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
HYDROLOGY/WATER QUALITY (SEE SECTION 5.8)			
Water Quality *Total Suspended Solids* The TSS concentration would be expected to increase marginally from 106 mg/L in the existing condition to 115 mg/L in the proposed condition (with BMPs), while the average annual TSS load would be expected to decrease by 11% in Project stormwater runoff due to volume loss and treatment capabilities of the proposed BMPs. The slight increase in TSS concentration only would be partly attributed to the introduction of HDSF Residential land use (TSS EMC = 124 mg/L), which has a higher EMC value than the golf course land use (TSS EMC = 38 mg/L) it is replacing and by the volume reduction achieved by the detention basins, which could increase concentration levels. When the 20.8-acre development area is analyzed separately, however, the concentration would decrease from 63 mg/L in the existing condition to 45 mg/L in the proposed condition (with BMPs), illustrating the development would not cause the increase in TSS concentrations. The water quality criterion for TSS is narrative, and the predicted average annual TSS concentration in stormwater runoff from the Project site with implementation of BMPs could not be quantitatively assessed relative to a quantitative water quality criterion. With implementation of the Project's comprehensive site design, source control BMPs, and treatment control strategy, and the low predicted Project concentration, the TSS in stormwater runoff from the Project would not "cause a nuisance or adversely affect beneficial uses in the receiving waters," consistent with the Basin Plan's (1994) narrative objective, reducing the Project's impacts on beneficial uses to a less than significant level.	Less than significant	No mitigation required or proposed.	Less than significant
Nutrients Average annual loads for TKN and TP are predicted to decrease with implementation of the Project by 35% and 34%, respectively. Average annual concentrations are similarly predicted to decrease through implementation of treatment BMPs by 22% and 21%, respectively.	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Although the nitrate concentration is expected to increase by 10%, the nitrate load is expected to decrease by 9% due to volume loss through implementation of BMPs. Also, the total nitrogen load (sum of TKN and nitrate loads) is predicted to decrease, from 375 lb/yr to 269 lb/yr (28% decrease). The Basin Plan (1994) contains biostimulatory-based desired goals for total nitrogen. The combined predicted average annual concentration for nitrate and TKN is higher than the desired goal for total nitrogen of 1.0 mg/L. The predicted average annual concentration for TP is also higher than the desired goal of 0.1 mg/L. However, if no BMPs were implemented at the site, the proposed conditions would increase these pollutant concentrations above the concentrations estimated for the existing conditions and land uses; with the BMPs, the Project would improve nutrient loadings as compared to current conditions for TKN and TP. Nitrate concentration also would increase according to the model because the largest source and highest concentration of nitrate would be from open space under the existing and proposed conditions. However, in the proposed condition, there would be less runoff from the development area than in the existing condition, which would have the effect of providing less "dilution" for the runoff from open space and would explain the increase in concentration. Source control BMPs target nutrients and include the use of integrated pest management practices for golf courses and common area landscape management, the development of a Golf Course Water Quality Management Plan (including plans for optimized fertilizer application practices), the use of native and/or non-invasive vegetation, and the use of efficient irrigation systems in common and golf course areas, all consistent with the County's LID requirements. Implementation of comprehensive site design, source control BMPs, and treatment control BMPs would achieve a significant overall reduction in nutrient loads			

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
as compared to the existing condition but would not achieve results consistent with the targets established by the CUP. However, with consideration for the type of use proposed and the current available technology and material available, the Project would meet the Best Available Technology (BAT) standard of EPA and the MEP standard of the County and, on that basis, Project impacts would be less than significant.			
Metals Average annual loads for total copper, total lead, and total zinc are predicted to decrease by 38%, 22%, and 54%, respectively, from the existing to proposed condition, based on changes in land use, volume reduction, and treatment within BMPs. Average annual concentrations of these metals are also predicted to decrease by 26%, 6%, and 45%, respectively. Specific source controls that would be implemented to minimize increases in trace metals include directing drainage from impervious areas to vegetated BMPs. Source controls that target metals include education and training for site operators and information for guests, as well as proper maintenance of BMPs. The CTR criteria are the applicable water quality objectives for protection of aquatic life and are expressed for acute (1 hour) and chronic (4-day average) conditions; however, only acute conditions were considered to be applicable for Project stormwater discharges because the duration of stormwater discharge is consistently less than 4 days. The comparison of the predicted average annual stormwater discharge concentrations for the proposed condition to the benchmark CTR values shows that total lead, copper, and zinc concentrations would be less than the benchmark water quality criteria. With implementation of the previously described water quality BMPs, the Project's impacts on surface water quality resulting from the discharge of metals impacts would be reduced to a less than significant level.	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Pesticides Pesticides would be of concern where maintenance practices involve the application of persistent organochlorine pesticides. Project operation would include periodic application of pesticides to landscaped areas including lawns, gardens, and the golf course. Diazinon and chlorpyrifos are two pesticides of concern due to their potential toxicity in receiving waters. The EPA has banned all indoor uses of diazinon in 2002 and stopped all sales for all outdoor non-agricultural use in 2003 (EPA, June, 2002). With no agricultural uses planned for the Project, diazinon would not be used. The EPA also has phased out most indoor and outdoor residential uses of chlorpyrifos and has stopped all non-residential uses where children may be exposed. For these reasons, the use of chlorpyrifos on the Project site would not occur, with the possible exception of emergency fire ant eradications until such time as reasonable alternative products become available and only with appropriate application practices in accordance with the golf course and landscape pesticide management program. Source control measures such as education programs for employees in the proper application, storage, and disposal of pesticides would be implemented. Most pesticides, including historical pesticides that may still be present on the site, are relatively insoluble in water and tend to adhere to the surfaces of sediment, which would be stabilized with development or, if eroded, would be settled or filtered out of the water column by the Project's water quality treatment BMPs. Stormwater treatment provided for removal of TSS, such as the bioretention areas, vegetated swales, media filtration areas, and detention basins, would also achieve some removal of pesticides. Careful selection, storage and application of these chemicals would help reduce adverse water quality impacts. Removal of sediments using the treatment and	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
source control BMPs also would remove sediment-adsorbed pesticides. Based on the incorporation of previously described site design, source control BMPs, and treatment control BMPs potential post-development impacts associated with pesticides would be reduced to a less than significant level.			
Pathogens Pathogens are viruses, bacteria, and protozoa that can cause illness in humans. Traditionally water managers have relied on measuring "pathogen indicators", such as total and fecal coliform, as an indirect measure of the presence of pathogens. Potential sources of pathogen indicators include birds and other wildlife, domesticated animals and pets, soils, and plant matter. Anthropogenic sources may include poorly functioning septic systems, cross-connections between sewer and storm drains, and the utilization of outdoor areas for human waste disposal by people without access to indoor sanitary facilities. The primary sources of fecal coliform from the Project site would be sediment, wildlife, and growth in the storm drain system itself. Other sources of pathogens and pathogen indicators, such as cross-connections between sanitary and storm sewers, would be unlikely given the proposed modern wastewater treatment facilities proposed for the Project and inspection and maintenance practices following the facility's construction. The treatment processes that would be used at the Project site in bioswales would involve sunlight (ultraviolet light) degradation, sedimentation, and infiltration, all of which would reduce pathogen concentrations and loads. The proposed swales would be located on relatively infiltrative soils. Pathogen removal by filtration is a common and effective practice in wastewater treatment. In addition to removal/treatment by vegetated swales, sand caps would be proposed for the Project's golf course. The Project would include source and treatment control BMPs to manage pathogen indicators and to reduce their	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
loadings. With implementation of these BMPs potential post-development impacts from pathogens would be less than significant.			
Hydrocarbons Various forms of hydrocarbons (oil and grease) are common constituents associated with urban runoff; however, these constituents are difficult to measure and are typically measured with grab samples, making it difficult to develop reliable EMCs for modeling. Based on this consideration, hydrocarbons were not modeled but are addressed qualitatively. The concentration of hydrocarbons in runoff would be expected to decrease under post-development conditions due to the treatment BMPs that would be installed with development of the Project. In addition, source control BMPs that address petroleum hydrocarbons would include educational materials on used oil programs, carpooling, and public transportation alternatives to driving, BMP maintenance, and street sweeping private streets. The parking lot site design, source controls, treatment BMPs and vegetation and soils within the treatment control BMPs would adsorb the low anticipated levels of emulsified oils in the Project's stormwater runoff, significantly reducing discharge of hydrocarbons and visible film in the discharge or the coating of objects in the receiving water. Hydrocarbon concentrations in post-development runoff discharges would be a less than significant level of impact on receiving waters. During the construction phase of the Project, hydrocarbons in site runoff could result from construction equipment/vehicle fueling or spills. Pursuant to the Construction General Permit, the Construction Stormwater Pollution Prevention Plan (SWPPP) must include BMPs that address proper handling of petroleum products on the construction site, and those BMPs must effectively prevent the release of hydrocarbons to runoff based on the Best Available Technology Economically Achievable and Best	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Conventional Pollutant Control Technology standards. PAH that are adsorbed to sediment during the construction phase would be effectively controlled through the use of the erosion and sediment control BMPs previously described. With these BMPs in place, construction-related impacts to water quality due to hydrocarbons would be reduced to a less than significant level.			
Trash and Debris During the Project's operational phase, BMPs including source control and treatment BMPs would minimize the adverse impacts of trash and debris and would reduce them as compared to existing conditions. Proposed source controls include public education and storm drain stenciling, which would be effective in reducing the amount of trash and debris that would be available for mobilization during wet and dry weather events. Other mitigation would include implementation of common area litter control practices that would include a litter patrol, covered trash receptacles, and emptying of trash receptacles in a timely fashion. Catch basin inserts would be provided for parking lot inlets when stormwater is routed to a below ground inlet. These BMPs would remove or prevent the release of floating materials, including solids, liquids, foam, or scum, from runoff discharges and would prevent impacts on dissolved oxygen in the receiving water. With implementation of source control and treatment BMPs the Project's post- development trash and debris impacts on receiving waters would be less than significant.	Less than significant	No mitigation required or proposed.	Less than significant
During the construction phase, there would be potential for an increase in trash and debris loads due to lack of good housekeeping practices on the part of contractor and construction workers. As required by the Construction General Permit, the SWPPP prepared for the Project site would include BMPs for trash control (catch basin inserts, good housekeeping practices, etc.) that would monitored by the County and the RWQCB. Consistent compliance with SWPPP requirements that meet the BAT/BCT standard would reduce impacts from trash and debris during the construction phase to a less than significant level.	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Oxygen Demanding Substances Concentrations of the oxygen demanding substances, including TN and TP, in stormwater runoff, are expected to decrease after Project construction. BMPs for application, use, and management of fertilizers during the pre- and post-construction periods would be a part of the integrated Fertilizer and Pest Management Program required by the County. Structural controls such as proper covering of trash bins and landscape maintenance storage areas would be employed to reduce potential for rainfall to come in contact with refuse, oil, grease, and other organic matter such as grass clippings. Project compliance with the provisions of the Fertilizer and Pest Management Program and compliance with the requirements of the County's MS4 Permit and implementation plans would reduce Project water quality impacts and reduce release and downstream loading of Project-generated oxygen demanding substances to a less than significant level.	Less than significant	No mitigation required or proposed	Less than significant
Temperature Infiltration basins, pervious pavement, green roofs, bioretention, sand caps, and bioswales sized to meet or exceed regulatory requirements would be used to treat stormwater from the Project site and reduce potential water quality impacts. These BMPs would reduce water temperature by slowing down runoff, increasing infiltration, increasing base flows, and reducing the total amount of water discharging to the creek. Beneficial uses for the Project's receiving waters include warm freshwater habitat. Accordingly, warm water runoff resulting from post-development BMPs would be less than significant even without implementation of the proposed BMPs.	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
pH The Basin Plan (1994) does not consider reduction of the pH of inland surface waters below 6.5 or the increase of the pH above 8.5 as a result of waste discharges either desirable or adversely impactful. The Basin Plan provides for ambient pH levels that do not change more than 0. 5 units from natural conditions as a result of waste discharge. Existing water sampling data from the Project site's most downstream point demonstrates that existing pH levels average 7.35 at the site. These results provide consistent supporting evidence that effluent pH from the Project site would fall within the acceptable pH range as defined by the Basin Plan.	Less than significant	No mitigation required or proposed.	Less than significant
Dry Weather Related Impacts to Water Quality Water quality effects during dry weather conditions may be considered significant pursuant to existing standards. Pollutants that tend to be associated with suspended solids (e.g., phosphorus, most trace metals, and some pesticides) are typically found in very low concentrations in dry weather flows from golf courses. Therefore, this discussion focuses on constituents that tend to be dissolved, (e.g., nitrate) or constituents that are so small as to be effectively transported, (e.g., pathogen indicators). A combination of efficient irrigation practices as a source control BMP and the use of infiltration-type treatment control BMPs such as those incorporated into this Project would ensure that dry weather flows from pervious Project site areas are captured to the maximum extent practicable. The redesigned golf course would be constructed with water conservation features that would reduce irrigation demands by approximately 32 percent as compared to the existing condition. The Project would control landscape watering with advanced metering systems. Moreover, any dry weather flows would be routed to the above referenced LID BMPs, which would completely contain them and reducing the Project's dry weather water quality impacts to a less than significant level. The incorporation of effective, County-approved LID and hydromodification BMPs as identified and discussed	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
in this analysis would ensure that the Project would not violate any water quality or waste discharge requirements.			
Groundwater All or a portion of the Project site overlies a lower and an upper aquifer that, is not considered a groundwater basin. Nonetheless, the lower aquifer is the source of groundwater pumped by six working wells on the Project site. The wells are approximately 300 to 400 feet in depth, which is thought to be the probable depth of the lower aquifer. As noted in Section 5.8-1, Existing Conditions – Regional and Site Groundwater, little is known about the hydrogeological characteristics of the lower aquifer and there is no known estimate of its capacity or recharge. The lower aquifer is overlain by volcanic bedrock, which may allow surface flows to percolate into the aquifer through cracks and other formations. What is known is that the groundwater quality is significantly better than the quality of surface water at the site. The wells pumping water at the Project site have been in use at least since the original golf course was constructed in the 1970s and water has been pumped from the wells and used to help irrigate the golf course. The Project would reduce both the size of the golf course greens and the amount of groundwater required for golf course irrigation by including recycled wastewater treated to a tertiary standard as part of the mix of irrigation water sources. Accordingly, it is unlikely the Project would result in a net deficit in aquifer volume or a drop in the local groundwater table. The production rate capacity of the onsite well would remain the same, although the level of production required would likely decline. Overall, the development of the Project would have a beneficial impact on the lower aquifer and its net capacity. Approximately 19 acres of the northern portion of the Project site, located outside of the development area, contribute to the Hidden Valley groundwater basin, as	Beneficial and less than significant	No mitigation required or proposed.	Beneficial

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
defined in the Basin Plan (1994). Although the majority of this portion of the Project site does not overlie the Hidden Valley Basin, surface runoff that infiltrates within the Carlisle Canyon watershed ultimately recharges the Hidden Valley Basin. The Basin Plan (1994) lists Hidden Valley groundwater basin water quality objectives for bacteria, chemical constituents, pesticides, radioactivity, salinity, tastes and odors, and toxicity. These water quality objectives are applicable to all groundwater basins, regardless of beneficial use. However, the development area of the Project site is located within the Trancas Canyon Creek watershed and, therefore, would not interfere with recharge of the Hidden Valley groundwater basin nor contribute anything other than naturally occurring constituents to it. There is no proven hydrologic connection between Trancas Canyon Creek and the Malibu Valley Groundwater Basin, the only other known groundwater basin in the general area of the Project. Therefore, development of the Project would neither deplete groundwater supplies nor interfere with groundwater recharge in either known groundwater basin in its vicinity and would have no impact as regards this threshold.			
<u>Drainage Pattern Alteration</u> *Hydromodification* Development typically increases impervious surfaces on formerly undeveloped (or less developed) landscapes, reducing the capture and infiltration of rainfall. The development results in a larger percentage of rainfall becoming runoff during any given storm. In addition, runoff reaches the stream channel more efficiently due to the development of storm drain systems, so the peak discharge rates for rainfall events and floods are higher for an equivalent event than they were prior to development. Further, the introduction of irrigation and other dry weather flows can change the seasonality of runoff reaching natural receiving waters. These changes, in turn, affect the stability and habitat of natural drainages, including the physical and biological	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
character of these drainages. This process, termed "hydromodification" (SCCWRP, 2005) is addressed in this section. Significant adverse hydromodification impacts are presumed to occur if the Project would substantially alter the existing drainage pattern of a natural drainage, stream, or river causing substantial erosion, siltation, or channel instability in a manner that adversely affects beneficial uses. Three strategies would be used by the Project to prevent and control hydromodification impacts to the natural drainage: • Preservation of natural hydrologic conditions; • Project-based hydrologic source control; and • Project-based flow control. BMPs for control of hydromodification would protect the Project's receiving water from hydromodification. As a result, the flow rates, velocities, depth/width ratios, and total storm volumes at 2-, 5-, 10-, 25-, and 50-year and the Capital Flood storm levels would not be expected to increase over existing conditions. Hydromodification controls would include: • Preservation of 81% of the site's current natural hydrologic features; • No increase in overall Project site imperviousness; • Incorporation of LID BMPs which cumulatively infiltrate the LID/SUSMP 85th percentile 24-hour storm; and • Inclusion of two outlet controlled detention basins, which control flows associated with storm events exceeding the 85th percentile 24-hour storm event up to the 50-year 24-hour storm event. The entire volume from the 85th percentile 24-hour storm would be mitigated with implementation of the BMPs required or proposed for the Project site, resulting			

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
in post-developed peak flows, velocities, and depth/width ratios that are lower than existing conditions and, therefore, consistent with this performance standard. The proposed runoff rates were modeled based on inclusion of the detention facilities, which are designed to maintain the undeveloped flow rate. Because sediment has historically been deposited and trapped on the golf course, post-development sediment delivery would continue to be very low. Project development would not result in an increase in the impervious area of the Project site when compared to the existing condition and landscape would provide additional slope stabilization, limiting any increase in sediment delivery from that source. Since onsite hydromodification control BMPs are designed to meet the Project's hydromodification control performance standard they would protect the Project's receiving waters from excessive erosion and degradation caused by discharges from the Project. In this manner hydromodification impacts resulting from the Project would be less than significant.			
Off-site and On-site Flooding Within the development area, storm drainage facilities would be designed to handle up to a level of a Capital Flood event (50-year burned and bulked) intensity storm (Capital Storm) to convey runoff levels that would not interfere with operations and would be conveyed to the detention basins. These proposed storm drainage facilities include curbs, gutters, swales, bioswales, inlets, pipes, and outlets. The maximum runoff developed in the site area is 38.2 cfs, developed in a 50-year storm as controlled by an outflow device after detention. As there would be no change in the characteristics of flow to the offsite runoff downstream of the site, the Project's development would not be the cause of any downstream flooding.	Less than significant	No mitigation required or proposed.	Less than significant
Storm Water Drainage Systems With implementation of the proposed BMPs, average annual runoff volume would be expected to decrease from 53.7 ac-ft./year in the existing condition to 44.6	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
acre-feet per year, or approximately 17 percent. This volume reduction would be attributable to a decrease in imperviousness due to implementation of Project design features including green roofs, bioretention, pervious pavement, and the volume reduction achieved within the infiltration basins and golf course sand caps. Because onsite runoff can exceed the on-site storm drainage facility capacity, Triad/Holmes performed hydraulic analysis to determine the potential flood elevations onsite in overland sheet flow conditions on-site. Most of the existing storm drain facilities have the capacity for 2- to 5-year intensity storms, with the exception of the 66-inch culvert between the water feature and its point of discharge, which can handle a 50-year storm. A Capital Flood event (50-year burned and bulked conditions) would exceed all of the existing on-site storm drainage facility capacities, either existing or planned. However, all flows in excess of existing and/or planned storm drain facilities would be retained onsite within and on the golf course greens, would release slowly or percolate into the underlying soil and sand cap, and would not threaten downstream properties. In a Capital Storm Event, the culvert under Encinal Canyon Road would not be overtopped. Sediment carried by flows would be deposited on the golf course. Requirements for continuing onsite maintenance and storage of potentially polluting chemicals, trash and debris, should ensure that runoff water would not provide additional sources of polluted water. Use of pesticides, herbicides, and fertilizer as well as other pollutants of concern would be reduced through compliance with NPDES permit conditions and County LID Ordinance requirements, and the implementation the BMPs previously cited, resulting in a less than significant impact.			
<u>NPDES</u> *Construction General Permit* Construction phase impacts to site hydrology would be minimized through compliance with the regulatory	Potentially significant but mitigable	**MM5.8-1** All grading associated with the implementation of the Project shall take place within the previously disturbed areas of the existing Malibu Golf Club, including the fairways, tee boxes, and greens.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
requirements of the Construction General Permit as implemented by the Project's SWPPP. Current regulations require inclusion of effective erosion and sediment control BMPs that would at least meet and potentially exceed the Project's determined risk level pursuant to the Construction General Permit, in addition to any BMPs that would control the other potential construction-related pollutants. A Construction Site Monitoring Program that identifies monitoring and sampling requirements during construction would be a required component of the SWPPP. Most construction projects are categorized as a Risk Level 2. BMPs contemplated for the Project and reflected in the Construction General Permit SWPPP would be developed assuming this level of risk. In the event analysis of the Project's final design analysis indicates that the Project would fall under Risk Level 3, additional Level 3 permit requirements would be implemented as part of the SWPPP pursuant to existing regulations. Implementation of the requirements of the Project's SWPPP and implementation of mitigation measure MM 5.8-1 would reduce potential construction phase impacts to water quality due to erosion and sediments to a less than significant level.			
Dewatering Implementation of the regulatory requirements contained in the General Order for Dewatering would minimize impacts from construction dewatering and other non-stormwater discharges to the extent feasible. Construction on the Project site would not, for the most part, penetrate below the water table and dewatering would not be required. One portion of the site has evidence of perched water at a depth of 13 feet bgs. This location also is proposed as the location of one of the subsurface detention facilities and/or the wastewater treatment facility. The depth of excavation required for facility installation may require dewatering. Trenching required for installation of sewer lines to the treatment facility also may require construction dewatering. In the event dewatering is required during construction, effluent would be screened for priority pollutants prior to	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
discharge to ensure no pollutants of concern are present that would preclude coverage under the General Order. The Project would comply with numeric effluent limitations, conduct effluent and receiving water monitoring during the discharge, and submit a discharge report to the Los Angeles Regional Water Quality Control Board for every discharge. Implementation of these requirements and compliance with the General Order for Dewatering would reduce Project impacts associated with potential discharge of priority pollutants as a result of construction phase dewatering to a less than significant level.			
MS4 Related Impacts The Project would be required by existing regulations to meet the water quality performance criteria of the County's MS4 NPDES Permit. As previously noted, the Project's hydrologist used the Nomograph Method, presented in the Orange County Technical Guidance Document (OCPW, 2011) used to determine the percent capture (treatment) volume of the detention basins in the development area. In this analysis, no upstream hydrologic source controls (i.e. swales, biofilters, green roofs, etc.) were considered as part of the capture efficiency of the Project area. The sand cap underlying the golf course would be sized to meet or exceed the County's flow and volume-based BMP design requirements as described in the MS4 Permit. An assumption of 80 percent volume capture is considered reasonable and conservative. Thirty percent volume reduction was conservatively estimated for the Project's infiltration basins. Average annual pollutant concentrations were determined by dividing average annual total pollutant loads by average annual runoff volumes for each pollutant and for the existing and proposed Project site condition. As noted in the Methodology portion of the Analysis section, satisfaction of the MS4 Permit requirements for	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
new development and redevelopment would establish compliance with water quality regulatory requirements applicable to stormwater runoff. Under the regulations in the permit, the effectiveness of stormwater treatment controls is demonstrated by the ability to infiltrate, harvest, and/or biotreat runoff from the 85th percentile rainfall event or the 0.75-inch event, with other types of treatment allowed if these measures are demonstrated to be infeasible onsite. As indicated above, the BMPs proposed for incorporation into the Project design would accomplish the level of reduction required pursuant to the MS4 Permit, achieving a less than significant impact.			
LID Development Requirements Chapter 12.84 of the Los Angeles County Code requires the use of low impact development (LID) standards in development projects. This chapter applies to all development within the unincorporated area of the County after January 1, 2009. LACDPW has developed a LID Standards Manual that outlines stormwater runoff quantity and quality control development principles, technologies, and design standards for achieving the LID Standards of Large Scale Residential and Nonresidential Development projects, which are required to prioritize the selection of BMPs to treat stormwater pollutants, reduce stormwater runoff volume, and promote groundwater infiltration and stormwater reuse in an integrated approach to protecting water quality and managing water resources. The Manual states BMPs should be implemented in the following order of preference: • BMPs that promote infiltration; • BMPs that store and beneficially use stormwater runoff; and • BMPs that utilize runoff for other water conservation uses including, but not limited to BMPs that incorporated vegetation to promote pollutant removal and runoff volume reduction and integrated multiple uses, and BMPs that	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
percolate runoff through engineered soil and allow is to discharge downstream slowly. The Project employs are a variety of LID BMPs that achieve the LID Standards for projects of its size. This includes the use of bioswales, a sand cap under the golf course greens, green roofs and extensive undisturbed and/or vegetated open space to reduce stormwater runoff volume through the infiltration of storm flows. The storm flows thus captured and infiltrated reduce the need for mechanical irrigation and support the re-establishment of native vegetation, allowing for an integrated approach to the protection of water quality and the reuse of water resources. In addition, the Project incorporates detention basins that also provide a treatment function for first flows, assuring that storm flows downstream are maintained onsite to avoid flooding. Since a lower aquifer is known to exist under some portion of the site, the use of both mechanical and non-mechanical retention and infiltration BMPs permits percolation of storm flows into the aquifer over time, ensuring its replenishment. This groundwater pumped by six working wells is used to supplement water supplied by LVMWD for use in landscape irrigation. Irrigation water would be further supplemented by recycled water from the Project's onsite wastewater treatment facility. Pervious paving will replace over 50 percent of currently paved areas that are now impervious, increasing the amount of infiltration available on the site, consistent with County LID requirements. All site BMPs would be designed in accordance with the provisions and guidance provided by the County LID Standards Manual (2009). Compliance with LID Ordinance requirements would ensure less than significant impacts associated with design and implementation of LID BMPs.			
<u>Areas of Special Biological Significance</u> Areas of Special Biological Significance (ASBS) are areas designated by the SWRCB for the protection of sensitive marine species or biological communities from undesirable alterations in natural water quality (SWRCB	Significant but mitigable	See mitigation measure MM 5.8-1, above.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
1979). The SWRCB has developed regulations and procedures related specifically to ASBS and contain certain prohibitions related to flows into ASBS. The standard for water quality protection in an ASBS is "natural water quality." Currently, drainage from the Project site travels south via Trancas Canyon Creek and discharges in the Laguna Point to Latigo Point Area of Special Biological Significance (LPLP-ASBS – Index No. 24), designated in 1974. The LPLP-ASBS covers 11,842 acres of coastal land and extends from Ventura County through the western portion of Los Angeles County. The study found that differences from natural water quality were relatively infrequent at ASBS discharge sites and significant toxicity was not observed. Regional sampling efforts were undertaken in 2008 and 2011. Among the areas sampled for discharge related changes between dry and post-storm discharges was Board Beach (Trancas Beach) near the mouth of Trancas Canyon Creek. As previously noted, Trancas Canyon Creek is not considered impaired and studies of pollutants impacting the Trancas Lagoon and Board (Trancas) Beach have been generally traced to near-coastal development rather than discharges originating from the Creek. The Project site, located approximately 4 miles from the coast, discharges into Trancas Canyon Creek and therefore does not contribute pollutants to an impaired water body that discharges either point or non-point source pollutants into the Laguna Point to Latigo Point Area of Special Biological Significance. Compliance with the Project's permits, regulatory requirements and mitigation measure MM 5.8-1 would reduce impacts to less than significant.			
<u>Onsite Wastewater Treatment</u> The Project would use an onsite wastewater treatment system that allows the collection of wastewater water and provides for its treatment to tertiary standards and subsequent use as recycled water for irrigation. Solids are held in tanks located in close proximity to generating	Significant but mitigable	MM5.8-2 The Project shall remove all septic tanks throughout the Project site with the exception of the septic tank serving the caretaker's house in the northern portion of the Project site, and shall install an on-site wastewater treatment system with effluent meeting Title 22 standards for	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
structures. All portions of the system maintain a minimum 100-foot setback from any groundwater well. Groundwater at the Project site is generally found at considerable depth. Perched water was found in only one boring at a depth of 15 feet in an area where alluvium deposits over volcanic bedrock was at its deepest (approximately 24 feet), in proximity to the southeastern edge of the bungalows. Gravity lines carrying effluent to the treatment plant are located approximately 100 feet from the location of the borehole and with appropriate maintenance, there would be no interaction between perching groundwater and piped effluent. Trancas Canyon Creek's mainstem began on the Project site prior to its original development, but is now confined to a subsurface culvert. Given the type of onsite wastewater system, and the depth to the actual underlying aquifer, the Project's wastewater system would be appropriate to the site's geology and would not result in any adverse consequences to either surface flows or groundwater. Permits for the construction of the wastewater treatment facilities must be obtained from the Regional Water Quality Control Board and the system would be operated pursuant to the conditions and requirements imposed by the RWQCB. Mitigation measure MM 5.8-2 requires removal of all existing septic systems on the site with the exception of the septic system serving the caretaker's residence and their replacement with the proposed onsite wastewater treatement system in a manner compliant with Title 22. With compliance with County Code and the implementation of mitigation measure MM 5.8-2, the Project's impacts would be less than significant.		reuse as irrigation for the remodeled golf course.	
<u>Degrade Water Quality</u> the Project would not degrade either surface or groundwater quality. In every instance, the Project's development would result in either no change or a beneficial change in discharges and/or pollutants of concern associated with the construction and operation	Significant but mitigable	See Mitigation measure 5.8-2, above.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
of the Project. Even with the Best Available Technology (BAT) combined nitrogen will exceed the CUP target standard of 1 mg/L; however, that standard is not used as a target standard by the State or local government in any other location and the more common standard of 10 mg/L is not exceeded. Mitigation measure MM 5.8-1 would contribute to the mitigation of water quality impacts to a less than significant level, as will compliance with existing regulations, laws, policies, and ordinances. The Project would not result in the degradation of water quality as compared to the existing condition.			
Flood Hazards The only housing on the Project site is overnight accommodations in a group of bungalows set back from and above the grade of the golf course. The Project site is not located within a 100-year flood hazard area as mapped on any federal Flood Hazard Boundary Map (FHBM) or Flood Insurance Rate Map (FIRM) or other flood hazard delineation map. A flood hazard analysis was performed for the Capital Flood event to determine flood hazard limits. Based on the preliminary site plan design elevations for buildings, shown on Tentative Tract Map 71735 and illustrated in Figure 5.8-6 (Development Area Capital Flood event storm boundaries), the finished floor of all buildings, including the bungalows, would be a minimum of two feet above the flood level elevations and approximately 50 horizontal feet from the nearest building. Based on the drainage study, the Project would not place housing or other structures within the Capital Flood hazard limits. No obstructions that would impede or redirect flood flows would be created (Triad/Holmes, 2013). Neither people nor structures would be exposed to loss, injury or death as a result of onsite flooding within the golf course, as illustrated and no additional mitigation measures are required. The finished floor of all buildings were located outside of the highest maximum water elevation line within the golf course; therefore, no structures are located within a	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Capital Flood hazard area or in any location where they might impede or redirect flood flows. Persons and structures would not be exposed to significant risk of loss, injury, or death involving flooding. In a Capital Storm event the golf course would be closed to use. The Project is not located within the inundation area of any levee or dam.			
Seiche, Tsunami, and Mudflow The Project site is located within the area covered by the Local Coastal Plan; however, the site itself is approximately 4 miles from the coastline with a minimum elevation of 1,300 feet above mean sea level. For this reason it would not be affected by a tsunami.	Less than significant	No mitigation required or proposed.	Less than significant
The Project site would contain at least one aboveground water reservoir tank, the golf course would include a water feature, a treated effluent pond, and the overnight accommodations and clubhouse would include a swimming pool. Strong ground motion could result in seiche conditions for an aboveground water reservoir tank, a golf course water feature, a treated effluent pond, and a swimming pool. None, however, would result in any danger or damage to structures or persons. Were the above ground reservoir to fail or overtop, water would flow onto the golf course. Likewise, a seiche-induced overtopping of the effluent pond or golf course water feature would also affect only the golf course. Seiche conditions in the swimming pool would be too shallow to create damage or danger. Accordingly, a seiche would not adversely impact the Project.	Less than significant	No mitigation required or proposed.	Less than significant
The Project site is located within a valley surrounded by steep slopes and ridgelines that rise as much as 1,000 feet above the valley floor, where development would occur. Small streams and rills traverse the steep slopes and carry flows that are tributary to Trancas Canyon Creek, located on the Project site. The majority of these small tributaries converge at relatively small detention and/or sediment basins located around the boundary of the golf course. There is potential for any of these small drainages to carry mudflows in heavy precipitation	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
events, since the area traversed is undeveloped. However, the onsite drainage pattern would direct such flows onto the golf course and away from buildings. The existing condition would remain unaltered with implementation of the Project. Therefore, buildings and structures on the Project site would not be adversely impacted by mudflows.			
Cumulative Impacts *Cumulative Surface Water and Hydromodification Impacts* Urban development in the Trancas Canyon Creek area has contributed to pollution of the Trancas (Broad) Beach area and the Trancas Lagoon. As discussed above, the anticipated quality of effluent expected from the Project site would contribute concentrations of pollutants of concern, primarily nitrates/nutrients, that could cause or contribute to a violation of the water quality standards in the Project's surface receiving waters; however, with the implementation of regulatory requirements including the County's LID BMPs, the Project's contribution would be reduced to the maximum extent practicable (MEP Standard) and would, therefore, be less than cumulatively considerable and less than significant. The Project's proposed infiltration BMPs would be sized to meet hydromodification control standards; therefore the Project's incremental effects on hydromodification would not be cumulative considerable. With reduced runoff as compared to existing conditions, the Project would improve hydromodification conditions over the existing condition and, therefore, the Project's contribution to the cumulative condition would be beneficial. The Project's surface runoff water quality, after implementation of BMPs, during construction and post-development would comply with adopted regulatory requirements designed by the State Water Board and Los Angeles Regional Water Quality Control Board to assure that regional development does not adversely affect	Beneficial and less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
water quality and hydromodification in receiving streams, including the provisions of the MS4 General Permit, the Construction General Permit, and the General Dewatering Permit requirements, and benchmark Basin Plan water quality objectives, CTR criteria, and CWA Section 303(d) listings. The Project would comply with these regulatory requirements designed to protect beneficial uses, which would mitigate adverse impacts to cumulative water quality and hydromodification to a level that would be less than significant. Therefore, the Project's contribution to any existing water quality or hydromodification impacts within the watershed would be less than cumulatively considerable. Any future urban development occurring in the Trancas Canyon Creek and Carlisle Canyon Watersheds also would be required to comply with these requirements. Runoff from the Project site under the proposed condition, inclusive of BMPs, would yield lower pollutant loads and concentrations for most of the modeled constituents (TSS, NO3-N, TKN, total nitrogen, TP, total copper, total lead, and total zinc) than in the existing and proposed conditions without BMPs. Additionally, in the context of the proposed site design, source controls, and treatment control BMPs, the Project's contribution to potential cumulative impacts associated with the qualitatively analyzed pollutants of concern (POCs) would not be cumulatively considerable and would be less than cumulatively significant. The model results, which show an overall improvement in stormwater runoff quality and a reduction in runoff volume and the impacts from the qualitatively assessed POCs, demonstrate that the Project's contribution to any existing adverse water quality issue would be less than cumulatively considerable and less than significant.			
Cumulative Groundwater Impacts The anticipated quality of stormwater runoff discharges from the Project's development area, reclaimed water used for irrigation, and discharges from septic systems would not contribute pollutants of concern that would be	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
expected to cause or contribute to a violation of the groundwater quality standards. While a productive "lower aquifer" underlays all or a portion of the Project site, baseline testing in 2013, over 35 years after the golf course began operation, indicated that to the extent that surface flows percolate into the lower aquifer, the depth of the water table and the nature of the soils and bedrock through which water percolates are effective in removing pollutants of concerns from groundwater at depth. BMPs incorporated into the Project in the form of LID BMPs would result in no adverse effects on groundwater recharge. Rather, they would put in place another layer of infiltration and treatment that would effectively remove POCs, including those that may impact saturated near surface alluviums that may perch water to the surface as it flows downstream. The Project's discharges to groundwater, after BMPs, during construction and post-development, would comply with adopted regulatory requirements that are designed by the Los Angeles Regional Water Quality Control Board and State Water Board to assure that regional development does not adversely affect water quality, including MS4 General Permit requirements and Construction General Permit requirements. In addition, per the State Water Board's Recycled Water Policy, cumulative groundwater impacts shall be managed under a regional Salt and Nutrient Management Plan that also addresses CECs. The Project would comply with these requirements designed to protect beneficial uses; therefore, the Project's contribution to cumulative groundwater quality impacts would be mitigated and its contribution would be less than cumulatively considerable and less than significant.			
Cumulative Flood Impacts The Project would be designed with flood control facilities that would contain any incremental increase above existing conditions and therefore, the Project would make a less than cumulatively considerable contribution to any downstream cumulative flooding impacts.	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Flood flows within the golf course during Capital Flood storm events would remain at least two feet below the finished floor elevation of any building or structure constructed on the Project site at a 50-foot horizontal distance from retention storage on the Project site. Flows held on the site would infiltrate within 3.5 days following a peak storm event. Accordingly, the Project would not make a cumulatively considerable contribution to any regional flood problem within the watershed, and would be less than significant.			
Other Impacts The Project is too distant from the shoreline and at too high an elevation to be threatened by tsunami and would make a less than cumulatively consider contribution to any regional impacts created by coastal development within tsunami-prone areas of the coast. The Project may be subject to mudflow generated by intense precipitation events generating mud and debris flows that would be carried to the Project development site by creeks and rills located in the upland areas of the Project site and beyond. However, such mudflows would be directed by the existing (and unchanged) drainage pattern onto the golf course where it would do no damage to persons or structures and would not make a cumulatively considerable contribution to regional or watershed impacts associated with mudflows/landslides. The Project contains facilities capable of producing seiche conditions when disturbed by strong ground motion; however, any overtopping of contained water would be directed onto the golf course and would not endanger either persons or structure, nor would it affect downstream properties. Therefore, the Project would not make a cumulatively considerable contribution to any watershed-wide cumulative impacts associated with seiche conditions.	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
LAND USE/PLANNING (SEE SECTION 5.9)			
Division of an established community All of the proposed development would occur within the footprint of the already disturbed and graded area of the Project site. No development is proposed outside the Project site as part of the Project, development would not involve acquisition of additional properties outside of the boundaries of the Project site, and no incursion into, or division of, existing surrounding land uses, including public open space, would occur as a result of Project implementation.	Less than significant	No mitigation required or proposed.	Less than significant
Consistency with County General Plan The County's General Plan land use designation for the proposed development area on the Project site is Rural, Non-Urban Hillside. The Project would be consistent with all applicable General Plan policies and Project impacts would be considered less than significant with adherence to existing Codes and regulatory requirements and the implementation of appropriate mitigation measures provided for in the various sections of this DEIR.	Less than significant	No mitigation required or proposed.	Less than significant
Consistency with Malibu Local Coastal Program and Land Use Plan The Project's proposed uses (e.g., parking, recreational, educational, and overnight accommodations) are permitted by the Malibu Local Coastal Program Land Use Plan's designation for the development area of the Project site.	Less than significant	No mitigation required or proposed.	Less than significant
Hillside Management Criteria and SEA Conformance Criteria The Project site is not located within an SEA, which is discussed in more detail in Section 5.3, Biological Resources, and as such would not conflict with SEA Conformance Criteria. The Project would not conflict with the County's Hillside Management Criteria, and would be consistent with General Conditions and Standards for Development for Non-Urban Hillside Development as provided in the General Plan. The Project also would be consistent with the General Plan	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Conservation and Open Space Element Policy COS 24 regarding protection of the natural and scenic character of hillside areas and reducing risks from fire, flood, mudslide, erosion, and landslides.			

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Consistency with Zoning Code The development area of the Project site is zoned R-R-1 (Resort and Recreation) and A-1-1 (Light Agricultural). The Project's impacts related to consistency with the existing zoning designation would be less than significant.	Less than significant	No mitigation required or proposed.	Less than significant
Consistency with SCAG Regional Policies The Project is located within the six-county Southern California Association of Governments (SCAG) region. An analysis of Project consistency with SCAG documents is required where a project is determined by SCAG to be of area-wide or regional significance. Since the Project is largely the redevelopment and expansion of an existing use, no such notification of significance was received from SCAG during the Project's scoping process and no policy-by-policy consistency analysis is required.	Less than significant	No mitigation required or proposed.	Less than significant
Habitat Conservation Plans The Project is not located within an area covered by a Multiple Species Habitat Conservation Plan or Natural Community Conservation Plan. The Project site is, however, located within and adjacent to the Santa Monica Mountains National Recreation Area, which has adopted a General Management Plan that includes provisions for the preservation of resources within the publicly owned lands. The Project would be consistent with the applicable goals of the NPS 2002 General Management Plan for the Santa Monica Mountains National Recreation Area, with implementation of required mitigation measures and compliance with all applicable County, state, and federal laws, regulations and ordinances.	Less than significant	No mitigation required or proposed.	Less than significant
Cumulative Impacts The development of the Project together with development of related projects within the surrounding vicinity would result in a modest intensification of existing land uses. The expansion and addition of uses within the Project site would not make a cumulatively	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
considerable contribution to effects associated with land use in the Project area and would not result in significant adverse land use compatibility impacts when considered in combination with the related projects anticipated in the area.			
NOISE (SEE SECTION 5.10)			
Off-Site Short-Term Construction Noise Short-term construction noise impacts, which are dominated by large, earth-moving equipment, tend to occur in discrete phases and vary markedly because the noise strength of construction equipment ranges widely as a function of the equipment used and its activity level. Therefore, construction activities are treated separately in the County Code because they do not represent a chronic, permanent noise source. Project construction activities that would create short-term noise near the Project site would be generated on the southern and central portions of the site in connection with site preparation and construction of the development, primarily from heavy equipment used for demolition and/or earth-moving. Since point sources of noise emissions are atmospherically attenuated by a factor of 6 dB per doubling of distance, the loudest construction activities would require almost 280 feet of distance between the source and a nearby receiver to reduce the peak 90 dB source strength to the generally acceptable 75 dB exterior exposure level specified in the County Building Code. With regard to the Project site, the distance necessary to achieve acceptable noise attenuation during construction activities would be satisfied as the distance between any nearby receptors and the proposed development area of the Project site would exceed this 280-foot measurement.	Less than significant	No mitigation is required. However, mitigation measures MM5.10-1 through MM5.10-3 are provided as recommendations for keeping noise impacts at less than significant levels. **MM5.10-1** All construction and general maintenance activities, except in an emergency, shall be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday and the hours of 7:00 a.m. to 7:00 p.m. on Saturday. Construction activities shall be prohibited on Sunday and legal holidays except for emergency maintenance or repair. **MM5.10-2** All on-site construction equipment shall be equipped with noise shielding and muffling devices. All equipment shall be properly maintained in accordance with manufacturers' specifications to assure that no additional noise, due to worn or improperly maintained parts is generated. **MM5.10-3** All construction staging areas shall be located at least 500 feet from the nearest homes at which point peak noise levels would have diminished by at least 20 dB from their near-source maximum levels.	Less than significant
Operational Noise *Traffic Noise* The Project would not cause the roadway segment to exceed the +3 dB CNEL significance threshold. Future "with project" traffic noise levels of almost 61 dB CNEL at 50 feet from the Encinal Canyon centerline decrease to less than 47 dB CNEL at this setback distance. This	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
noise level is much less than the recommended recreational exterior recreational compatibility threshold of 65 dB CNEL for transitional living.			
Traffic noise impacts to on site uses The calculated with Project traffic noise level of almost 61 dB at 50 feet from centerline would attenuate to 45 dB at the security/information building, which would be below the significance threshold of 50-70 dB for office buildings.	Less than significant	No mitigation required or proposed.	Less than significant
Noise impacts to parking area Noise related to the parking area would not be perceptible at the nearest off-site sensitive use.	Less than significant	No mitigation required or proposed.	Less than significant
Stationary noise impacts Sources of stationary noise during the Project's operation would include the continued use of the existing PA system to announce golf-related information, outdoor events, and associated parking lot activity. Noise generated from outdoor amplified music can be as loud as 80 dB at a measured reference distance of 20 feet from the music or conversation source. Under line-of-sight conditions, spreading losses would reduce this noise level to 36 dB within 1,200 feet of the activity with undeveloped site conditions (undeveloped open space and vegetation as opposed to paved surfaces). Thus, amplified music would be lower than the daytime and nocturnal noise standard. However, since nocturnal background levels in the area are so low, amplified music could be clearly audible at night even if noise ordinance standards were not exceeded. With implementation of the required mitigation measure, the impacts would be reduced to less than significant.	Significant but mitigable	**MM5.10-4** Use of outdoor amplified music, sounds, or public address systems shall cease by 10:00 p.m.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Vibration Impacts *Construction activity vibration* Construction activities generate ground-borne vibration when heavy equipment travels over unpaved surfaces or when it is engaged in soil movement. the simultaneous operation of four or more of the largest bulldozers onsite at the point of the development footprint nearest to any residence would result in vibration levels that would still remain below human perception at that distance, and well below levels that would result in an annoyance.	Less than significant	No mitigation is required, however, MM5.10-1 is recommended to further reduce construction vibration impacts.	Less than significant
Operational Vibration Impacts Golf course operations will entail use of small powered equipment that will operate hundreds of feet from off-site residences and create imperceptible vibration. Site-related traffic is the only source of potential vibration impact at off-site sensitive uses. The vibration level associated with a passing automobile on a paved road is typically 0.001 inch/second (FTA Manual, FTA-VA-90-1003-06, May, 2006), at 50 feet from the centerline. The County Vibration Ordinance perception threshold is 0.01 inch/second, or ten times less stringent than typical vehicular pass-by traffic.	Less than significant	No mitigation required or proposed.	Less than significant
Air Travel Noise Impacts The Project site is not located within an airport land use plan area and is not within two miles of a public or private airport or airstrip.	Less than significant	No mitigation required or proposed.	Less than significant
Cumulative Impacts None of the identified cumulative projects in the cumulative project list in the Cumulative Projects Table of Section 4.0, Environmental Setting, are sufficiently close to the Project site as to generate any potential cumulative noise impacts from either stationary or construction activity noise sources, traffic, or vibrations.	Less than significant	No mitigation required or proposed.	Less than significant
Stationary & Construction Noise Impacts "Point" noise sources such as mechanical equipment (e.g., pumps, HVAC, etc.) or heavy construction equipment are rapidly attenuated by geometrical spreading losses at a rate of 6 dB or more per distance doubling. Possible cumulative noise impacts from other	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
developments require a close proximity of activities. None of the identified cumulative projects in the cumulative project list in the Cumulative Projects Table of Section 4.0, Environmental Setting, are sufficiently close to the Project site as to generate any potential cumulative noise impacts from either stationary or construction activity noise sources. Cumulative construction activity noise impacts could result if there were extensive on-road trucking needed to move cut or fill for the Project. However, the proposed amounts of cut-and-fill for the Project are projected to be balanced on-site and, therefore, would not require on-road trucking. Cumulative noise impacts would be less than significant.			
Vibration Impacts Project-related vibration from construction or operation will be imperceptible outside the Project boundary. Therefore, cumulative vibration impacts will be less than significant.	Less than significant	No mitigation required or proposed.	Less than significant
PUBLIC SERVICES (SEE SECTION 5.11)			
Impacts on LACFD Services Although the Project would develop land uses in an area subject to wildfires, its occupants and/or property would be adequately protected from wildfires by incorporation of sprinkler systems, green roofs, adequate emergency vehicle access, the Fuel Modification Plan, approved by the County Fire Department, which includes fuel modification zones for vegetation management, and emergency helicopter access.	Less than significant	No mitigation required or proposed.	Less than significant
The increase in the number of visitors to the Project site with completion of the Project would not substantially increase the possibility of an occurrence of human-caused wildfires following the implementation of the above-mentioned plan and provisions.	Less than significant	No mitigation required or proposed.	Less than significant
The Project's design and development plans would incorporate fire safety features and comply with applicable County Fire Code requirements and ordinances pertaining to building construction, site access, proximity to water mains, the adequacy of fire-flows, and the location of adequate numbers of fire hydrants.	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Existing fire protection staff levels and equipment would adequately accommodate the demands for typical fire protection anticipated from the Project and, therefore, would not require the provision of additional staff and/or fire protection facilities. The LACFD also provides paramedic services (non-transport); in the event patient transport to a hospital is required, that function is provided by a private ambulance company which would also be adequately accommodated by the internal circulation driveways and site access, as would firefighting apparatus.			
Cumulative Impacts on LACFD Services Development and occupancy of the Project in combination with related projects in the Cities of Malibu and Agoura Hills would have cumulative, but minimal, adverse impacts on LACFD facilities, equipment, and manpower in that each additional development creates greater demands on existing resources, which would increase the cumulative impact this Project would have on LACFD services. However, each related project would be appraised by the reviewing agencies responsible for evaluating project consistency with applicable land use plans. Each project also would be required to mitigate its individual impacts on fire protection services. With compliance with applicable County codes and policies and required Project-specific mitigation measures MM 5.11.1-1 through MM 5.11.1-6, cumulative impacts upon fire services would be reduced to less than significant levels.	Significant but mitigable	**MM5.11.1-1** The Project shall pay the fee required by the Consolidated Fire Protection District's Developer Fee Program for new residential and commercial construction to support fire stations and apparatus located within the City of Malibu that provide fire suppression and emergency services to the Project site, which is within Area of Benefit 1. **MM5.11.1-2** The Project shall comply with the applicable Uniform Fire Code (UFC) and LACFD ordinance requirements for development located in high fire danger areas regarding the following: building construction methods and materials; the ease of site access; the adequacy of water mains to maintain adequate fire-flow pressures and volumes; the location and numbers of fire hydrants; the use of indoor sprinklers and sensors; the re-vegetation of all manufactured slopes with fire retardant (native) landscaping; and brush clearance. **MM 5.11.1-3** The Applicant shall install and test, or bond for all required fire hydrants prior to recordation of the Final Map for the Project. **MM 5.11.1-4** The Applicant shall obtain approval from	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		LACFD of a final "Fuel Modification Plan" for the Project prior to commencement of construction. **MM 5.11.1-5** The Applicant shall provide detailed site plan maps and facilities drawings of the completed facilities and areas for the Project to the LACFD, which clearly illustrate access routes, building recognition/identification numbers/names, addresses, building and parking structure floor plans, the locations of emergency exits, and any other pertinent information that would facilitate LACFD response. **MM 5.11.1-6** The Project shall comply with all applicable State Fire Marshall requirements for the installation of fire alarms, firewalls and dampers, and detector devices.	
Cumulative Impacts on Wildfire Occurrences The cumulative effect of additional development, such as that of the Project, in this area could further increase the occurrence of wildfires.	Significant but mitigable	See MM 5.11.1-1 through MM 5.11.1-6, above.	Less than significant
Impacts on LACSD Services *Short-Term Construction Phase Impacts* The demand for law enforcement services generated by the Project during construction could be accommodated by existing LACSD staffing levels.	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Operational Impacts The bungalows would provide overnight accommodations, and would cause temporary and minor increases in the area's population size which could result in an increase in demand for law enforcement services. However, as stated in the LACSD's letters in response to the NOP for the Project and providing comment on the Administrative Draft EIR, the Project would have no effect on staffing or response times and thus would not require the provision of additional staff and/or sheriff protection facilities.	Less than significant	No mitigation required or proposed.	Less than significant
Cumulative Impacts on LACSD Services According to LACSD, staffing levels of law enforcement are adequate to meet the needs of the Project and that of the related projects as well.	Less than significant	No mitigation required or proposed.	Less than significant
RECREATION (SEE SECTION 5.12)			
While the golf course is closed, an increase in the use of other nearby public golf courses may occur. Since the closure of the golf course would be temporary, however, it would not result in permanent impacts to public golf courses located nearby. At buildout, the Project's recreational amenities would minimize use of off-site recreational facilities by overnight guests by providing onsite recreational opportunities.	Less than significant	No mitigation required or proposed.	Less than significant
The Project would include the development of recreational facilities, including a remodel of an existing golf course open to the public, and the construction of a fitness/wellness center and outdoor swimming pool provided as amenities for overnight guests. The potential for the Project's provision of these recreational facilities to result in adverse physical effects on the environment is evaluated along with the other proposed Project components. As the Project site is currently occupied by a public golf facility, the remodeled golf course would not result in adverse impacts relative to existing conditions.Mitigation has been identified to reduce any potential impacts from this Project to less than significant; therefore, impacts related to provision of recreational facilities would be less than significant with mitigation.	Significant but mitigable	Mitigation measures related to Air Quality, Hazards, Hydrology and Water Quality, and Noise provided in the respective sections of this DEIR and compliance with County Code and regulations would reduce impacts to less than significant.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Open Space Connectivity The Project does not propose development of any areas not currently developed, and would preserve over 450 acres of undeveloped open space.	Less than significant	No mitigation required or proposed.	Less than significant
Cumulative Impacts As the County continues to grow, there will be an increasing need to provide recreational opportunities to meet the cumulative needs of County residents. The Project would not include any residential units and therefore would not increase population, however, it would provide a recreational amenity that would be available to residents of the vicinity including new residents resulting from cumulative development in the area. As the Project would not increase the demand for off-site recreational facilities, with the potential exception of an increase in passive use of regional trails, the Project would not result in an increase in demand for recreational facilities in the County.	Less than significant	No mitigation required or proposed.	Less than significant
TRANSPORTATION/TRAFFIC (SEE SECTION 5.13)			
Construction Traffic During construction, the existing Malibu Golf Club would be closed, including the golf course, clubhouse, and restaurant, which would eliminate existing traffic generation under current conditions. Based upon Institute of Transportation Engineers (ITE) generation rates for golf courses, the existing facilities could generate a total of 643 ADT. The Project would not require import/export soil hauling, as all grading quantities would be balanced onsite. Construction period traffic would therefore consist of commuting workers accessing the site and material delivery vehicles, which would be offset by reductions due to cessation of current operations. Assuming a worst-case scenario of peak activity for each component occurring on the same day, the Project construction period would result in a maximum of 90 workers onsite in a single day, with a maximum average of 9 delivery trucks per day. As stated earlier, many construction workers likely would carpool to the site.	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Additionally, most of the worker commute trips would occur outside of the peak hour periods for weekday traffic since construction workers generally would arrive prior to 7:00 A.M. and end their work day before 4:00 P.M. The majority of the material delivery and hauling trips also would be scheduled outside of the peak hour periods. As the current operations of the existing Malibu Golf Club would cease during construction, the 138 ADT for construction traffic would be more than offset by the reduction of existing traffic generation. Weekend traffic would be reduced even further as minimal construction would occur on Saturdays and no construction would occur on Sundays, while closure of the Malibu Golf Club would reduce weekend traffic generation by an even larger amount than weekday reductions. Construction traffic typically would avoid the A.M. and P.M. peak hours, and thus would not result in significant increases in Volume/Capacity (VC) ratios for intersections in the study area for those peak hours. Due to the temporary nature of construction activity, the off-peak hours during which most construction traffic would occur, and the accompanying reduction in existing traffic due to closure of the Malibu Golf Club, Project construction period impacts would be less than significant.			

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Operational Traffic Trip generation estimates were developed for the Project based on the rates presented in the Institute of Transportation Engineers (ITE) Trip Generation report. The peak hour trip generation rates for Resort Hotel (Land Use Code #330) were selected as the best fit for the proposed educational retreat because the resort hotel rates are based on studies of facilities that provide extensive amenities where guests are more likely to stay on-site rather than leave for activities. The ITE report does not provide an ADT rate for Resort Hotels; therefore an ADT rate for the Project was derived from ITE Hotel rates (Land Use Code #310) as modified by the Resort Hotel peak hour trip rates. The Project would generate a net additional 998 ADT, including 59 A.M. peak hour trips and 78 P.M. peak hour trips, which would use the surrounding roadway network. Traffic increases generated by the Project would not result in traffic levels on roadways in the study area that equal or exceed the thresholds of Los Angeles County, the City of Agoura Hills, and the City of Malibu, based on existing conditions.	Less than significant	No mitigation required or proposed.	Less than significant
Congestion Management Programs The nearest CMP intersection to the Project site is the Kanan Dume/PCH intersection, located in the City of Malibu. As stated above in section 5.13.3, Thresholds of Significance, a project would be considered to cause a significant impact on a CMP facility if it increased traffic by 2 percent of capacity (V/C of 0.02 or more), that either caused a LOS F (V/C of more than 1.00), or exacerbated an existing LOS F condition. The traffic analysis indicates that this intersection is forecast to operate at LOS C under Cumulative and Cumulative + Project traffic volumes, and the Project's traffic additions would not increase the intersection V/C ratio by 2 percent or more as shown in section 5.13.5.	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Air Traffic Patterns The Project is not located in the vicinity of a public or private airport and as such would have no impact on air traffic patterns. An onsite helipad would be relocated as part of the Project, however this facility would be provided exclusively for emergency operations, to be accessed by the Los Angeles County Fire Department and other public agencies during wildfire fighting activities or other potential emergencies, to protect life or property.	Less than significant	No mitigation required or proposed.	Less than significant
Hazards due to design features or incompatible uses All activities related to the construction, operation, and maintenance of the Project would occur within the Project site boundaries and would not affect off-site traffic or introduce a land use that is incompatible with roadways in the vicinity. The Project does not propose any construction related soil import or export from grading activities that would substantially increase truck traffic. Therefore, the Project would not introduce a condition, either temporary or permanent, that would pose a substantial increase in traffic hazards.	Less than significant	No mitigation required or proposed.	Less than significant
Inadequate emergency access Access to the Project site is provided via Clubhouse Drive, which also provides access to the existing Malibu Golf Club and associated facilities. Clubhouse Drive is 48-feet wide with two 20-foot travel lanes that are separated by an 8-foot raised median. The Project would be required to have the Los Angeles County Fire Department approve the planned onsite access including lane width, distance from buildings, and provision of adequate turnaround areas. See Section 5.11.1, Public Services - Fire Protection, for further discussion of emergency vehicle access impacts.	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Impacts on public transit, bicycle, or pedestrian facilities Due to the remote location of the Project site, there are no regularly scheduled public transit operations that serve the site, however, the Project would introduce a shuttle service available by reservation to transport guests to and from area airports. The Project would not conflict with any policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.	Less than significant	No mitigation required or proposed.	Less than significant
This Project would provide onsite parking areas during construction, and operational parking spaces in excess of the total amount required for the overall site with County authorization of shared parking for the development area on the Project site.	Less than significant	No mitigation required or proposed.	Less than significant
Cumulative Impacts Based on the County's thresholds, the Cumulative (Existing + Related Projects) + Project would generate cumulative impacts at the U.S. 101 NB Ramps/Kanan Road intersection during the A.M. peak period, and the U.S. 101 SB Ramps/Kanan Road and PCH/Kanan Road intersection during the P.M. peak hour period. These intersections are located in the City of Agoura Hills and the City of Malibu. The U.S. 101 NB Ramps/Kanan Road intersection, and the PCH/Kanan Road intersection would operate at LOS C or better under the Cumulative + Project traffic volumes, which would be less than significant based on the thresholds provided by the cities where these intersections are located, and mitigation measures at these locations would not be required. The U.S. 101 SB Ramps/Kanan Road intersection is forecast to operate at LOS D under Cumulative (Existing + Related Projects) + Project traffic volumes, which is considered unacceptable based on Caltrans and the City of Agoura Hills operating standards, and, as such, the Project's cumulative impacts at this intersection would be potentially significant before mitigation. With implementation of the required mitigation measure, the	Significant but mitigable	**MM5.13-1** The Project shall be required to contribute to the cost of implementing intersection improvements for the U.S. 101 SB ramps/Kanan Road intersection as identified in the Agoura Village Specific Plan EIR as a mitigation measure. The planned improvements would implement widening the northbound approach to provide a third through-lane and restriping the southbound approach to provide an additional left-turn lane. The westbound approach would also be widened to accommodate the dual southbound left-turns. The Project would contribute a total of 51 peak hour trips to this intersection, which would represent four percent of the 1,123 peak hour trips added to this intersection by the related projects. Therefore, the Project's fair share contribution to these intersection improvements would be four percent of the estimated $169,000 cost, which would be $6,760.00.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Project's cumulative impact would be reduced to less than significant.			
UTILITIES/SERVICES (SEE SECTION 5.14)			
Water Supply (see section 5.14.1)			
Water demand rates and supply impacts The Project would reduce the demand for potable water provided by LVMWD at the Project site relative to current water usage regardless of the Project's plans to supplement its irrigation demands with onsite supplies of well water or recycled water. As the Project would result in an net reduction in demand for potable water to be supplied by LVMWD, primarily due to the incorporation of water saving features into the remodeled golf course, reduced area of turf coverage, and the provision of recycled water supplies from the onsite wastewater treatment system, the Project would not result in the need for additional LVMWD facilities or expansion or additional entitlements to provide adequate potable water supplies for the Project.	Less than significant	No mitigation required or proposed.	Less than significant
Maximum Water Demand Flow Rate The existing water supply system that provides potable water to the Project site utilizes an 8-inch meter with an 8-inch pressure reducing valve (PRV) located in the northwest corner of the Malibu Golf Club. The existing 8-inch meter serving the property is capable of providing a maximum flow of 1,000 gpm, based on information provided by LVMWD. In order to provide a required fire flow of 2,000 gpm, a detector check valve and PRV would need to be installed parallel to the existing meter and PRV in accordance with LVMWD standards.	Significant but mitigable	**MM5.14.1-1** The Applicant shall install a detector check valve with its own pressure reducing valve parallel to the existing water meter and PRV on the Project site approved by the Department of Public Works in accordance with LVMWD standards in order to provide a required fire flow of 2,000 gpm on the Project site.	Less than significant
A portion of the existing water supply system that serves the Malibu Golf Club includes a 10-inch diameter pipeline within the Project site that is buried at more than 10-feet below grade. During grading activities for the remodeled golf course, the Project would replace the deep portion of pipeline with a new pipeline segment installed at 36 to 60 inches below ground surface, which is a normal depth for a pipeline of this size.	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
Cumulative Impacts The Project's water use would not result in a cumulatively considerable contribution to water supply demand within the service area.	Less than significant	No mitigation required or proposed.	Less than significant
With implementation of mitigation measure MM5.14.1-1, the Project would result in an improvement in the water distribution system to provide sufficient peak flows under maximum demand conditions.	Significant but mitigable	See MM5.14.1-1, above.	Less than significant
Wastewater Treatment (see section 5.14.2)			
Wastewater Treatment Requirements The design and installation of the Onsite Wastewater Treatment System (OWTS) would be subject to approval by the Los Angeles Regional Water Quality Control Board to ensure compliance with requirements related to protection of water resources. Under the preferred option, the Ventura Regional Sanitation District (VRSD) would operate, monitor and maintain the OWTS, and the Project would use the treated effluent to irrigate the eastern portion of the 122-acre golf course, which currently is irrigated using potable water, through either spray irrigation or subsurface piping 9-12 inches below ground surface. Under the second option, the VRSD would operate, monitor and maintain the OWTS with the treated effluent dispersed through a conventional subsurface dispersal system that would allow the water to percolate to groundwater. If the OWTS plant and disposal/irrigation system provided under either option fails to meet the standards of the Regional Water Quality Control Board (RWQCB) discharge permit at any time, the applicant shall immediately close and cease operation of the facility. This shall include cancellation of all current and scheduled events and lodging. The closure shall remain in place until it is confirmed that the system can again meet RWQCB water quality/discharge requirements.	Less than significant	No mitigation required or proposed.	Less than significant
With the exception of the septic tank and leach field serving the existing caretaker's residence near Mulholland Highway on the Project site, the Project would abandon the existing OWS of on-site septic tanks that serve the site. As there are no wastewater utility infrastructure components in the vicinity that would	Significant but mitigable	Mitigation related to Air Quality, Geology, Hazards, Hydrology and Water Quality, and Noise provided in the respective sections of this EIR reduces impacts to less than significant.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
serve the Project, wastewater generated by the Project would be collected and treated by a proposed onsite OWTS, which has been designed to treat 100 percent of the Project's wastewater to standards for reuse as irrigation on the remodeled golf course. As such, the Project would result in the construction (installation) of a new wastewater treatment facility. With compliance with State and local laws and Regional Water Quality Control Board requirements, impacts related to construction or operation of the OWTS would be less than significant with mitigation.			
On-site wastewater impacts Wastewater generated by the Project would be treated by a proposed OWTS, which has been designed with a capacity to convey, collect, and treat 100 percent of the Project's wastewater based on peak flows.	Less than significant	No mitigation required or proposed.	Less than significant
Impacts to the off-site wastewater system Wastewater generated by the Project would continue to be collected and treated onsite as under existing conditions and would have no connection to off-site wastewater infrastructure provided by a utility. The Project would result in no impacts to off-site wastewater facilities regarding capacity in sewer lines and/or sewage disposal conveyance systems as there are none that serve the Project site.	Less than significant	No mitigation required or proposed.	Less than significant
Cumulative Impacts Related projects located within the vicinity of the Project site would produce additional flows, some of which may be serviced by regional wastewater treatment facilities. Any additional wastewater flows from related projects would have no bearing on the Project's OWTS, as there would be no connection provided to other projects, and the Project's OWTS would have no connection to a regional wastewater system.	Less than significant	No mitigation required or proposed.	Less than significant
Solid Waste (see section 5.14.3)			
Construction period impacts Following a diversion of 65 percent for recycling activities, demolition is expected to produce up to 661.4 tons of debris to be deposited in a landfill. Construction	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
of the Project's proposed facilities would generate 162 tons of debris for disposal, for a total of 823.4 tons of material to be disposed of in landfills. Given the excess in permitted daily capacity at the Sunshine Canyon, Calabasas, and Chiquita landfills, construction waste from the Project that cannot be recycled is not expected to exceed the capacity of those landfills.			
Operational Impacts During operations, the daily solid waste generated by the Project would be 2,381 pounds per day (1.194 tpd), which would be a total of 434.7 tons of solid waste annually. Recyclable materials would be collected separately and diverted from landfills, thus reducing the Project's quantity of solid waste that would require landfill disposal. Based on the existing diversion rate of approximately 52 tons per year by the Malibu Golf Club, the Project would send an estimated net increase of 0.132 tpd or 48.2 tons per year of solid waste to landfills over existing conditions. The Project's estimated quantity of solid waste disposal would not exceed the permitted daily capacity of the three nearest landfills under their most recently reported disposal rates. As such, the Project would not result in a significant impact to those facilities. However, as other landfills in the County reach their lifetime capacity, future inputs could potentially increase significantly. Due to the potential for increased demands on the nearest landfills, and for the County to maintain compliance with AB 939, it will be important for all solid waste generators, including the Project, to implement and maintain diversion programs to reduce the amount of waste sent to landfills.	Significant but mitigable	**MM5.14.3-1** The applicant shall implement a recycling program for the operational phase of the Project. The recycling program shall be monitored to ensure that the program advances along with technological advancements in waste management industry-wide. At a minimum the recycling program shall maintain existing levels of waste diversion with improvements in waste diversion over time that exceed existing levels and are in keeping with overall Countywide criteria. Some of the recycling criteria that shall be met or exceeded include: • All green waste generated onsite (e.g. tree trimmings, brush clearance, grass, etc.) shall be either chipped and reused for pathways or landscaping (e.g. wood chips), or shall be composted onsite for use within the Project; • Where trash receptacles are placed in common areas of the Project site for use by guests, clearly marked recyclable bins shall also be provided for beverage containers such as bottles and cans; • Food waste shall be separated from other refuse and recyclable materials and composted onsite utilizing a worm bin to convert	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
		non-fatty food wastes into potting soil (called ermicompost) for onsite landscape maintenance use; • Batteries, toner cartridges and other office tech equipment such as computer monitors, printers, and cell phones shall be recycled; • Offices shall promote recycled paper usage that contains at least 30 percent recycled content and is Green Seal Certified; • A Central Recycling Center (CRC) shall be located on-site in an area where all of recycled materials are to be stored until transported to the processor, and will include roll-off containers for separation of various recycling commodities; • The Project shall provide an on-site baler for all cardboard and newspaper, equipment to crush glass items and cans, and compactors for all other waste to minimize volumes; • The Project shall provide bulk dispensing systems throughout the property for toiletry items such as soaps and shampoos to minimize packaging; and • The Project shall provide cloth towel rolls or hand dryers in common area restrooms instead of paper towels.	
Compliance with federal, state, and local statutes and regulations related to solid waste The Project would be required to comply with the County's mandatory Construction and Demolition Debris Recycling and Reuse Program as required by the County's Green Building Standards (Section 22.52.2130.C.4.b), by diverting a minimum of 65	Less than significant	No mitigation required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
percent of non-hazardous construction and demolition debris to be recycled or salvaged. In addition, the Project would comply with County requirements under Title 20, Chapter 20.89 that establishes a service charge levied upon each parcel of real property in the unincorporated area of the County of Los Angeles in order to fund the preparation, adoption and administration of the Los Angeles County Household Hazardous Waste Element, and the Los Angeles County Source Reduction and Recycling Element of the Countywide IWMP.			
Cumulative Impacts Construction Unclassified landfills would not be significantly impacted from cumulative disposal of construction and demolition wastes, and the Project's contribution of construction and demolition materials to those facilities would be less than significant.	Less than significant	No mitigation required or proposed.	Less than significant
Operational The Project would not contribute to a significant cumulative impact on landfill capacity; however, mitigation measure MM5.14.3-1, requiring the implementation of a waste reduction and recycling program is incorporated to further ensure the Project's contribution would not be cumulatively considerable. As such, with implementation of mitigation measures in support of the State's disposal reduction goals, the Project would not have a cumulatively considerable contribution to solid waste impacts, which would be less than significant.	Significant but mitigable	See MM5.14.3-1, above.	Less than significant
Energy Supply (see section 5.14.4)			
The Project would incorporate energy efficiency features with the goal of achieving LEED™ Platinum certification or equivalent for proposed structures, which would result in greater efficiencies and more sustainable development than required by the Los Angeles County Green Building Ordinance. As such, the Project would not conflict with this ordinance and impacts related to the Project's compliance with the Los Angeles County Green Building Ordinance would be less than significant.	Less than significant	No mitigation is required or proposed.	Less than significant

Description of Impact	Significance of Impact	Proposed Mitigation Measures	Significance After Mitigation
The incorporation of drought tolerant native trees and landscaping including the replacement of turf grass on the existing golf course with drought tolerant grass varieties, which would comply with the Drought Tolerant Landscaping Ordinance. The Project would also remove approximately 1,590 non-native trees to reduce irrigation demands on the site. As such, the Project would not conflict with the Los Angeles County Drought Tolerant Landscaping Ordinance and impacts related to compliance with that ordinance would be less than significant.	Less than significant	No mitigation is required or proposed.	Less than significant
Inefficient Use of Energy Resources The Project would incorporate energy conservation features with the goal of achieving LEED™ Platinum certification or equivalent including a more efficient irrigation system, provide a shuttle service to area airports for overnight guests, and install pathways for internal circulation between each proposed structure by foot or electric cart to minimize energy use onsite. Therefore, impacts related to inefficient use of energy resources would be less than significant.	Less than significant	No mitigation required or proposed.	Less than significant
Based on the minor increase in electricity demands by the Project relative to SCE's current production of electricity, the Project's electricity demands would not exceed the capacity of SCE facilities to supply them. Additionally, the Project would produce electricity onsite to meet approximately half of its own demand by installing solar panels above parking lot shade structures and some rooftops.	Less than significant	No mitigation required or proposed.	Less than significant
Cumulative impacts By providing approximately 50 percent of the electrical demand onsite, constructing buildings with enhanced efficiency features to achieve the highest level of certification for sustainability, and accounting for the reduction of the estimated current usage onsite, the Project would have a net increase in demand of approximately 0.0004 percent, which would not represent a significant contribution to cumulative electricity supply impacts.	Less than significant	No mitigation required or proposed.	Less than significant

1.4 ALTERNATIVES

The DEIR evaluates the potential impacts of four alternatives. These alternatives are compared to the impacts associated with the proposed Project and among these an environmentally superior alternative is identified. The selection of alternatives was based on CEQA Guidelines and the Project's significant impacts as identified in Section 4 of this EIR. The following alternatives were selected for analysis in this EIR:

Alternative1: No Project
Alternative 2: Residential Development
Alternative 3: Original Malibu Institute Proposal (2011)
Alternative 4: Reduced Footprint

ALTERNATIVE 1 – NO PROJECT

As required by CEQA, this section analyzes a "No Project" alternative. Under the No Project Alternative, the Project would not be constructed. Specifically, the Malibu Institute sports-oriented retreat including the proposed educational meeting rooms, overnight accommodations, new clubhouse, and associated support facilities would not be constructed, nor would the golf course be remodeled or have irrigation improvements installed under this alternative.

The analysis of the No Project Alternative assumes the continuation of existing conditions; therefore, the existing uses of the Malibu Golf Club would remain the same. No additional construction or site improvements would be pursued under this alternative. The site would continue to have a 12,475-square foot golf clubhouse and dining facility, as well as approximately 7,000 square feet of associated support facilities, along with the 18-hole public golf course that was originally constructed in the 1970s. This scenario anticipates that other off-site development in the Project area would continue (i.e. related projects described in Section 4.0 *Environmental Setting*).

ALTERNATIVE 2 – RESIDENTIAL DEVELOPMENT

The proposed Project would not be implemented and the existing Malibu Golf Club would remain unchanged and the remaining lots in the 650-acre property would be developed with single-family residential estates. Based on General Plan Zoning designations and topographic or accessibility constraints, a total of 29 residential estates would be developed with implementation of Alternative 2. For this analysis, it has been assumed that the residential estates would average approximately 3,000 square feet in size. Under this alternative, the golf course would not be remodeled and therefore improvements related to water conservation, water quality, and non-native aquatic species eradication would not occur. Additionally, due to limited suitable development area, it is assumed that two existing structures in the northern portion of the Project site, consisting of an abandoned residence and a caretaker's house, would be removed to accommodate the planned estates and associated landscaping;

ALTERNATIVE 3 – ORIGINAL MALIBU INSTITUTE PROPOSAL (2011)

The Malibu Institute educational retreat would be implemented under this alternative, however, a total of 626,904 square feet of structures would be developed and the redesigned golf course would consist of only six fairways, reducing the total golf course acreage, allowing for restoration of approximately 40 acres of the Trancas Canyon Creek headwaters. As this alternative would significantly alter the golf course and provide habitat restoration, it is assumed that implementation of Alternative 3 would likely incorporate improvements related to water conservation, water quality, and non-native aquatic species eradication within the existing onsite ponds. This alternative would include a 118,395-square foot

conference and event center, 46,485 square feet of meeting rooms, 58 guest bungalow units (four bedrooms each), an underground parking facility, a 5,720-square foot administration/security building, as well as a wellness center and a golf pro shop. Under this alternative, two existing structures in the northern portion of the Project site, consisting of an abandoned residence and a caretaker's house, would remain as they currently exist.

ALTERNATIVE 4 – REDUCED FOOTPRINT

The Malibu Institute would be implemented as proposed, however, no bungalows would be located on the former helipad, and six of the single bungalow units would be replaced with the double-unit bungalow structures (Bungalow Floor Plan B2) for an overall reduction of 1,500 square feet of construction. Implementation of this alternative would therefore result in a greater average building height as the Bungalow Floor Plan B2 is approximately five to twelve feet higher than the single bungalow units that would be replaced.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In addition to the discussion and comparison of impacts of a proposed project and the alternatives, CEQA Guidelines Section 15126.6(e)(2) requires an "environmentally superior" alternative be selected and the reasons for such a selection disclosed. In general, the environmentally superior alternative is the alternative that would be expected to generate the least amount of adverse impacts.

A summary of the environmental impacts anticipated for the Project and each alternative is provided in Table 1-2 below. In this case, Alternative 1 (No Project) would result in the fewest adverse impacts and thus is considered the environmentally superior alternative. However, CEQA Guidelines Section 15126.6(2) requires an environmentally superior alternative be selected above and beyond the No Project Alternative. Based on the alternative analysis provided above, of the remaining alternatives, Alternative 4 (Reduced Footprint) would minimize the extent of less than significant impacts or impacts requiring mitigation, which would make Alternative 4 the environmentally superior alternative. However, when compared to the Project, Alternative 4 would require the same mitigation measures as the Project to reduce potential impacts to less than significant. Thus, the Project would not result in impacts of any higher significance than the environmentally superior alternative.

As discussed above, Alternative 4 would not fulfill the Project's objective to:

- Construct proposed site improvements within a clustered area to minimize off-site view impacts while locating visitor-serving facilities including overnight accommodations in a manner that maximizes guests' views of the remodeled golf course and natural areas of the Santa Monica Mountains and provides separation between bungalow structures as feasible within the development area.

Table 1-2
Comparison of Land Uses Under the Alternatives

	Malibu Institute Project	Alternative 1 No Project	Alternative 2 Residential Development	Alternative 3 Original Malibu Institute Project (2011)	Alternative 4 Reduced Footprint
Land Uses					
Malibu Institute	48,164 sf	-	-	118,395 sf	48,164 sf
Guest Bungalows (40 Units)	109,140 sf (40 Units)	-	-	282,378 sf (58 Units)	107,640 sf (40 Units)
Security/Information Building	120 sf	-	-	5,720 sf[a]	120 sf
Golf Pro Shop/Grill	12,104 sf	-	-	5,720 sf	12,104 sf
Cart Barn	9,162 sf	-	-		9,162 sf
Clubhouse	30,147 sf	12,475 sf	12,475 sf	16,500 sf[b]	30,147 sf
Maintenance Building	10,500 sf	7,000 sf	7,000 sf	5,000 sf	10,500 sf
Warehouse	4,623 sf	-	-	-	4,623 sf
Pool Showers	800 sf	-	-	-	800 sf
Meeting Rooms	-	-	-	46,485 sf	-
Sub-grade Parking Structure	-	-	-	145,906 sf	-
Sewer Treatment Building	-	-	-	800 sf	-
Caretaker's Residence [e]		875 sf	-		
Abandoned Residence [c]	-	4,160 sf	-		-
Residential Estates	-	-	87,000 sf[d] 29 d.u.	-	-
Totals	224,760sf	24,510 sf	106,475 sf	626,904sf	223,260 sf
Golf Course	107 acres	118 acres	118 acres	40 acres	107 acres

[a] Administration/Security building
[b] Wellness Center
[c] Alternative 2 would likely place new residences at the site of an existing abandoned residence and a caretaker's residence, thus removing them from the overall development square footage.
[d] Assumes 3,000 sf per residence
[e] Except for the no project alternative, the existing 875 sf caretaker's residence is not included in the totals as there are no modifications to this structure proposed.

The comparison of feasible alternatives discussed below has been included to provide sufficient information about each alternative to allow for meaningful evaluation, analysis, and comparison with the Project and its objectives. In the analysis and **Table 1-3**, the potential impacts of the alternatives are compared with those expected to be generated by the Project.

Table 1-3
Comparison of Alternatives - Summary of Environmental Impacts

Environmental Issue	Proposed Malibu Institute Project	Alternative 1: No Project – Continues as an 18-hole Golf Course	Alternative 2: Residential Development	Alternative 3: Original Malibu Institute Project	Alternative 4: Reduced Footprint
Aesthetics					
Visual Resources	LTS	NI	LSAM (greater)	LTS (reduced)	LTS (greater)
Visual Character	LTS	NI	LSAM (greater)	LTS (greater)	LTS (greater)
Lighting	LTS	NI	LSAM (greater)	LTS (reduced)	LTS (same)
Air Quality					
Air Quality - Construction	LSAM	NI	LTS (reduced)	LTS (greater)	LSAM (same)
Air Quality - Operation	LTS	NI	LTS (reduced)	LTS (greater)	LTS (same)
Biological Resources					
Biological Resources	LSAM	NI	LSAM (greater)	BI	LSAM (reduced)
Cultural Resources					
Paleontological Resources	LSAM	NI	LSAM (greater)	LSAM (same)	LSAM (same)
Archaeological Resources	LSAM	NI	LSAM (greater)	LSAM (same)	LSAM (same)
Geology and Soils					
Geotechnical Hazards	LTS	NI	LSAM (greater)	LTS (same)	LTS (same)
GHG/Climate Change					
Greenhouse Gas Emissions	LTS	NI	LTS (greater)	LTS (greater)	LTS (same)
Hazards and Hazardous Materials					
Exposure - Construction	LSAM	NI	LSAM (same)	LSAM (same)	LSAM (same)
Exposure - Operations	LSAM	NI	LSAM (same)	LSAM (same)	LSAM (same)
Hydrology and Water Quality					
Drainage -Operation	LTS	NI	LSAM (greater)	LTS (reduced)	LTS (same)
Water Quality -Construction	LSAM	NI	LSAM (greater)	LSAM (same)	LSAM (same)
Water Quality -Operation	LSAM	NI	LSAM (greater)	LSAM (reduced)	LSAM (same)
Land Use					
Land Use Consistency	LTS	NI	LTS (same)	LTS (same)	LTS (same)
Land Use Compatibility	LTS	NI	LTS (same)	LTS (same)	LTS (same)
Noise					
Noise - Construction	LTS	NI	LTS (same)	LTS (same)	LTS (same)
Noise - Operation	LSAM	NI	LTS (same)	LSAM (same)	LSAM (same)
Public Services					
Fire	LSAM	NI	LSAM (greater)	LSAM (greater)	LSAM (same)
Police	LTS	NI	LTS (same)	LTS (same)	LTS (same)
Schools	NI	NI	LSAM (greater)	NI (same)	NI (same)
Recreation					
On-site Recreation Facilities	LTS	NI	LTS (same)	LTS (greater)	LTS (same)
Off-site Recreation Facilities	LTS	NI	LTS (same)	LTS (same)	LTS (same)
Transportation/Traffic					

Environmental Issue	Proposed Malibu Institute Project	Alternative 1: No Project – Continues as an 18-hole Golf Course	Alternative 2: Residential Development	Alternative 3: Original Malibu Institute Project	Alternative 4: Reduced Footprint
Traffic and Access	LSAM	NI	LSAM (reduced)	LSAM (greater)	LSAM (same)
Utilities					
Water Supply	LSAM	NI	LSAM (greater)	LSAM (greater)	LSAM (same)
Wastewater	LTS	NI	LTS (same)	LTS (same)	LTS (same)
Solid Waste	LSAM	NI	LSAM (reduced)	LSAM (greater)	LSAM (same)
Energy	LTS	NI	LTS (greater)	LTS (greater)	LTS (same)
NI – No Impact BI – Beneficial Impact LTS – Less Than Significant LSAM – Less Than Significant After Mitigation SI – Significant Impact					

1.5 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

A number of issues regarding the Project were raised by public agencies in response to the NOP and through the Administrative Draft EIR review process. These issues include geotechnical hazards, water quality, land use, traffic/access, water supply, sewage disposal, cultural resources, biological resources, noise, air quality, and public services. These issues have therefore been addressed in this DEIR in Section 5. Several issues have been identified as areas of controversy through the public review period on the Initial Study/Notice of Preparation disclosure by the Lead Agency. These include issues related to the size of the Institute facilities, anticipated uses, the 24-hour duration of operations, and noise issues related to outdoor sound amplification.

2.0 INTRODUCTION

2.1 PROJECT SUMMARY

The Malibu Institute Project (the Project) proposes to create a sports-oriented educational retreat and remodel of an existing 18-hole golf course on a 650-acre Project site currently operated as the Malibu Golf Club in the unincorporated Malibu area of Los Angeles County. The Project would provide for the development of educational and meeting facilities along with visitor-serving overnight accommodations consisting of 40 bungalows with a total of 160 bedrooms to complement the proposed golf course remodel and associated support facilities, including a new clubhouse/wellness building, swimming pool, a golf pro shop and grill, a maintenance building, a golf cart storage barn, a warehouse, and a security/information building. In total, the Project proposes to construct a combined 224,760 square feet of structures, which would include the reuse of the building footprint of the existing 12,475-square foot clubhouse and cart barn as part of the Institute building and the removal of 11,160 square feet of existing structures, for a total increase of 201,452 square feet of structures on the Project site. An existing 875-square foot caretaker's residence located on the northern portion of the property along Mulholland Highway would be retained by the Project for use as a caretakers' residence. All of the proposed improvements, including the remodeled golf course, would be constructed within the previously disturbed area of the Malibu Golf Club and all of the proposed structures would be clustered within a 20-acre development area in the southern portion of the Project site. Over 450 acres of native coastal scrub and chaparral, including oak woodland forest, would be left undisturbed and would become permanently dedicated open space.

2.2 PROJECT SITE HISTORY

The Project site is currently occupied by the Malibu Golf Club, which provides an 18-hole public access golf course, clubhouse, and associated facilities in the southern and central portions of the site. The golf course has operated as a golf facility since original construction in the early 1970s. Additionally, two residential structures constructed in the 1920s are located in the northern portion of the Project site along Mulholland Highway. One of these residences is currently used as a caretaker's residence for the existing Malibu Golf Club; the other is an abandoned hunting lodge.

2.3 CEQA NOTICING AND PROCESS

The California Environmental Quality Act (CEQA), California Public Resources Code Section 21000, *et seq.*, requires the preparation of an Environmental Impact Report (EIR) when there is substantial evidence a project may have a significant effect on the environment. The purpose of an EIR is to provide decision-makers, State and local agencies, and the general public with detailed information on the potentially significant environmental effects a proposed project is likely to have, to identify ways the significant environmental effects may be avoided or substantially lessened, and to indicate feasible alternatives to the project. (Public Resources Code Section 21002.1.) Additionally, CEQA requires an EIR identify those adverse impacts determined to remain significant after feasible mitigation.

The EIR for the Malibu Institute is a Project EIR. As stated in Section 15161 of the CEQA Guidelines (Title 14, California Code of Regulations, Section 15000, *et seq*.), a Project EIR should "focus primarily on the changes in the environment that would result from the development project." The Project EIR examines all phases of a project, including planning, construction, and operation.

The Project entitlement applications for a vesting tentative tract map, a conditional use permit and a parking permit were reviewed by the Los Angeles County Department of Regional Planning (serving as

Lead Agency), an Initial Study was prepared (see **Appendix A**), and it was determined the Project required the preparation of an EIR. The determinations contained in the Initial Study were based on detailed knowledge of the Project site and surrounding area, as well as the Project applications provided by the Malibu Institute (Applicant). A Notice of Preparation (NOP) then was issued for the Project, pursuant to CEQA Guidelines Section 15082, on November 21, 2012, notifying the Office of Planning and Research and each responsible and trustee agency, as applicable to this Project, an EIR was being prepared. Comments were solicited on the NOP. Initially the NOP comment period was for 30 days; however, the comment period was extended to 60 days. Following the NOP comment period, the EIR's scope was adjusted to include the issues raised by agencies and the general public in response to the NOP. The Project entitlement applications were deemed complete by the Department of Regional Planning on January 22, 2013.

As determined by the Lead Agency, local environmental considerations and resources could be significantly impacted by construction and operation of the Project (Public Resources Code Sections 21002.1 and 21151). The issues identified in the Initial Study as potentially significant and recommended for analysis in the EIR include:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards/Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Noise
- Public Services
  - *Fire Protection Services*
  - *Sheriff Protection Services*
- Recreation
- Transportation/Traffic
- Utilities/Services
  - *Water Supply*
  - *Wastewater Treatment*
  - *Solid Waste Disposal*
  - *Energy Supply*

CEQA Guidelines Section 15128 states: "An EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. Such a statement may be contained in an attached copy of an initial study." The Lead Agency determined there was no evidence the Project would cause significant environmental effects in the following areas; therefore, no further environmental review was necessary for the reasons described in the Initial Study in Appendix A:

- Agriculture/Forest Resources
- Mineral Resources
- Population/Housing
- Public Services
  - *Schools*
  - *Libraries*
  - *Other Public Services*

This Draft EIR (DEIR) is being circulated for public review and comment for a period of 60 days. During this period, the general public, organizations, and agencies may submit comments on environmental issues raised in the DEIR and the DEIR's accuracy and completeness to the Lead Agency at the following address:

Los Angeles County Department of Regional Planning
320 West Temple Street
Los Angeles, California 90012
Attn: Carolina Santoro Blengini

Comments on the DEIR should be submitted in writing and delivered to the above address no later than 5 p.m. on the last day of the public review period. Upon completion of the public review period, a Final EIR (FEIR) will be prepared that will include the comments on the DEIR as well as responses to those comments. This DEIR and the FEIR will comprise the EIR for the Project.

2.4 ORGANIZATION OF THE EIR

Section 1.0, Introduction, identifies the Lead Agency and provides an introduction to the Project. It provides a brief overview of the Project and the Project site, the CEQA environmental review process, and a description of the organization of the EIR.

Section 2.0, Executive Summary, provides a summary of detailed information contained in subsequent sections. It includes a description of the Project and the alternatives considered, and it identifies all impacts by environmental issue with the associated significance determination, mitigation measures, cumulative impacts, and significance after mitigation for those impacts.

Section 3.0, Project Description, provides a description of the Project. It identifies the size and function of the proposed facilities and amenities of the Project, and describes the "green" features of the Project to maximize sustainability and minimize impacts. Additionally, this section identifies the objectives and goals of the Project.

Section 4.0, Environmental Setting, provides a description of the Project in the context of its regional and local environmental setting. This section also provides a brief description of the related projects, as the cumulative impacts discussed in the DEIR (refer to Section 5.0, below) are those that result from the individual effects of the Project in combination with the effects of other related projects, which are commonly in close proximity to the Project site.

Section 5.0, Environmental Impact Analysis, describes the potential environmental impacts of the Project. The discussion in this section is organized by environmental issue area including Aesthetics, Air Quality, Biological Resources, Cultural Resources, Energy, Geology/Soils, Greenhouse Gas Emissions,

Hazards/Hazardous Materials, Hydrology/Water Quality, Land Use/Planning, Noise, Public Services, Recreation, Transportation/Traffic, and Utilities/Services. Each issue discussion is organized into six subsections as described below:

Existing Conditions: This section describes the existing conditions and environmental setting in the Project vicinity as it pertains to the specific environmental issue.

Thresholds of Significance: This section defines the criteria for determining whether an impact of the Project is considered significant.

Project Impacts: This section provides an analysis of the Project, including the identification and evaluation of direct and indirect impacts, as appropriate, which may occur during construction or operation. This section also discusses whether or not these environmental effects meet or exceed the established threshold of significance.

Cumulative Impacts: This section addresses the potentially significant cumulative impacts that may result from the Project when taking into account the environmental impacts of other related, and reasonably foreseeable past, present, and future projects.

Mitigation Measures: This section identifies potentially feasible mitigations that would avoid or substantially reduce significant adverse Project-related impacts.

Unavoidable Adverse Impacts: This section discusses the environmental effects of the Project after the implementation of the identified mitigation measures and indicates whether or not the resulting impact has been reduced to a less than significant level. This section also categorizes the Project's impacts on a particular environmental issue according to the following classes of impacts:

- Class I – Significant adverse environmental impacts that cannot be feasibly mitigated or avoided. Decision-makers must approve a Statement of Overriding Considerations under CEQA Guidelines Section 15096(b) for Project approval;
- Class II – Significant adverse environmental impacts that can be feasibly mitigated or avoided. Decision-makers must make findings under CEQA Guidelines Section 15091 for Project approval;
- Class III – Adverse environmental impacts that are not significant. These impacts do not require mitigation or require findings be made; or
- Class IV – Beneficial impacts.

In the event the Lead Agency finds the Project would result in one or more significant environmental effects, it may, after making a series of findings, certify the FEIR and then approve or decline to approve the Project. If the County were to certify the FEIR and approve the Project despite unavoidable adverse environmental effects, it would be required by CEQA to state, in the record, the overriding considerations for the approval and implementation of the Project.

Section 6.0, Alternatives, provides a discussion of the No Project Alternative as well as other alternatives to the Project. The CEQA Guidelines require an EIR to identify a reasonable range of alternatives to a project, determine what environmental effects would result from implementation of those alternatives, and determine whether the alternatives would meet the objectives of the project. Based on the alternatives analysis, an environmentally superior alternative is designated among the alternatives. CEQA requires if the environmentally superior alternative is the No Project Alternative, the EIR must identify an

environmentally superior alternative among the other alternatives. If an alternative that is environmentally superior to the project cannot be feasibly implemented, the reasons are to be included in the record of the agency's action on the EIR.

Section 7.0, Significant Environmental Effects and Irreversible Environmental Changes, discusses the significant environmental effects that cannot be avoided if the Project is implemented (Class I). Additionally, this section discusses the irreversible environmental changes that could occur as a result of construction or operation of the Project.

Section 8.0, Growth Inducing Impacts, describes the potential for the Project to foster economic or population growth or the construction of additional housing either directly or indirectly in the surrounding environment.

Section 9.0, Preparers of the EIR, Contacts, and References, provides a list of contacts and references consulted during the preparation of the EIR, and also identifies the preparers of the EIR.

Appendices are provided under separate cover in the EIR Technical Reports.

2.5 LEAD AND RESPONSIBLE AGENCIES

Implementation of the Project would require approvals from the agencies listed below:

2.5.1 Lead Agency

As stated, the County of Los Angeles has the principal responsibility for approval or denial of the Project and is the Lead Agency, as defined by CEQA Guidelines Section 15367. As Lead Agency, the County is responsible for the preparation and distribution of this DEIR. The Lead Agency also has the responsibility for the processing of various discretionary actions including, but not limited to additional conditional use permits, parking permits, grading and building permits, and occupancy permits.

2.5.2 Responsible Agencies

Responsible agencies are public agencies other than the Lead Agency that have responsibility for carrying out or approving the Project, as defined by CEQA Guidelines Section 15381. The following agencies are identified as responsible agencies:

- *Regional Water Quality Control Board (RWQCB).* The Los Angeles RWQCB would review and process permits and plans that pertain to construction activities and the proposed on-site wastewater recycling system, and the issuance of a National Pollutant Discharge Elimination System (NPDES) permit and Clean Water Act Section 401 Water Quality Certification.
- *California Coastal Commission.* The Coastal Commission would review and process a coastal development permit for the Project.
- *California Department of Fish and Wildlife (CDFW).* The CDFW has jurisdiction over biological resources affected by the Project. Additionally, pursuant to Section 1600 of the California Fish and Game Code, a Streambed Alteration Agreement would be required prior to disturbance of jurisdictional stream channels.
- *Army Corps of Engineers (ACOE).* The ACOE maintains jurisdiction over "waters of the United States" including certain drainages that cross the Project site. All dredge and fill activities within "waters" are regulated by the ACOE and a permit pursuant to Section 404 of the Clean Water Act would be required for the Project.

- *Ventura County Local Agency Formation Commission (VCLAFCo)*. The VCLAFCo implements state law requirements and state and local policies relating to boundary changes for cities and most special districts. In this capacity, it may consider and approve the annexation of OWTS into the Ventura Regional Sanitation and other actions such as an out-of-agency service extension, Sphere of Influence Amendment, and change of organization/reorganization to enable Ventura Regional Sanitation District to serve the property.
- *Los Angeles County Local Agency Formation Commission (LACLAFCo)*. The LACLAFCo implements state law requirements and state and local policies relating to boundary changes for cities and most special districts. In this capacity, it may consider and approve the annexation of OWTS into the Ventura Regional Sanitation and other actions such as out-of-agency service extension, Sphere of Influence Amendment and change of organization/reorganization to enable Ventura Regional Sanitation District to serve the property.

2.5.3 Trustee Agencies

Trustee agencies, as defined by CEQA Guidelines Section 15386, have jurisdiction over natural resources that may be affected by the Project. The following agencies are identified as trustee agencies:

- *South Coast Air Quality Management District (SCAQMD).* The SCAQMD is responsible for managing air quality in southern California. The SCAQMD may review and comment on development proposals under consideration by the County of Los Angeles.
- *National Park Service.* The National Park Service has jurisdiction over trails within the Santa Monica Mountains National Recreation Area, including the Backbone Trail, which traverses portions of Zuma and Trancas Canyons in undeveloped lands abutting Encinal Canyon Road to the south of the Project site.

2.5.4 Other Agencies

As defined by CEQA Guidelines Section 15086, in addition to the responsible and trustee agencies, the Lead Agency is required to consult with other State, Federal and local agencies with authority over resources that may be affected by the Project. The following agencies are identified as other agencies:

- *City of Malibu*. The Project site is not located within the City of Malibu's sphere of influence. However, the City of Malibu has jurisdiction over infrastructure and/or resources that may be affected by the Project, such as City roadways. Additionally, Project Alternatives related to relocating one or more Project components could potentially include development within the City's limits.
- *City of Agoura Hills.* The Project site is not located within the City of Agoura Hill's sphere of influence. However, the City has jurisdiction over infrastructure and/or resources that may be affected by the Project, such as City roadways. Additionally, Project Alternatives related to relocating one or more Project components could potentially include development within the City's limits.
- *City of Westlake Village*. The Project site is not located within the City of Westlake Village's sphere of influence. However, the City has jurisdiction over infrastructure and/or resources that may be affected by the Project, such as City roadways. Additionally, Project Alternatives related to relocating one or more Project components could potentially include development within the City's limits.
- *California Department of Transportation (Caltrans)*. Caltrans has discretionary approval authority over private development projects that may affect or require modification to a State

highway. State Highway 23 traverses the northwestern portion of the Project site, forms parts of the western property boundary, and provides an access route to the Project via a connection with Lechusa Road approximately 0.10 mile south of the Project entrance, or via an intersection with Mulholland Highway that connects with Encinal Canyon Road to the east of the Project site.

- *United States Fish and Wildlife Service*. Involvement of the United States Fish and Wildlife Service is not likely unless rare or endangered species are found within the development footprint of the Project site or if the agency determines implementation of the Project would significantly affect these resources.
- *County of Los Angeles Environmental Review Board*. The County of Los Angeles Environmental Review Board normally addresses projects that may affect areas designated as Environmentally Sensitive Habitat Areas (ESHAs) or certain areas designated as Significant Ecological Areas (SEA) located within the Local Coastal Zone in the County of Los Angeles. A Biological Constraints Analysis (BCA) for the Malibu Golf Club Project (Envicom 2012) determined a portion of the Project site is located within Significant Ecological Area (SEA) Buffer 3A (in the northeastern area of the Project site). This area is far removed from the proposed development footprint and would not be impacted by construction activities or operations as there are no hiking trails accessing this area from the proposed facilities. The BCA also identified an ESHA located within the north-central portion of the Project site, however this area is in a remote, undeveloped portion of the Project site that would remain undeveloped, and is not likely to be accessed by guests of the Project due to the lack of trails and the difficulty of access to this area.
- *Los Angeles County Department of Public Works (LACDPW).* LACDPW maintains many of the roadways that would be used to access the Project, including Encinal Canyon Road, Mulholland Highway, and Kanan Road. These roadways could experience additional traffic with implementation of the Project, potentially resulting in congestion or increased maintenance needs.
- *Las Virgenes Municipal Water District (LVMWD).* As the purveyor of potable water for the Project site, LVMWD may comment on the availability of water supplies to adequately serve the Project. LVMWD also may comment on the adequacy of the Project's water conservation design features.

3.0 PROJECT DESCRIPTION

The Project would create a sports-oriented educational retreat affiliated with the University of Southern California (USC) to complement a remodeled 18-hole golf course on a 650-acre Project site currently operated as the Malibu Golf Club in the unincorporated Malibu area of Los Angeles County. In addition to providing a remodeled golf course, the Project would include development of the Malibu Institute building consisting of educational and meeting facilities in which educational institutions, businesses, or other organizations could conduct seminars, conferences, and other events. The Project also would develop visitor-serving overnight accommodations to facilitate multi-day programs that may be held onsite. The overnight accommodations would consist of 40 bungalow units with four bedrooms per unit, for a total of 160 bedrooms with a maximum occupancy of two persons per room or 320 overnight guests. Other facilities to be provided for guests would include a clubhouse featuring dining and lounge facilities as well as a fitness and wellness center, an outdoor swimming pool with a poolside shower and changing room, and a golf pro-shop and grill/snack shop. The dining facility and golf-related amenities would be available to the visiting public as well as those staying in overnight accommodations. The Project also would develop associated support facilities necessary for upkeep of the Project, including a maintenance building, a golf cart storage barn, a warehouse, and a security/information building. In total, the Project proposes to construct a combined 224,760 square feet of structures, which would reuse the building footprint of the existing 12,475-square foot clubhouse and cart barn for the proposed educational and meeting facilities of the Malibu Institute building, and also remove 11,160 square feet of existing structures, including maintenance sheds associated with the Malibu Golf Club and an abandoned residence located in the northern portion of the Project site. The Project would also include associated infrastructure improvements, including replacing existing septic tanks with an onsite underground wastewater treatment/water recycling facility, installing domestic use water supply pressure-reducing valve improvements to provide adequate water pressure, and relocating an existing, unpaved, emergency use helicopter landing pad to a more central portion of the golf course as approved by the Los Angeles County Fire Department.[1] The relocated helicopter landing pad would be provided with a water hydrant for filling firefighting helicopters, and would be on a relatively flat area that would not be graded or otherwise disturbed, with the exception of occasional mowing for maintenance. An existing 875-square foot guesthouse located on the northern portion of the property along Mulholland Highway would be retained by the Project for use as a caretakers' residence. At completion, the Project would result in a total net increase of 201,125 square feet of structures on the Project site.

The reconfigured 18-hole golf course would be redesigned using the acreage of 17 of the existing holes on the golf course, allowing the proposed facilities, including the redesigned golf course, to be constructed within previously disturbed areas. The redesigned golf course would incorporate features to minimize demand for water resources and maximize efficiency. The Project's water conservation features would include installation of an onsite wastewater recycling system that would replace existing septic tanks within the proposed development area, treating effluent generated onsite to a standard suitable for use as landscape irrigation on the golf course, to offset a substantial portion of the existing golf course's potable water use. The proposed improvements would be constructed completely within the previously disturbed area of the Malibu Golf Club, with the exception of the removal of an abandoned residence that would not be rebuilt or replaced. All of the proposed structures to be constructed would be clustered within a 20-acre development area in the southern portion of the Project site along Encinal Canyon Road. The development footprint would occupy the lower elevations of the Project site, and proposed structures would be nestled into sloped areas and would conform to the existing contours of the

[1] County of Los Angeles Fire Department, Conditions of Approval for Subdivision – Unincorporated TR 71735, Tentative Map – Conditions of Approval No. 1, October 31, 2012.

existing conditions. The Project would require grading of 120,000 cubic yards of cut and 120,000 cubic yards of fill, which would be balanced onsite. To protect the scenic beauty and environmentally sensitive native plant and animal species of the Santa Monica Mountains, the Project would avoid and preserve over 450 acres of native coastal scrub and chaparral, including oak woodland forest, which would be left undisturbed and would become permanently dedicated open space.

3.1 OPERATIONAL SUMMARY

The Project would provide meeting rooms, classroom facilities, and administrative offices within a 48,164-square foot conference building to be used for educational retreats held by USC and other universities/educational organizations, emphasizing programs for collegiate and professional athletes and wellness and recreational programs. Programming for these activities would consist of educational conferences, seminars, and lectures, and would be available for use by educational institutions and other organizations including charitable foundations. This facility also could host seminars, banquets, or receptions for other organizations. USC would participate in collaboration with the Malibu Institute on sports-oriented research projects, academic conferences and symposia, and would offer advice on development of a professional and/or continuing education curriculum related to the pursuit or enhancement of careers in sports. In addition to the educational facilities, the Malibu Institute building would include a cafeteria and lounge area. The proposed facilities would be operated year-round, and, by providing overnight accommodations onsite to event participants and the general public, the overall Project would operate 24 hours per day, although the classes, meetings and seminars to be held in the conference building likely would conclude by 10:00 p.m.

The Project would provide overnight guest accommodations in 40 bungalow units to be constructed in 37 individual structures. Three of these structures would contain two bungalow units. The bungalow structures generally would be two-stories (four would be single-story), with floor areas ranging from 2,610 square feet to 2,885 square feet for the single bungalow units, and 5,310 square feet for structures with two bungalow units, for a total of 109,140 square feet of bungalows. Each bungalow unit would include four private bedroom/bathroom facilities and a common lounging area, for a total of 160 bedrooms provided onsite. The bungalows would not include kitchen facilities. Guests staying in the bungalows would be provided with room services typical of resort hotels, such as meal delivery on request and a daily cleaning service.

A golf-oriented clubhouse would be constructed in a 30,147-square foot building providing a dining facility, lounge, fitness and wellness center, and locker rooms. While the clubhouse dining room and lounge would be open to the general public similar to the existing dining facility of the Malibu Golf Club, the fitness center/spa facilities would be provided as an amenity for use by overnight guests. The clubhouse facilities would allow overnight guests to remain on-site for dining and fitness activities that would otherwise require leaving the site. This facility also would be available for hosting banquet and receptions events to be held either indoors or in an outdoor courtyard. The dining facility would be permitted to serve guests and visitors until 11:00 p.m. for outdoor banquet or reception events, and indoor events, dining, and lounge service would be concluded by midnight.

A golf pro-shop and grill/snack shop would provide retail space for golf-related merchandise, a snack bar, and eight indoor computerized driving range bays within a 12,104-square foot building. This facility would serve golfers that are day-use visitors of the site as well as overnight guests of the Malibu Institute.

As an amenity for overnight guests, the Project would include an outdoor swimming pool with an associated 800-square foot poolside shower/changing room located to the west of the clubhouse facility.

Other proposed facilities would be provided to support the Malibu Institute and golf course operations. These would include a 9,162-square foot golf cart storage building, a 4,623-square foot warehouse to store supplies, a 10,500-square foot maintenance building, and a 120-square foot security/information building.

The remodeled golf course would continue to offer an 18-hole public-use course, which would be available to day-use visitors of the site as well as overnight guests of the Project. The golf course would not include an outdoor driving range, as the proposed pro shop would feature an indoor computerized practice facility. All outdoor golf activities would be prohibited at night as under existing conditions and no outdoor lighting would be provided for golf activities. Two existing restroom facilities located on the golf course would be removed, and replaced with modular restroom facilities that may be serviced by a mobile pump truck, or replaced as needed. The golf course would continue to be available as a practice facility for area high school and university golf programs that currently use the existing Malibu Golf Club. The golf course also would continue to provide a venue for charitable organizations and corporations to hold tournaments for fundraising or team-building purposes. Such tournaments would be participatory in nature by invited guests and would not involve on-course spectator access or grandstand facilities. Tournament participants may include guests of the on-site overnight accommodations and players arriving from off-site.

3.2 PROJECT GREEN FEATURES

The Project would incorporate many "green" features. The Institute building, which would contain the educational and meeting facilities, would use the building footprint of the existing clubhouse and cart barn. The buildings and accommodations would incorporate sustainable and green design with the goal of achieving LEED™ Platinum certification (or equivalent) for all buildings on the Project site. As a sustainability strategy, the Project would attempt to reuse as much of the existing clubhouse facility as feasible to minimize disposal of demolition and construction debris and reduce associated energy use and air quality impacts, however, the degree to which this goal may be achieved would be dependent on the ability of the existing structure and materials to attain LEED™ Platinum certification (or equivalent) for construction. Should existing materials or construction be a limiting factor in achieving the desired level of efficiency for sustainability, the existing building would be replaced in its entirety; as such, impacts discussed in this document assume the entire structure would be demolished and reconstructed, however, the proposed structure would make use of the existing building footprint. Design features also would include green roofs on many of the Project buildings, the use of color and shade structures to reduce the heat island effect, charging stations for electric vehicles, the use of highly efficient geothermal HVAC equipment, and the use of native, drought-tolerant landscaping. The Project would replace over 185,000 square feet of existing non-pervious parking lots and cart paths with pervious material to allow infiltration of storm water and improve water quality. The Project also would provide a shuttle van service for individuals or groups of overnight guests arriving or departing from area airports, universities, or other facilities in the region where groups attending a retreat or conference may originate. The shuttle service would be provided at times and locations as requested on a reservation basis. Water conservation and design features would include low flow/ultra low-flow fixtures, energy star appliances, and the use of drip irrigation systems with features such as moisture sensors, drought-resistant turf and landscaping. The Project would remove multiple septic tanks throughout the Project site and install an on-site wastewater treatment system with effluent meeting Title 22 standards for reuse as irrigation for the remodeled golf course and landscaping. The Project would use photovoltaic panels over shade structures in the expanded surface parking area and on some proposed rooftops to generate most of the energy needs for the Project. The Project would remove 1,590 non-native trees, including palm trees, which were introduced with development of the existing golf course, and provide landscaping with native, drought-tolerant species, to reduce irrigation demands and to provide habitat features and a color palette more consistent with that of

the Santa Monica Mountains. The Project would incorporate a recycling program by providing separate collection bins for recyclable materials generated by guests and employees to divert those materials from landfill disposal, and by composting green waste generated by and used by onsite landscaping maintenance. Finally, as part of its operations, the Project would incorporate sustainability features from the County's Green Building Ordinance, Low Impact Development Ordinance, and Drought Tolerant Landscaping Ordinance.

3.3 PROJECT LOCATION

The Project site is located at 901 Encinal Canyon Road, within the unincorporated Malibu area of Los Angeles County. Regionally, the site is located in the western portion of the Santa Monica Mountains approximately forty-five miles west of downtown Los Angeles (**Figure 3-1**). Locally, the Project site is situated northwest of the City of Malibu, and south of the Cities of Agoura Hills, Calabasas, Thousand Oaks and Westlake Village in a rural area of the Santa Monica Mountains lying south of the primary east-west ridgeline. Portions of the site located south of Mulholland Highway also fall within the Coastal Zone as defined by the California Coastal Act. Adjacent land uses are primarily undeveloped private and public lands, much of which is open space, with some large lot rural residential development along the northern and western boundaries. Youth detention facilities operated by the Los Angeles County Probation Department (Camp Miller and Camp Kilpatrick) are located to the east of the Project site.

3.4 PROJECT SITE

The Project site is comprised of an irregularly shaped assemblage of 29 parcels that total approximately 650 acres, spanning from Encinal Canyon Road on the south to the intersection of Mulholland Drive and Westlake Boulevard on the north as shown in **Figure 3-2** (See Appendix A for a complete list of Assessor Parcel Number (APN) for the parcels that constitute the Project site). Development of the Project would occur only on six of the 29 parcels that make up the Project site, and would include APNs 4471-001-034, -035, 4471-002-010, -011, 4471-021-034, and 4471-003-030. As part of the Project, the existing 29 parcels would be consolidated into 7 lots of a tract map with 5 of those lots (456.16 acres) being dedicated as permanent open space. The majority of the Project site is zoned R-R-1 (Resort and Recreation), with the portions to the north, east, southeast and south on the periphery of the Project site zoned either A-1-1 (Light Agriculture – 1 acre minimum lot size) or A-1-20 (Light Agriculture – 20 acres minimum lot size). Small portions of the Project site north of Mulholland Drive and the northeast area of the Project site are zoned RPD-5-0.2U-DP (Residential Planned Development – 5 acres minimum lot size – 0.2 dwelling units per acre – Development Program).

As mapped on the "Point Dume" USGS 7.5 minute topographic quadrangle (in portions of Sections 2, 3 10, 11 and 15, of T.1S, R.19W), the majority of the Project site falls within the upper watershed area of Trancas Canyon with the exception of a small, northerly extension of the Project site that spans the drainage divide and falls into the upper watershed of an unnamed tributary to the Carlisle Canyon watershed. The watersheds occupied by the Project site are discussed in Section 5.8, Hydrology and Water Quality, and depicted in Figure 5.8-2. Topographically, the site is situated in a bowl created by the crest of the Upper Trancas Canyon drainage basin. The on-site topography ranges in elevation from peaks that reach 1,900 feet to 2,300 feet above mean sea level (MSL) in the northeast and northwest, to valley bottom elevations that fall to approximately 1,300 feet above MSL. To the southeast, adjacent mountain ridges range from 1,400 feet to 1,900 feet above MSL. Landforms southwest of the site have gentler slopes and range from 1,400 feet to 1,700 feet above MSL. The overall elevation differences between the Project site and the surrounding mountains generally contribute to the formation of a centralized water drainage pattern with branching tributaries. Several debris basins are located around the

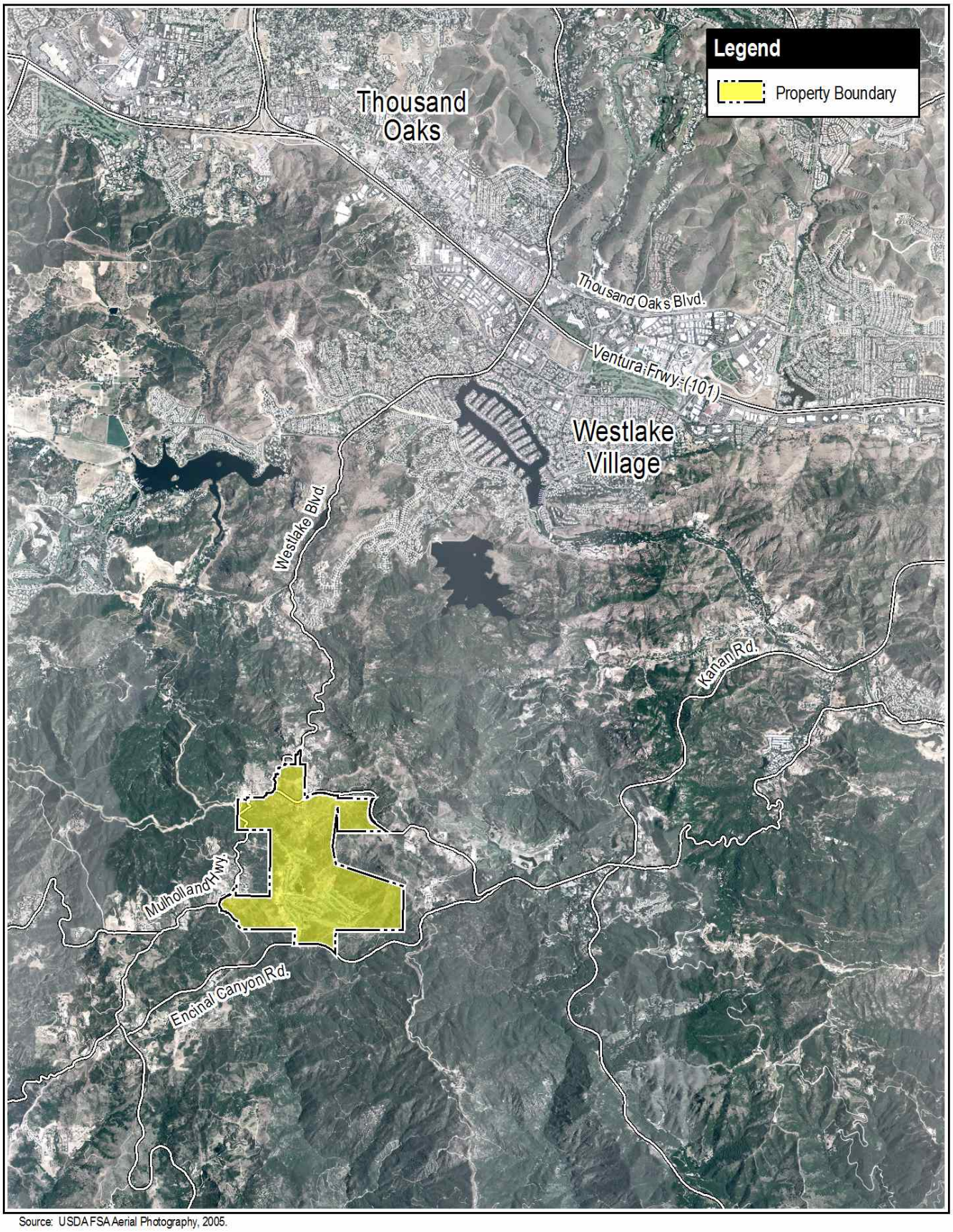
THE MALIBU INSTITUTE PROJECT EIR

ENVICOM CORPORATION

Project Location

MILES 0 4 8

FIGURE 3-1



Source: USDA FSA Aerial Photography, 2005.

THE MALIBU INSTITUTE PROJECT EIR

ENVICOM CORPORATION

Vicinity Map

0 0.5 1 Miles

FIGURE 3-2

periphery of the existing golf course to dissipate runoff within defined drainage channels, collect fluvial sediments, and direct the water flows. During construction of the golf course in the 1970s, two segments of the original intermittent Trancas Canyon Creek "blueline stream" were straightened and buried in culverted channels that pass through the golf course leading to two man-made ponds used as water features within the existing golf course. All excess water flow discharged from the headwaters area and the developed golf course is returned into the mainstem channel of Trancas Canyon Creek, near the public entrance to the golf course (Clubhouse Drive), after which the creek passes under Encinal Canyon Road leaving the Project site to resume a natural streamcourse on public lands.

3.5 EXISTING CONDITIONS

Existing development on the site consists of the Malibu Golf Club, constructed in the early 1970s, consisting of an 18-hole public golf course with supporting amenities, two surface parking lots, and associated driveways, all located in the central and southern regions of the Project site. **Figure 3-3** provides an aerial photo depicting the existing conditions of the site including onsite structures, parking lots, and driveways. Structural facilities that exist on the Project site as part of the Malibu Golf Club include a 12,475-square foot golf clubhouse with a restaurant and lounge. An associated maintenance structure and shed provide an additional 7,000 square feet of onsite development. There are also two structures on the Project site beyond the limits of the proposed development area, consisting of a guest house used as a caretaker's residence for the Malibu Golf Club, and an abandoned residence structure (approximately 875 square feet and 4,160 square feet, respectively), for a total of 24,510 square feet of existing structural development on the property. The Project would retain the guest house as a caretaker's residence. The remainder of existing structural development would be removed or replaced by components of the Project. The abandoned residence is in a state of disrepair and poses a potential hazard to trespassers from collapse or from biological risks associated with rodent infestation, and, as such, the Project would remove the structure due to safety and security concerns. An existing 100,000-gallon water tank that provides storage for irrigation water provided by onsite groundwater wells would remain and continue to serve the same purpose.

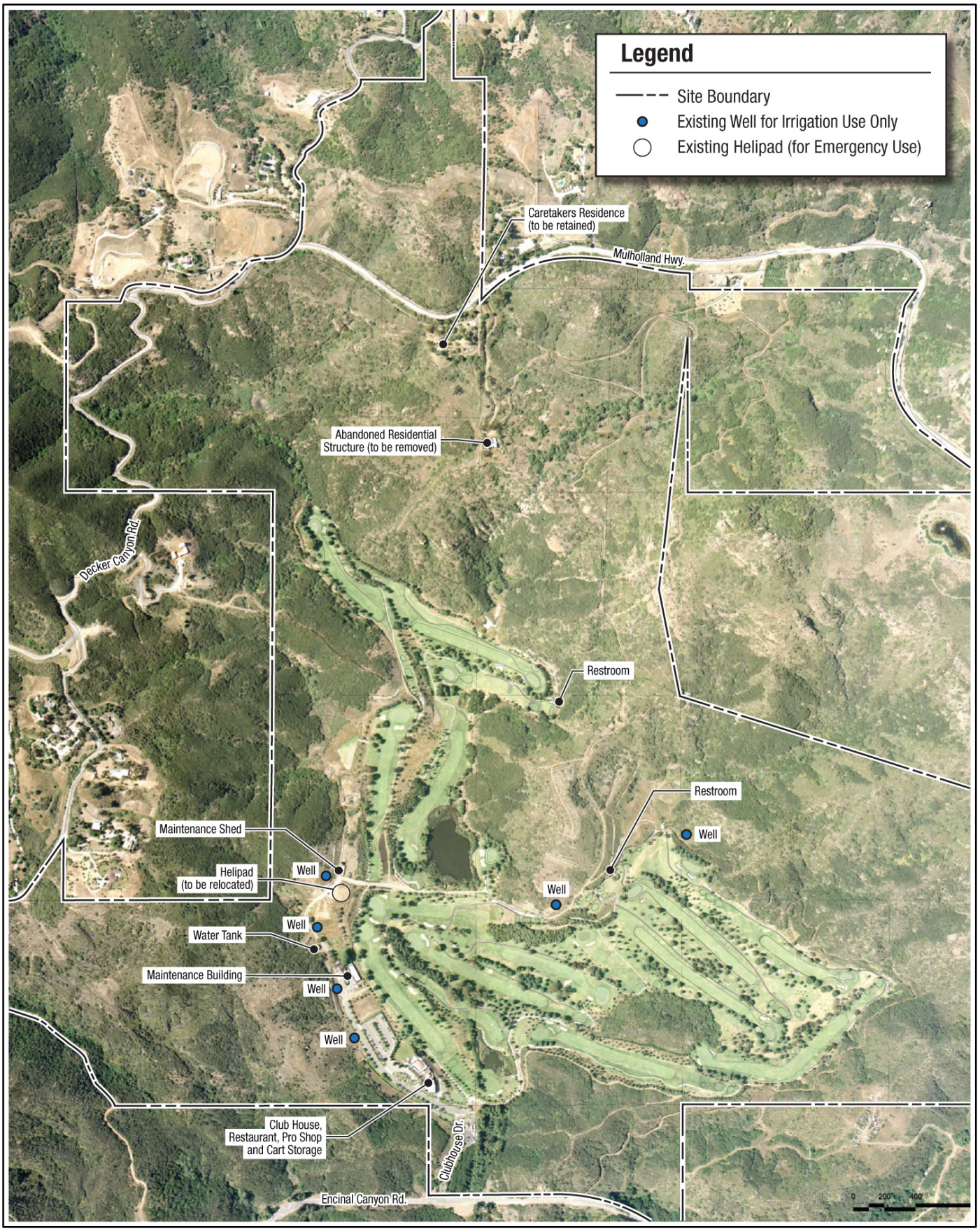
The existing development is provided potable water from Las Virgenes Municipal Water District (LVMWD) for domestic use and for irrigation of the golf course. The golf course irrigation is supplemented by six existing onsite wells depicted in Figure 3-3. Wastewater treatment for the existing development is provided by onsite septic tanks.

Much of the golf course area is planted with non-native and ornamental plant species. The remainder of the Project site consists of lands with native vegetation on generally steeply sloped terrain to the north, east, and west. Several areas adjacent to the golf course have been graded and disturbed in the past in connection with various development phases of the golf course.

3.6 PROJECT OBJECTIVES AND GOALS

CEQA Guidelines Section 15124(b) requires the Project Description to contain "a statement of the objectives sought by the proposed project," which "should include the underlying purpose of the project." The underlying purpose of the Project is to provide an environmentally sustainable golf course and sports-oriented educational retreat of superior quality and design within the Santa Monica Mountains. The following is a list of the objectives and goals of the Project:

- Establish a financially viable sports-oriented educational retreat, which provides educational, research and employment opportunities, and invigorates the local economy of unincorporated western Los Angeles County.



Source: LRS Architects, Inc., September 24, 2012.

THE MALIBU INSTITUTE PROJECT EIR

ENVICOM CORPORATION

Existing Site Conditions

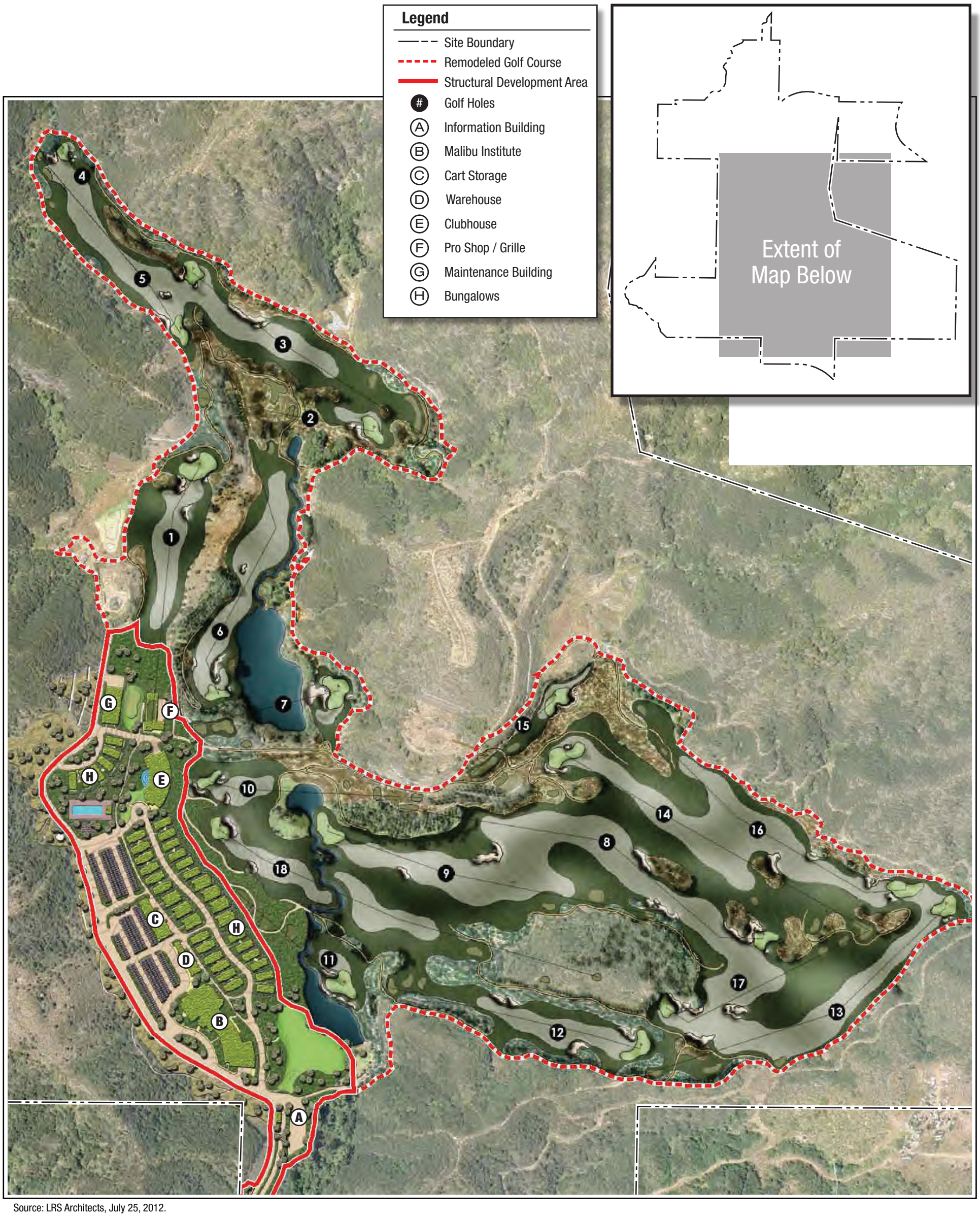
FEET 0 400 800

FIGURE 3-3

- Provide a comfortable, relaxing and inspiring environment in which educational institutions, governmental organizations, non-governmental organizations, business leaders and the public can conduct meetings and conferences.
- Provide visitor-serving overnight accommodations within individual bungalow units that would include common areas within each unit to provide a casual meeting space for discussion or study groups of Project guests that would be attending conferences or on-site functions together.
- Introduce a pattern of land uses compatible with existing environmental resources and community character, while improving the social, environmental and economic well-being of overnight guests, visitors, and the community.
- Incorporate sustainable and green design features with the goal of achieving LEED™ Platinum certification (or equivalent) for all new buildings on the Project site.
- Protect environmentally sensitive native plant and animal species by dedicating open space areas on the Project site that contain sensitive and native habitat.
- Preserve and enhance the scenic beauty of the Santa Monica Mountains.
- Protect and expand access to open space recreational opportunities and resources, including incorporation of sustainable visitor-serving accommodations, which would be available for visitors of the Santa Monica Mountains National Recreation Area.
- Protect a unique public recreational resource of unincorporated western Los Angeles County consisting of an 18-hole golf course located within the Santa Monica Mountains and in the vicinity of the Santa Monica Mountains National Recreation Area.
- Construct proposed site improvements within a clustered area to minimize off-site view impacts while locating visitor-serving facilities including overnight accommodations in a manner that maximizes guests' views of the remodeled golf course and natural areas of the Santa Monica Mountains and provides separation between bungalow structures as feasible within the development area.
- Provide an all-inclusive retreat destination in the Santa Monica Mountains with visitor-serving components connected by a network of paths for pedestrian or electric cart use, so guests could access those Project features without the need for personal vehicle use.
- Design and construct a state-of-the-art 18-hole golf course using features and standards that will minimize impacts to the existing environment for sustainable coexistence between golf and nature.
- Recognize and avoid natural hazards, and protect paleontological, archaeological and historic resources.
- Protect the unique cultural and social characteristics of the region's rural residential communities.
- Eradicate non-native aquatic species in the man-made ponds onsite.
- Improve water quality in the portion of Trancas Canyon Creek leaving the Project site.

3.7 PROJECT COMPONENTS

The Project would develop all of the proposed components of the Malibu Institute within the previously disturbed areas of the existing golf course facilities located in the southern portion of the Project site as shown in **Figure 3-4**. The structural components of the Malibu Institute and support facilities would be clustered in the southwest portion of the previously developed area as depicted in a detail of the site plans shown in **Figure 3-5**. All of the proposed buildings would be constructed with similar architectural design features, materials and color palette, making use of stone and wood surfaces. In total, the Project proposes a combined 224,760 square feet of structures, which would include the potential reuse of

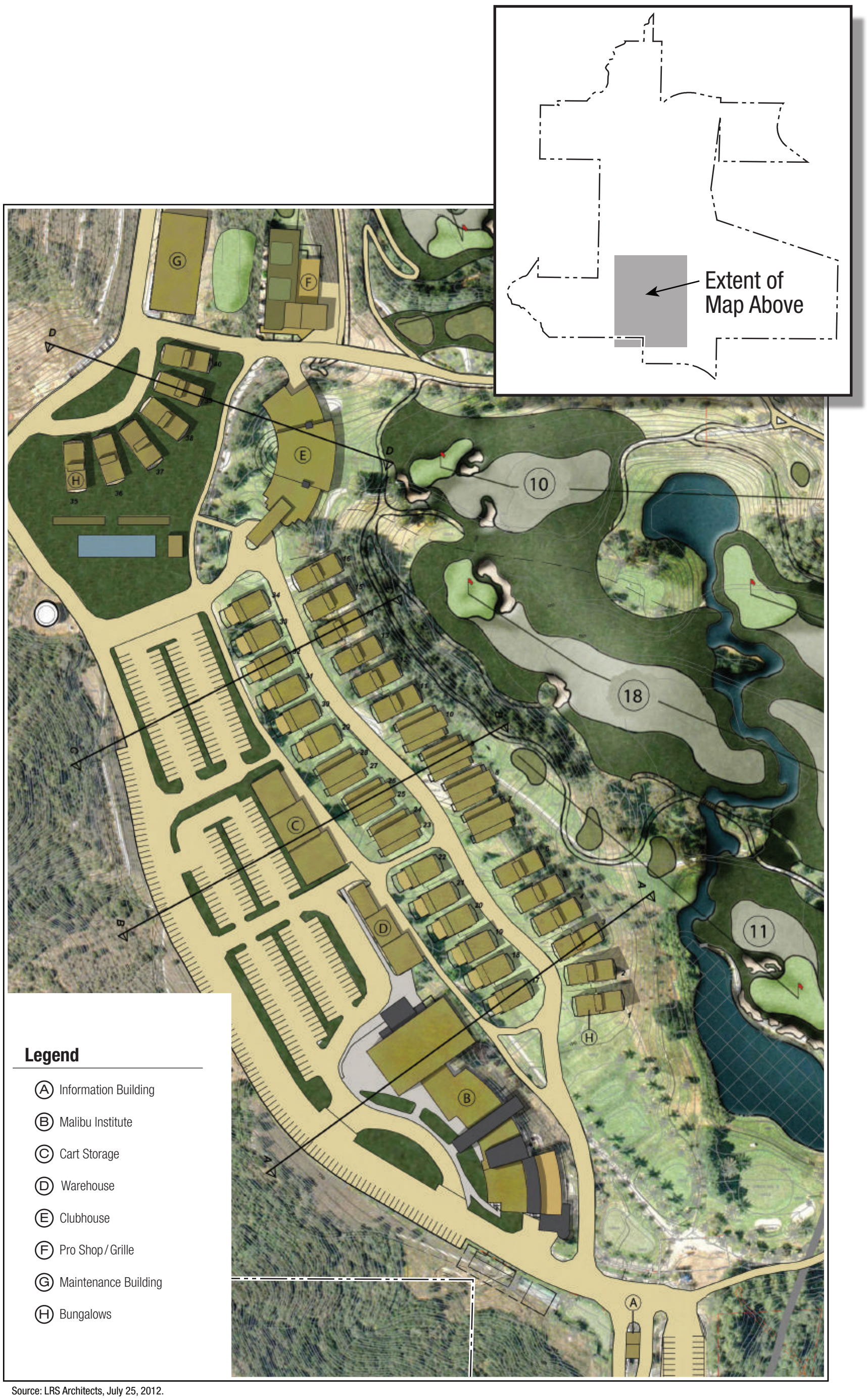


Source: LRS Architects, July 25, 2012.

Site Plan

FEET 0 200 400

FIGURE 3-4



Source: LRS Architects, July 25, 2012.

Site Plan Detail

FEET 0 75 150

FIGURE 3-5

components of the existing 12,475-square foot clubhouse and cart barn as part of the Institute building, and the removal of 11,160 square feet of existing structures, for a total increase of 201,125 square feet of structures on the Project site. Building heights and sizes for specific Project components are discussed in the following subsections.

3.7.1 The Malibu Institute

The Malibu Institute would provide educational and meeting facilities designed using features and standards that minimize impacts to the existing environment. This would include the construction of all proposed buildings with sustainable and green design features incorporated with the goal of achieving LEED™ Platinum certification (or equivalent). The Malibu Institute educational facilities would consist of a 48,164-square foot conference center, featuring a large meeting room, several smaller meeting rooms and classrooms of various sizes, a cafeteria with a kitchen facility, and a lounge. As shown in **Figure 3-6**, *Malibu Institute Elevations*, this building would have a maximum roof height of 32 feet above grade, with two vent risers to a maximum of 50 feet above grade. The educational conference center would be constructed using the existing building footprint of the existing clubhouse and cart barn. Refer to **Table 3-1** for a summary of all proposed components and associated square footage.

Table 3-1
Summary of Proposed Project Components

Components	Proposed Development (sf)
Educational Facilities	
Malibu Institute	48,164
Subtotal	***48,164***
Overnight Visitor Accommodations	
Guest Bungalows (40 Units)	109,140
Subtotal	***109,140***
Support Facilities	
Security/Information Building	120
Golf Pro Shop/Grill	12,104
Cart Barn	9,162
Clubhouse	30,147
Maintenance Building	10,500
Warehouse	4,623
Shower/Changing Building	800
Subtotal	***67,456***
TOTAL	**224,760**

3.7.2 The Malibu Institute Guest Accommodations

The Project would provide overnight accommodations for conference participants and the general public in 40 bungalows. The overnight accommodations and associated amenities would enhance the Project's sustainability by allowing participants of multi-day programs to remain onsite, minimizing vehicle trips by eliminating the need for guests to leave the site for lodging, dining, or recreation. The 40 bungalows that comprise the Project's accommodation facilities would consist of 37 individual buildings totaling

1. INSTITUTE BUILDING - NORTH ELEVATION
SCALE: 1/16" = 1'-0"

2. INSTITUTE BUILDING - SOUTH ELEVATION
SCALE: 1/16" = 1'-0"

3. INSTITUTE BUILDING - EAST ELEVATION
SCALE: 1/16" = 1'-0"

4. INSTITUTE BUILDING - WEST ELEVATION
SCALE: 1/16" = 1'-0"

Source: LRS Architects, Inc., July 20, 2012.

Institute Building Elevations

109,140 square feet. A total of 34 overnight accommodation buildings would consist of a single bungalow unit, and three of the buildings would contain two bungalow units. The 40 bungalow units would each feature four separate bedrooms, for a total of 160 bedrooms provided by the Project, with one bed each. As discussed above, all Project buildings, including the bungalow structures, would incorporate sustainable and green design features with the goal of achieving LEED™ Platinum certification (or equivalent). Typically, full occupancy of the bungalows would be 160 guests, however, the maximum occupancy of the bungalows would be 320 guests (two guests per bedroom). The bungalows would provide short term (typically less than seven days) accommodations for conference participants and the general public. **Figure 3-7** shows elevations for two of the four types of bungalow structures, with overall heights of the majority of these units ranging from 18 feet to 26 feet above grade because the bungalows would be nestled into the surrounding slopes. Three of the bungalow structures would consist of two individual four-bedroom bungalow units, with building heights approximately 30 feet above grade. The bungalows would be clustered within the southern and western portions of the site and would be constructed on an area that is currently used as a fairway for the existing golf course, and on an existing graded area currently designated as a helipad for emergency use by Los Angeles County Fire Department (LACFD). The proposed reconfiguration of the golf course and the relocation of the existing helipad would allow the proposed bungalows to be constructed with minimal grading, and without encroaching into undisturbed areas of the Project site. The helipad would be relocated to an existing cleared pad adjacent to the eastern side of the golf course, which is a site preferred by the LACFD, and would be exclusively for emergency use for public safety and fire-fighting purposes by LACFD.

3.7.3 Recreational Related Facilities

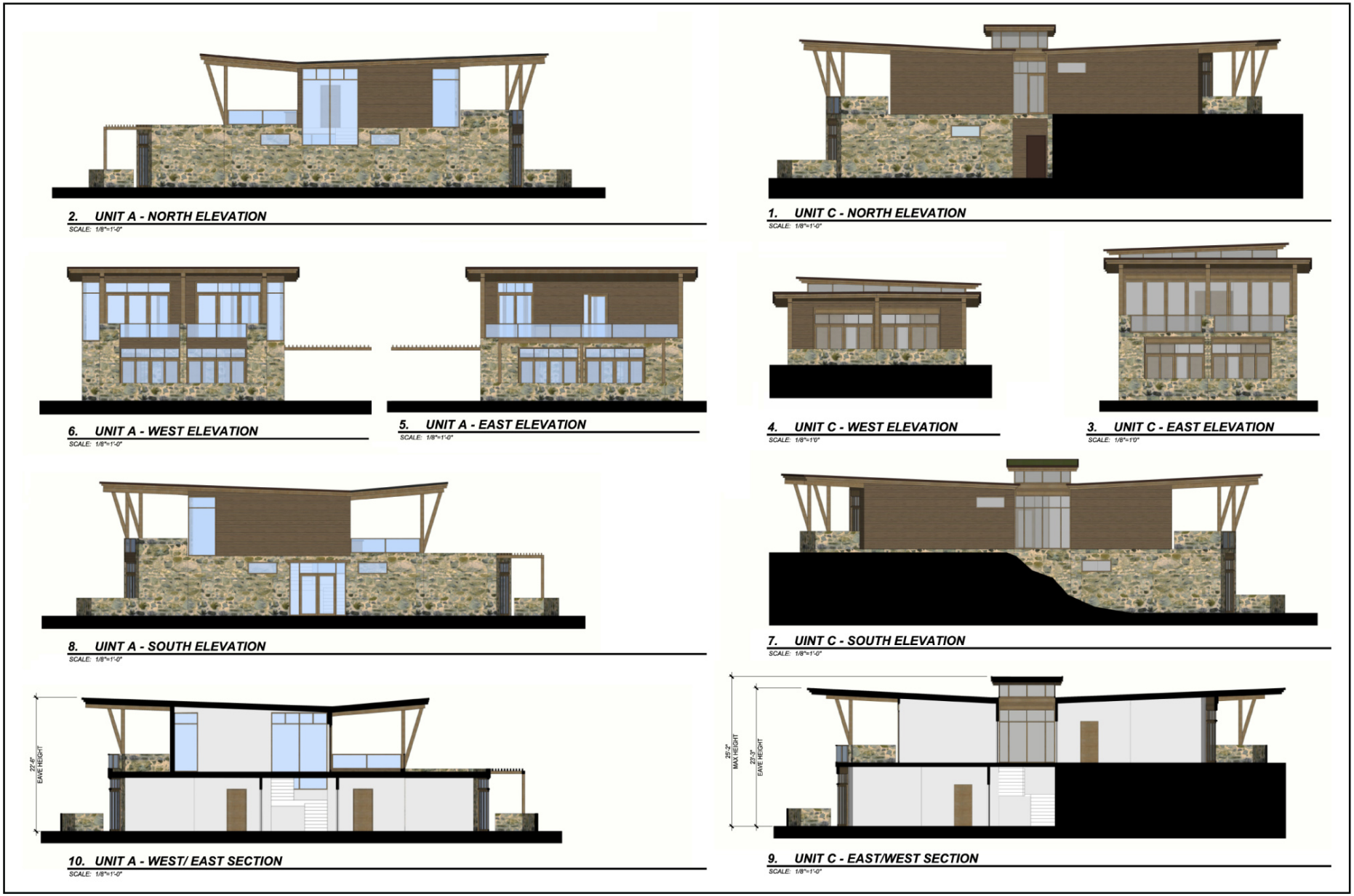
The proposed recreational facilities and associated support facilities would include:

- A golf-oriented clubhouse with a dining facility, lounge, spa and fitness center, and locker rooms (30,147 square feet);
- An outdoor swimming pool with a shower/changing room building (800 square feet);
- A new pro shop/grill with a computerized indoor driving range (12,104 square feet);
- A golf cart storage building (9,162 square feet);
- A warehouse facility for storage of materials and equipment for the Institute and the bungalows (4,623 square feet);
- A maintenance building to serve the golf course (10,500 square feet); and
- A new security/information building to be constructed at the main entrance (120 square feet).

As stated above, all proposed buildings would be located within the existing development footprint and clustered within an approximately 20-acre area along with the other structural components of the Project. As with all proposed construction associated with this Project, these facilities would be built with sustainable and green design features incorporated with the goal of achieving LEED™ Platinum certification (or equivalent). **Figures 3-8 and 3-9** show elevations of the proposed clubhouse and pro-shop/grill facilities, with building heights of approximately 35 feet above grade (not including vent risers on the Clubhouse). The remaining proposed facilities would have building heights ranging from approximately 17 to 19 feet above grade.

3.7.4 Golf Course Redesign

The existing 18-hole public golf course covers approximately 118 acres, largely comprised of turf grass and introduced native and non-native vegetation. The Project would reconfigure the golf course to reduce the overall footprint of the course to approximately 107 acres so the proposed 18 holes would fit within



Source: LRS Architects, Inc., July 26, 2012.

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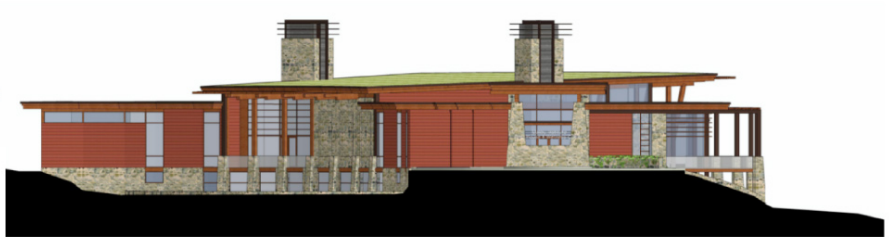
Bungalow Unit A & C Elevations

FIGURE 3-7

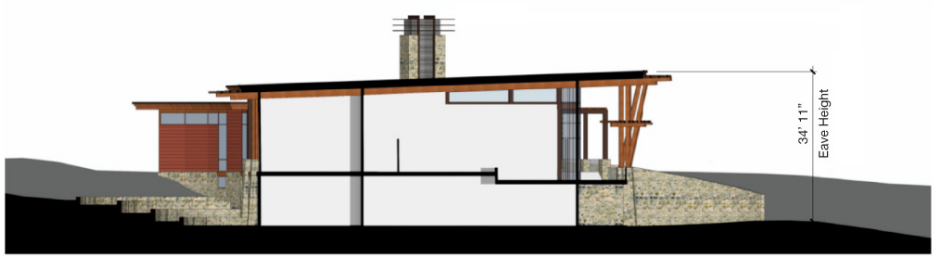
2. CLUB HOUSE ELEVATION - NORTH
SCALE: 1/16" = 1'-0"



1. CLUB HOUSE ELEVATION - SOUTH
SCALE: 1/16" = 1'-0"

3. CLUB HOUSE ELEVATION - WEST
SCALE: 1/16" = 1'-0"

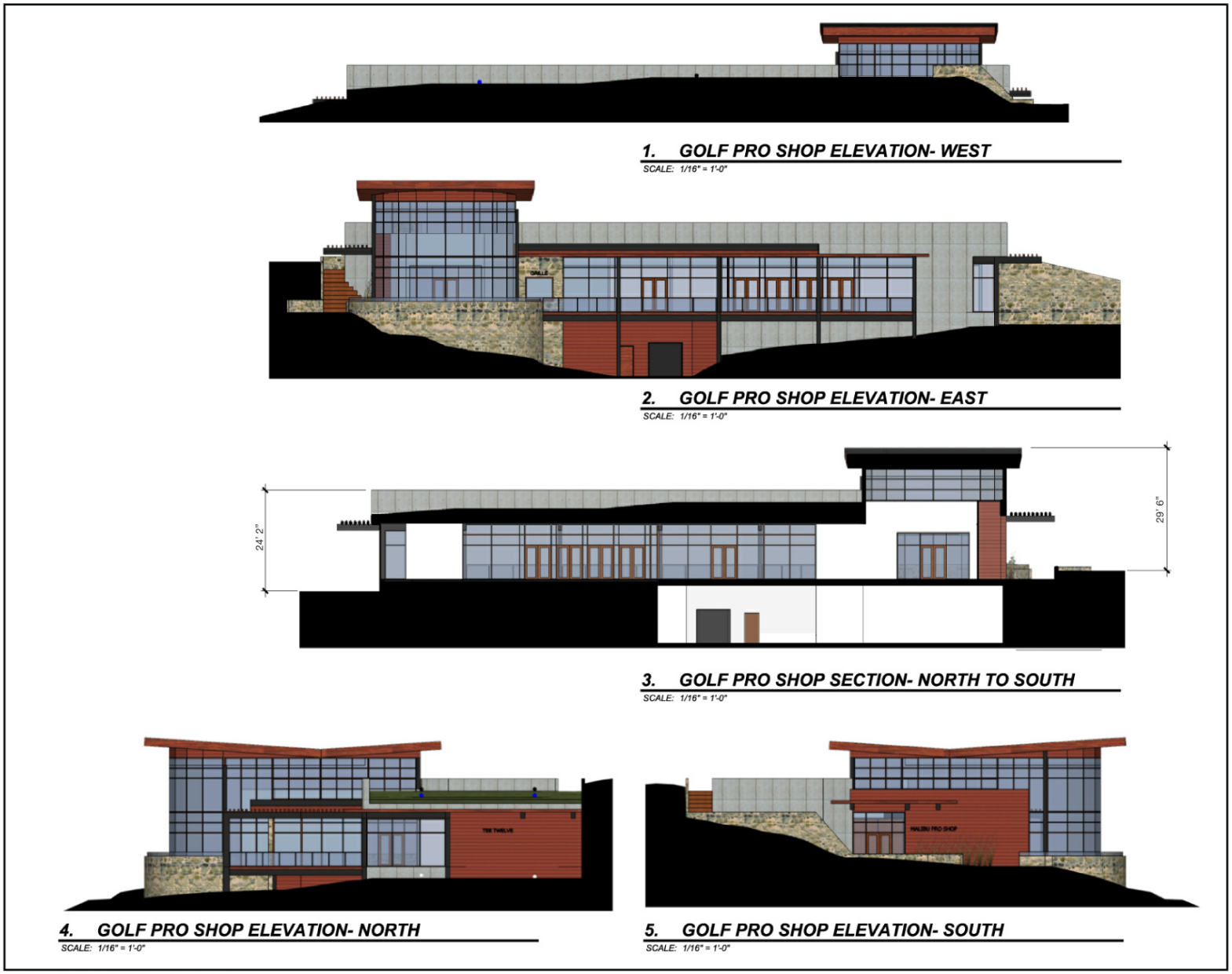
4. CLUB HOUSE ELEVATION - EAST
SCALE: 1/16" = 1'-0"



5. CLUB HOUSE SECTION - WEST/EAST
SCALE: 1/16" = 1'-0"

Source: LRS Architects, Inc., Aug., 2012.

Clubhouse Elevations



Source: LRS Architects, Inc., Aug., 2012.

Golf Pro Shop Elevations

FIGURE 3-9

the footprint of 17 of the existing 18 holes. The reduced acreage of the golf course would allow for other elements of the Project to be constructed within the existing area of disturbance. The remodeled 18-hole golf course would be constructed using state-of-the-art technology, methodology, and materials intended to create a sustainable, low impact golf facility, while still providing an aesthetically pleasing and athletically challenging course.

To provide an environmentally superior golf course design, proposed sustainability features include installation of a "smart" irrigation system, a reduction in the amount of turf area from approximately 85 acres to 62 acres, the use of turf grasses that exhibit drought-resistant properties to reduce irrigation demand, sand-capping the course for optimum growing conditions and filtration, and the removal of non-native landscaping from areas surrounding the golf course playing area, which would be re-vegetated with drought-tolerant native trees and shrubs. The water saving features to be provided with the remodeled golf course would reduce water consumption for irrigation by approximately 32 percent compared to the existing golf course facility.

The grading associated with the remodeled golf course would take place within the previously graded areas of the fairways, tee boxes and greens and would not require the removal of native oak or sycamore trees. By retaining existing native trees, in addition to planting new native oaks and sycamores, and by removing approximately 1,590 trees of non-native species, including palm trees, which were planted during the original construction of the golf course, the proposed landscape pallet would be more consistent with the surrounding open space areas of the Santa Monica Mountains.

The environmentally sensitive design of the remodeled golf course would include sand-capping of the fairways to promote infiltration of stormwater, and the use of Best Management Practices (BMPs) in order to reduce the rate of stormwater runoff, and improve the water quality of runoff that exits the Project site. Additionally, the existing impervious asphalt cart paths would be removed, and a non-continuous cart path would be provided consisting of a pervious material, further enhancing infiltration and improving water quality. The remodeled golf course would continue to be operated as a public golf course, as well as be available to guests of the Malibu Institute.

3.8 PROJECT CHARACTERISTICS

3.8.1 Access, Circulation and Parking Facilities

The Project would include onsite improvements and construction of existing and new roadways and parking areas, as well as walkways and cart paths for guest circulation between various proposed facilities of the Malibu Institute. Currently, the existing golf course facilities are accessed from Encinal Canyon Road, through a main entrance via Clubhouse Drive. This main entrance would continue to serve as the site access for the Project's guests and employees. Externally, the Project would generate approximately 314 Average Daily Trips (ADT) on area roadways, including 11 A.M. peak hour trips and 18 P.M. peak hour trips. These trips would be predominantly distributed along Kanan Road to the north and south from Encinal Canyon Road, with some minor increases associated with Decker Canyon Road. The Project would provide a van shuttle service by reservation for overnight guests arriving or departing from neighboring airports, including Los Angeles International Airport and Burbank Airport, or other regional locations such as universities or schools. As the overnight accommodations would consist of four-bedroom bungalows that would not provide rooms on an individual basis, it is anticipated that groups of guests sharing a one or more bungalow units would arrive together, and would not result in a demand for shuttle use by individuals. By providing a means for groups of guests to access the site without individual vehicles, the van shuttle service would reduce the Project's estimated ADT on area roads as well as reduce the Project's parking demands. For a conservative evaluation, the Project's potential traffic

impacts have been evaluated in Section 5.13, Traffic and Access, without consideration of the proposed shuttle service that would lower the overall ADT on area roads.

Internal circulation within the Project site would provide access to each of the Project components. Stemming from the primary access from Encinal Canyon Road and Clubhouse Drive, Trancas Lakes Drive would provide access to the expanded parking area located in close proximity to all of the proposed facilities, and a network of internal walkways and paths would promote circulation among the various facilities of the Project by foot or electric cart.

Existing parking facilities are provided in two surface parking lots and street parking located to the south and west of the existing clubhouse facilities. To ensure there is ample parking and to comply with County development standards, the Project would retain the southern parking lot and expand the western parking lot to increase the Project site's total parking availability to 387 parking spaces, which would exceed the 377 total parking spaces required by the Los Angeles County Code based on the proposed uses as shown in **Table 3-2**. The Project would repave the existing southern parking facility and provide landscaping to visually screen the surface lot from Encinal Canyon Road. The western surface parking lot would be expanded and existing non-pervious asphalt paving would be removed and replaced with pervious paving materials to facilitate stormwater infiltration and improve water quality, and would feature a sub-drain collection system to detain stormwater runoff, which could then be used for irrigation of the golf course or landscape areas. The expanded western parking area would be visually screened from Encinal Canyon Road near the site entrance by topographical features, as it is under existing conditions. The new parking stalls would be covered by shade structures with photovoltaic panels installed on top of the structures to be provided with the goal of supplying the majority of the Project's electricity needs in combination with additional rooftop mounted panels. See Section 5.14.4 for more discussion of the Project's electricity needs and proposed photovoltaic panels. In addition, existing outdoor overhead lighting at both parking lots, which currently can be seen from off-site, would be replaced with shielded down-lighting, designed to comply with the County's Rural Outdoor Lighting District Ordinance.

Table 3-2
Parking Requirements

Proposed Use	Square Feet (GSF)	Spaces/Square Footage	Required Parking Spaces
Information Building	120 sq. ft.	1/250 sq. ft.	1
Malibu Institute	48,164 sq. ft.	1:3 occupants, based on 193 occupant load	64
Cart Storage	9,162 sq. ft. (2 employees)	1:2 full-time employees[b]	1
Warehouse	4,623 sq. ft.	1/1000 sq. ft	5
Clubhouse	30,147 sq. ft.	1:3 occupants, based on 121 occupant load	40
Golf Course (18 holes) with Pro Shop and Grill/Snack Shop[a]	12,104 sq. ft.	10/each hole	180
Maintenance Building	10,500 sq. ft. (12 employees)	1:2 full-time employees	6
40 Guest Bungalows	160 rooms 109,140 sq. ft.	1 per 2 guestrooms	80
Total Spaces			**377**[c]

[a] A Pro Shop and Grill/Snack Shop are common facilities at golf courses where golfers pay green fees, check in, or purchase incidental golf items or snacks, and would not result in trips by persons who are not there to golf or use other onsite facilities.
[b] The cart storage facility would require no more than two employees to park and retrieve golf carts throughout the day.
[c] A minimum of 6 of the onsite parking spaces will be designated for use by handicapped persons.

Although the Project would satisfy Code-required parking for the proposed land uses, to cluster the buildings in the southern portion of the 650-acre Project site and allow the dedication of over 450 acres of permanent open space, the Project cannot satisfy Code-required parking on each respective lot as shown on the Vesting Tentative Tract Map, and instead would provide centralized parking to be shared between lots. Pursuant to Los Angeles County Zoning Code section 22.56.990, projects proposing a parking arrangement different than the parking requirements of County Code section 22.52 require a parking permit. Therefore, the Applicant is requesting a parking permit to authorize the use of shared parking between lots on the Project site. No tandem or compact spaces are proposed to meet Code-required parking.

3.8.2 Drainage Facilities and Stormwater Treatment

The proposed grading and drainage plans would include stormwater runoff control and treatment for each of the Project components and include bioswales and other features to facilitate infiltration or to capture runoff to be reused for on-site irrigation. A total of 185,000 square feet of non-pervious parking lot and cart path paving would be removed and replaced with pervious materials to increase infiltration and reduce stormwater runoff from the proposed development area. Project-related stormwater leaving the site would be released at a rate that would not exceed existing conditions. Maintenance of storm drain lines and appurtenances on the Project site would be the responsibility of the property owner.

Onsite ponds that exist within the golf course would be retained by the Project, however, during construction, the Project would drain and clean out the basins of the onsite water retention ponds to eradicate non-native aquatic species in the ponds to reduce the occurrence of such species within the watershed. The Project proposes to add pumps to the two larger ponds on the golf course to circulate the water by conveying it upgradient from each pond approximately 700 feet, to be released within meandering channels that would be created to direct the flows back to each respective retention pond. By providing circulation within these water features, the Project would increase dissolved oxygen levels in the water and reduce stagnation to improve water quality and habitat onsite as well as offsite when flows leave the site and enter the Trancas Canyon Creek mainstem. See Section 5.8 for a detailed discussion of hydrology and water quality conditions and impacts.

3.8.3 Grading

Grading for buildout of the Project would occur within previously disturbed areas and would require approximately 120,000 cubic yards of cut and 120,000 cubic yards of fill, which would be balanced on-site. No soil import or export is proposed. No off-site grading is proposed. Project construction activities are expected to take place over a 24-month period. The existing golf facilities will be closed during Project construction. **Table 3-3** provides Project grading quantities for the remodeled golf course and the structural development area components.

Table 3-3
Project Grading Quantities

Component	Cut (cubic yards)	Fill (cubic yards)	Net (cubic yards)
Remodeled Golf Course	54,318	81,116	26,798
Structural Development Area	65,682	38,884	26,798

3.8.4 Water and Wastewater Services

LVMWD currently provides potable water service to the existing Malibu Golf Club, and would continue to provide potable water for the Project. Additional irrigation water for the golf course is supplied by six private wells located onsite, which would continue to be used by the Project to supplement imported water supplies to meet irrigation demands. Irrigation water produced by the onsite wells is stored in an existing 100,000-gallon tank located on the western perimeter of the development area, which would remain and continue to serve this purpose with implementation of the Project. The Malibu Golf Club currently consumes an average of 93,597,240 gallons per year of potable water from LVMWD for domestic use and irrigation. The redesigned golf course would be constructed with water conservation features to reduce irrigation demands by approximately 32 percent, and would be irrigated by a combination of potable water provided by LVMWD, well water from onsite private wells, and reclaimed water from the Project's proposed Onsite Wastewater Recycling System.

Based on a Water System Design Report provided by LVMWD for the Project, existing water supplies and off-site infrastructure could serve the Project for daily needs and for emergency fire flow purposes, while maintaining adequate service for surrounding properties. A new water line would be installed to the relocated helipad where a hydrant would allow filling of helicopter water tanks for wildfire fighting. The new waterline would be placed within existing dirt roads that are primarily within an easement for use by Southern California Edison to access power lines and support towers that cross the eastern portion of the Project site. A 150-foot segment of the existing LVMWD 10-inch pipeline that serves the Project site is currently located beneath a fairway portion of the golf course at a depth of 10 feet or more below ground surface. To facilitate future maintenance or other service activities, under the direction of LVMWD the Project would abandon this deep portion of the pipeline, and provide a replacement pipeline at a standard burial depth of 36 inches below ground surface.

An Onsite Wastewater System (OWS) consisting of buried septic tanks currently serves the existing golf course facilities. The Project proposes to abandon the existing OWS and construct a below-ground Onsite Wastewater Recycling System (OWTS) to provide wastewater treatment of effluent to Title 22 standards for reuse as landscape irrigation. The proposed OWTS would consist of a sewer network gravity draining to the below ground OWTS. The OWTS would use a combination of aeration, ultrafiltration, and disinfection that treats the effluent to a standard suitable for unrestricted, non-potable reuse onsite as landscape and golf course irrigation. The OWTS would be operated as a private treatment facility, serving only the development area on the Project site. The existing guest house along Mulholland Drive, which would be retained as a caretaker's residence, would continue to be served by an underground septic system located near that structure. Two existing remote restroom facilities and associated individual septic tanks that are located in the northern and northeastern areas of the golf course would be removed.

3.8.5 Energy Usage

Central to the development concept for the Project are sustainability features that would minimize the consumption of gasoline and other carbon-based fuels and their associated greenhouse gas emissions. All proposed new buildings on the site would be constructed with the goal of achieving a LEED™ Platinum certification (or equivalent) of energy efficiency. To achieve this level of efficiency and sustainability, the Project would provide features to minimize the use of internal combustion powered vehicles and reliance on electricity generated off-site. Such features would include internal site circulation via electric vehicles or pedestrian walkways and installation of photovoltaic panels above shade structures in the surface parking area and on some Project rooftops. Additional efficiency design features may include green walls and roofs, the use of color and shade structures to reduce the heat island effect, enhanced

environmental control systems, high efficiency geothermal HVAC equipment, and the use of native, drought-tolerant landscaping. Water conservation and design features may include low flow/ultra low-flow fixtures, energy star appliances, and the use of drip irrigation systems. The Project would incorporate a recycling program as part of its operations as well as additional sustainability features from the County's Green Building Ordinance, Low Impact Development Ordinance, and Drought-Tolerant Landscaping Ordinance. The Project would also minimize off-site energy use by mobile sources by providing a shuttle service to area airports for the transport of guests of the Malibu Institute.

3.9 APPLICABLE PLANS/ ENTITLEMENTS REQUESTED

The following is a list of applicable County Plans that guide development in the region occupied by the subject Project site, and entitlements requested for development of the proposed land uses on the Project site:

3.9.1 Plans and Policies

The following is a list of applicable County Plans:

- Los Angeles County General Plan;
- Malibu Local Coastal Program Land Use Plan (1986); and
- Santa Monica Mountains North Area Plan.

3.9.2 Requested Lead Agency Approvals

The following is a list of approvals requested from the Lead Agency:

- Certification of an Environmental Impact Report;
- Vesting Tentative Tract Map No. 71735 to reconfigure lot lines of 29 existing lots to create a total of 7 lots over the 650-acre Project site with 2 lots containing the Project development and 5 lots dedicated as permanent open space, including the caretaker's residence.
- Conditional Use Permit No. 201100122 to authorize the following: (1) development of the Malibu Institute project and operation of a sports-oriented educational retreat facility on a 650-acre Project site containing an 18-hole golf course, educational and meeting facilities with a cafeteria and lounge, overnight visitor-serving accommodations for a maximum of 320 guests, a clubhouse with a restaurant/lounge and fitness/wellness center, an outdoor pool with associated shower/changing room, warehouse, a cart storage building, a pro shop, and a maintenance building; (2) the continued sale of alcoholic beverages for on-site consumption; (3) on-site accessory live entertainment in the clubhouse and conference facility; (4) on-site grading of 120,000 cubic yards of cut and 120,000 cubic yards of fill, which would be balanced on-site with no import or export of fill material; (5) the relocation of a helipad in the R-R zone for emergency use by LACFD; and (6) the continued use of a caretaker's residence in the R-R zone.
- Parking Permit to authorize shared use of 387 parking spaces for guests, visitors, and employees associated with proposed development on 2 lots within the Project boundary;
- Fuel Modification Plan from the Los Angeles County Fire Department; and
- Additional County and other governmental actions as may be determined necessary.

3.9.3 Requested Responsible Agency Approvals

The following is a list of potentially required approvals from Responsible Agencies, including but not limited to:

- Coastal Development Permit from the California Coastal Commission for development of the Project in the California Coastal Zone;
- Streambed Alteration Agreement from the California Department of Fish and Wildlife pursuant to Fish and Game Code Section 1603 to drain and clean out the basins of the onsite water retention ponds in the golf course to eradicate the non-native aquatic species population in the ponds and to improve water quality leaving the Project site;
- U.S. Army Corps of Engineers Nationwide Permit pursuant to Clean Water Act Section 404 to drain and clean out the basins of the onsite water retention ponds in the golf course to eradicate the non-native aquatic species population in the ponds and to improve water quality leaving the Project site;
- Water Quality Certification from the Regional Water Quality Control Board pursuant to Clean Water Act Section 401 to drain and clean out the basins of the onsite water retention ponds in the golf course to eradicate the non-native crayfish population in the ponds and to improve water quality leaving the Project site;
- Waste Discharge Requirements and Waste Reclamation Requirements from the Regional Water Quality Control Board for operation of an onsite wastewater system; and
- Approval of annexation into the Ventura Regional Sanitation District by the Ventura County Local Agency Formation Commission and/or the Los Angeles County Local Agency Formation Commission.

4.0 ENVIRONMENTAL SETTING

4.1 INTRODUCTION

This section provides a brief overview of the Project site's regional and local setting. Additional descriptions of the environmental setting as it relates to each of the environmental issue areas are included in the existing conditions discussions contained within Sections 5.1 through 5.14. Also provided below is a list of related projects, which is used as the basis for the discussion of cumulative impacts in Chapter 5, *Environmental Impact Analysis*.

4.2 REGIONAL SETTING

The Project site is located within the Santa Monica Mountains in an unincorporated area of Malibu in the southwestern portion of Los Angeles County. See Section 3.1 for a regional location map (Figure 3-1). The Pacific Ocean is located approximately 3.5 miles south of the Project site. The nearest municipalities to the Project site are the City of Malibu, located approximately three miles to the south, and the Cities of Westlake Village and Agoura Hills, located approximately one-third mile north, and four miles to the northeast, respectively.

4.3 LOCAL SETTING

The Project site is located at 901 Encinal Canyon Road and consists of 650 acres predominantly located within Trancas Canyon. The Project site was originally developed in the 1970s as the Malibu Golf Club. This approximately 200-acre golf club includes an 18-hole golf course, two surface parking lots, accessory structures, including a clubhouse, a restaurant, bar, and landscaping. The existing development is concentrated in a bowl created by the steep surrounding canyons and includes the lower elevation portions of some of the surrounding canyons and ravines focused in the central and south/central portions of the Project site. Primary access is provided via Encinal Canyon Road, a two-lane mountain road that traverses the Santa Monica Mountains between Mulholland Highway and the Pacific Ocean. Decker Canyon Road and Mulholland Highway provide alternative access to the northern portions of the Project site. Undeveloped portions of the Project site extend north, east, and west of the golf course into the steep and rugged terrain of Trancas Canyon. See Section 3.1 for an aerial photo of the Project site (Figure 3-3) and a description of existing development.

The rural setting surrounding the Project site includes public and private open space lands (with some traversed by recreational trails) and large-lot single-family homes with some homes including equestrian facilities. Fire Camp 13, operated by the County Fire Department in conjunction with California Department of Corrections and Rehabilitation is located approximately one-half mile southwest of the Project site. The County Probation Department operates two juvenile detention camps (Camp Miller and Camp Kilpatrick) located approximately one mile east of the Project site.[1]

A portion of the Santa Monica Mountains National Recreation Area (i.e, Zuma and Trancas Canyons), managed by the National Park Service, is located adjacent to Encinal Canyon Road along the southern boundary of the Project site. The County Department of Parks and Recreation's *Riding and Hiking Trails Master Plan* and the Malibu Local Coastal Program (LCP) reference public trail routes that pass in close proximity to the Project site. The primary adopted east-west trail system through the Santa Monica Mountains is the Backbone Trail System as shown in Figure 5.12-1. Another nearby route is the Zuma Ridge fire road located south of the Project site. The *Santa Monica Mountains National Recreation Area*

[1] http://probation.lacounty.gov/camps.asp accessed on September 23, 2012.

Interagency Trail Management Plan Map (September 2005), although not officially adopted, contains an existing conditions map that depicts a gap in the official Backbone Trail where it crosses private property just south of Encinal Canyon Road in the vicinity of the Project site. A route to connect the trail across the intervening private property is depicted that could traverse the Project site, although the right-of-way status is noted as "Unauthorized" and "Undesignated."

A portion of Los Angeles County Significant Ecological Area (SEA) Buffer 3A extends into the northeastern portion of the Project site; however, the SEA portion of the site is separated from the proposed development footprint by intervening rugged and nearly impassible terrain.

4.4 LOCAL SERVICES AND UTILITIES

The Los Angeles County Fire Department (LACFD) provides fire protection and paramedic services to the Project site. Fire Station No. 72 is located at 1832 Decker Canyon Road approximately two miles southwest of the Project site and is the closest (first due) responding station. The Los Angeles County Sheriff's Department (LACSD) provides law enforcement services to the site.

The Project site does not connect to a County-maintained flood control system. As noted above, most of the Project site is located within the Trancas Canyon watershed at the headwaters of Trancas Canyon Creek. Ephemeral streams, ravines and gullies flow into the Project site from the surrounding canyons. During construction of the golf course in the 1970s, two segments of the original intermittent Trancas Canyon Creek "blueline stream" were straightened and buried in culverted channels that pass through the golf course leading to two man-made ponds used as water features within the existing golf course. Near the southern entry point to the golf course (Clubhouse Drive), all excess water flows discharged from the headwaters area and the developed golf course converge into the main channel of Trancas Canyon Creek, after which the creek passes under Encinal Canyon Road through a 66-inch culvert to resume a natural unaltered streamcourse. Many, if not most, of the ephemeral streams around the existing golf course are intercepted by detention and/or desilting basins located along the developed edge of the existing golf course. Most of these basins can manage a two to three-year storm event before releasing flows onto the golf course where they sheet flow into the primary golf course water feature. A 60-inch storm drain carries up to 25-year storm intensity flows to a point of discharge at the southern edge of the site. Storm flows of 25-year intensity and above pond within the golf course where they are detained until they outflow through the 66-inch culvert under Encinal Canyon Road, where Trancas Canyon Creek begins as a definable watercourse to the Trancas Lagoon and the Pacific Ocean.

The existing golf course provides its own wastewater treatment by the use of several onsite septic tanks, located near each building.

The Las Virgenes Municipal Water District provides potable water with private on-site wells augmenting water available for irrigation for the existing golf course.

A private contractor handles disposal of solid waste generated by the Malibu Golf Club. Recyclable materials are separated at a mixed materials processing plant to recycle or dispose of solid waste. Non-recyclable materials are transported to the Calabasas, Sunshine Canyon or Chiquita Canyon landfills for disposal.

4.5 RELATED PROJECTS

CEQA Guidelines Section 15130 requires a discussion of cumulative impacts. Cumulative impacts are defined as two or more individual effects which, when considered together, are considerable or which

compound or increase other environmental impacts (CEQA Guidelines Section 15355). In the context of this DEIR, cumulative impacts are those impacts resulting from individual effects of the Project in combination with effects of reasonably foreseeable growth. According to CEQA Guidelines Section 15130(b)(1), reasonably foreseeable growth may be based on either of the following:

- A list of past, present, and probable future projects producing related or cumulative impacts including, if necessary, those projects outside the control of the agency; or
- A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental planning document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

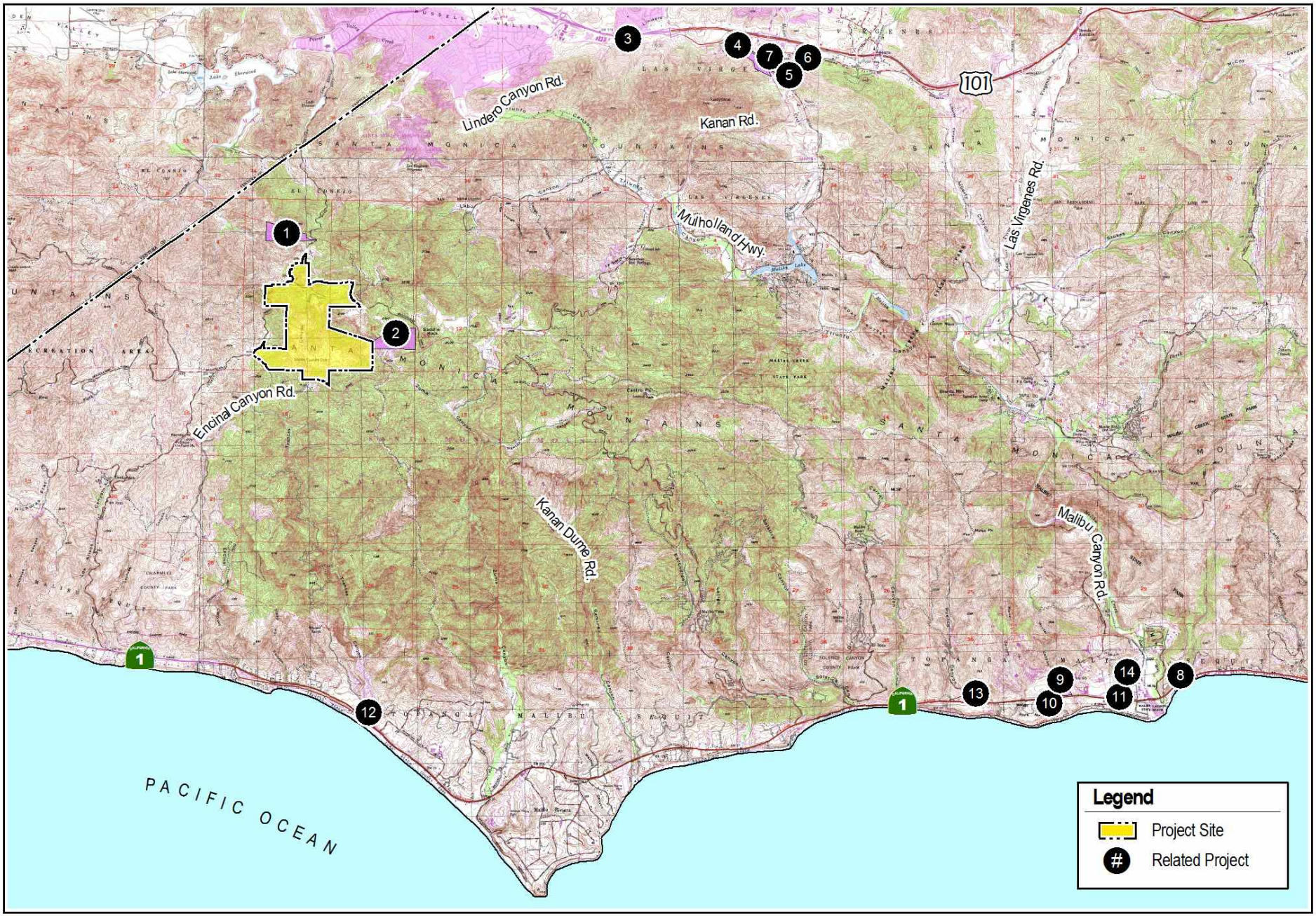
This DEIR uses a list of past, present, and probable future projects often called "related projects." Related projects most commonly include projects in close proximity to the Project site, but may include a regional setting (e.g., Air Quality, Greenhouse Gas Emissions) or be limited to the site itself (e.g., Geotechnical). The related projects used to frame much of the cumulative impact analysis for this DEIR are presented in **Table 4-1** and **Figure 4-1.** The related projects list was developed for the traffic impact assessment prepared by Associated Transportation Engineers (ATE) for the Project in consultation with the County Department of Regional Planning, the City of Malibu Planning Department, and the City of Agoura Hills Planning Department. A total of twelve pending and two approved projects have been identified.

A topic-specific cumulative impact analysis is provided in Sections 5.1 through 5.14. Each cumulative impact section provides a description of its relevant cumulative setting. If the cumulative project list is not used, a description of the topic-specific cumulative setting and an explanation for its use is provided.

Table 4-1
Cumulative Projects List

Project No.	Assessor's Parcel Number (APN)	Street Address	City/County	Pending/ Approved	Description
1	4472-002-027	557 Westlake Blvd	County of Los Angeles	Pending	Subdivision of one parcel into 2 lots, with one home on each lot.
2	4471-003-900	427 S. Encinal Canyon Road	County of Los Angeles	Pending	Remove 44,878 square feet (sf) of buildings, to be replaced with 47,000 sf of new buildings for juvenile detention facility. Reduce number of detainee capacity from 125 to 120.
3	2061-001-031	So. of Agoura Rd. near western City limits (Buckley)	City of Agoura Hills	Pending	14,075 sf Commercial/Medical Building.
4	2061-033-016	4995 Kanan Rd. (Martin Group)	City of Agoura Hills	Pending	Mixed-use development. 167,000 sf commercial, 92,000 sf retail, and 107 multi-family units (MFU).
5	2061-029-008/16; 2061-030-001/13	SEC Agoura Rd. and Cornell Rd. (Cornerstone)	City of Agoura Hills	Pending	Mixed Use Development. 26,000 sf retail, 18,000 sf office, and 35 MFU.
6	2061-029-003 and 2061-029-004	28870 Agoura Rd.	City of Agoura Hills	Pending	17,249 sf. office space.
7	2061-031-020	SEC of Agoura and Kanan Rd. (E.F. Moore & Co.)	City of Agoura Hills	Pending	Mixed Use Development. 48,500 sf retail/office, and 95 MFU.
8	4452-019-005	22959 PCH	City of Malibu	Pending	2,360 sf office; 4,517 sf retail.
9	4458-028-015, 4458-030-007, 4458-028-019	4000 Malibu Canyon Rd. (Rancho Malibu Hotel)	City of Malibu	Pending	New 146-room hotel.
10	4458-018-002	24108 PCH (Crummer Site Subdivision)	City of Malibu	Pending	5 new single family residences.

Project No.	Assessor's Parcel Number (APN)	Street Address	City/County	Pending/ Approved	Description
11	4458-020-902	23401 Civic Center Way (Whole Foods)	City of Malibu	Pending	24,500 sf grocery; 13,876 sf retail.
12	4469-045-001	30745 PCH (Hows Market/Trancas)	City of Malibu	Approved	Remodel and expansion of existing retail. 53,423 sf total.
13	4458-032-009	24903 Pacific Coast Highway	City of Malibu	Approved	9,685 sf office space
14	4458-022-023 & 024	23465 Civic Center Way (La Paz)	City of Malibu	Approved	Commercial development. 53,825 sf office, and 77,110 retail.



Source: U.S.G.S. 7.5 Min. Topographic Quadrangle Map.

THE MALIBU INSTITUTE PROJECT EIR

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Related Projects

0 4,000 8,000 Feet

FIGURE 4-1

5.1 AESTHETICS AND VISUAL RESOURCES

This section describes the existing views of the Project site, and evaluates the Project's potential impacts to the visual character of the surrounding area as seen from public viewing locations.

5.1.1 Existing Conditions

The Project site is located in a rural area of the Santa Monica Mountains and surrounded primarily by undeveloped private and public land with some large lot rural residential development along the northern and western boundaries of the Project site and institutional facilities, including a juvenile detention camp, to the east of the Project site. As discussed in Section 3.0, Project Description, existing development on the Project site primarily consists of an 18-hole golf course with supporting facilities, surrounded by undeveloped areas of native vegetation. A small caretaker's residence and a large, abandoned hunting lodge off Mulholland Highway occupy a bluff overlooking the golf course. The existing conditions of the Project site presented in this section include the existing visual resources in the vicinity of the Project, and the existing public views including the visual character of the Project site as observed from the available public viewing areas as identified below.

Visual Resources

For purposes of this analysis, visual resources are those identified in the Malibu Local Coastal Program Land Use Plan (LUP) (certified by the California Coastal Commission in 1986). The LUP provides a map of visual resources with designations that include Scenic Elements, Scenic Highways, and Significant Ridgelines. An updated version of the Visual Resources map provided in the LUP appears in the proposed Santa Monica Mountains Local Coastal Program Coastal Zone Plan (SMMLCP) (approved by the Los Angeles County Department of Regional Planning September 2007 as General Plan Amendment #200600008)[1] that more clearly shows the locations of those visual resources. As the California Coastal Commission has not certified the proposed SMMLCP, this evaluation will focus on the adopted policies of the 1986 LUP, however, a portion of the SMMLCP visual resources map is reproduced herein as **Figure 5.1-1**, to depict the visual resources evaluated in this document. Based on the LUP, the following visual resources are identified at or near the Project site.

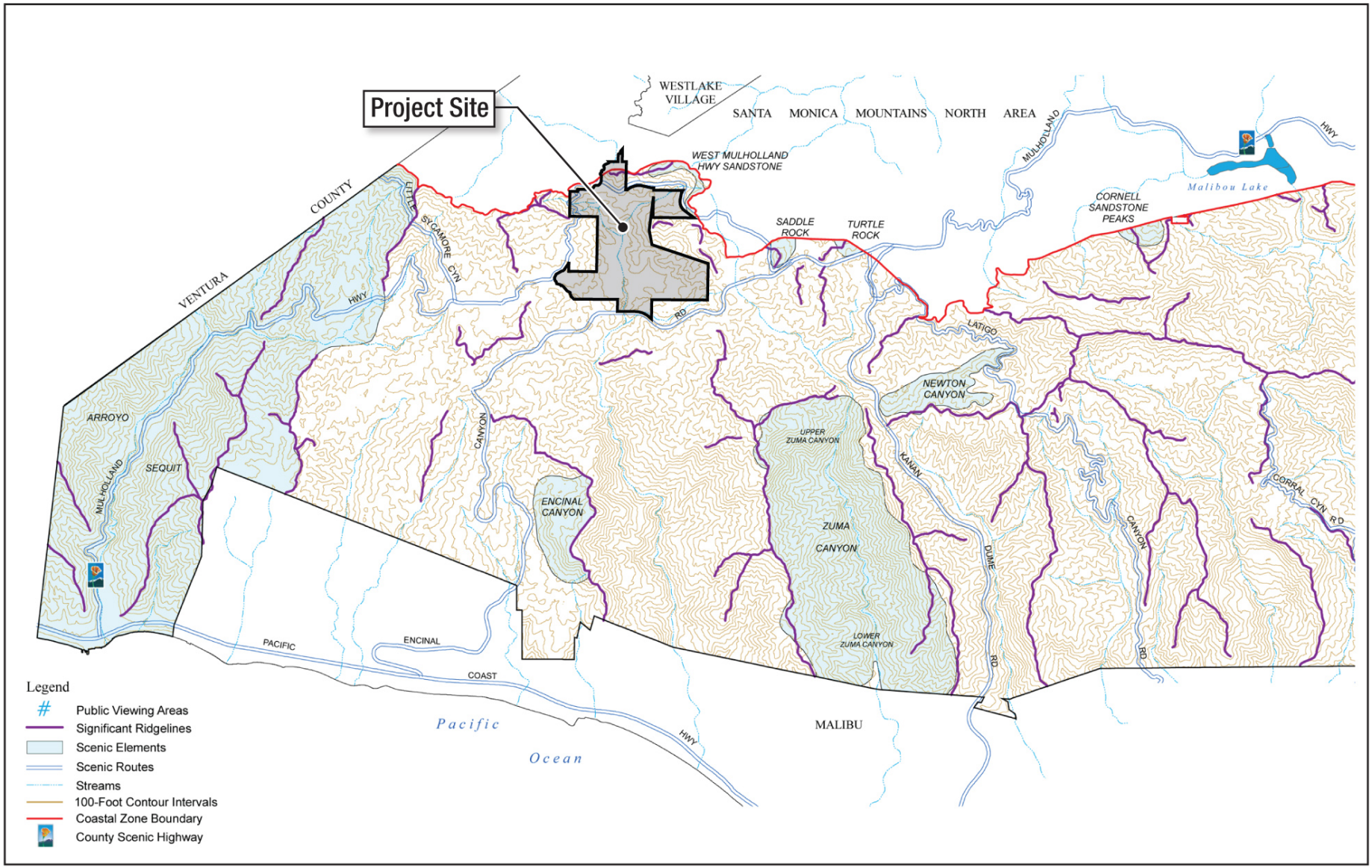
Scenic Elements

Scenic elements are characterized by rare or unique geologic formations, such as large rock outcroppings, sheer canyon walls, coastline viewsheds, undisturbed hillsides, or riparian or woodland habitat with intact native plant communities. As shown in Figure 5.1-1, the West Mulholland Highway Sandstone, a designated scenic element depicted in the Visual Resources map of the LUP and described in the SMMLCP, lies immediately north of the Project site and consists of a sequence of sandstone outcrops along the crest of the Santa Monica Mountains. These outcrops are among the highest elevations in the vicinity and they generally tower above the surrounding terrain, including most of the Project site, and form a local scenic viewshed boundary.

Significant Ridgelines

Ridgelines are defined as the line formed by the meeting of the tops of sloping surfaces of land. In general, Significant Ridgelines are highly visible and dominate the landscape. As shown in Figure 5.1-1,

[1] The proposed SMMLCP has not been certified by the California Coastal Commission, however, its discussion of visual resources is very similar to that portion of the 1986 LUP, and it is referenced here primarily due to its inclusion of a visual resources map that is consistent with the LUP map and more clearly and precisely demonstrates the locations of designated visual resources in the vicinity of the Project.



Source: Santa Monica Mountains Local Coastal Program, Map 3 Scenic Resources, Dec. 26,2006.

Visual Resources

FEET 0 3,250 6,500

FIGURE 5.1-1

there are several designated significant ridgelines located in the vicinity of the Project site, many of which provide a viewshed boundary, preventing views of the Project site from areas beyond these ridgelines.

Scenic Highways/Routes

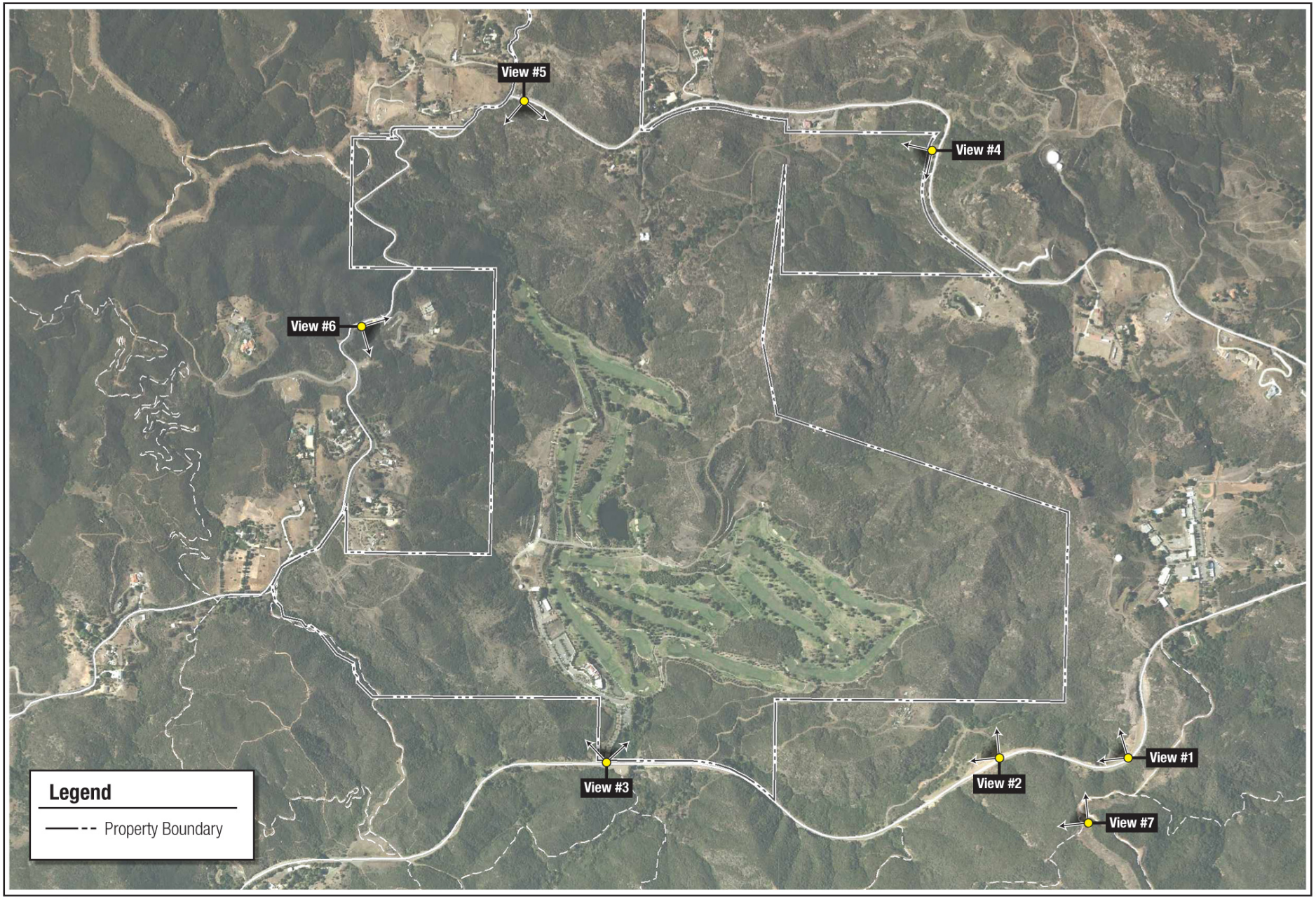
Scenic routes are selected for the unique aesthetic qualities that can be experienced as one drives along them. Scenic routes identified in the LUP are those that pass along wide swaths of undisturbed habitat, offer views of dramatic geologic or coastal formations, pass by rolling hills studded with oaks, and wind past areas rich with riparian vegetation. Mulholland Highway is a State-designated County Scenic Highway that is located in close proximity to the northern and western Project site boundaries, and traverses the northern portion of the Project site. The SMMLCP, although not adopted by the Coastal Commission, also designates Encinal Canyon Road as a scenic route, which provides access to the developed southern portion of the Project site. Both of these roadways offer intermittent views of the existing Malibu Golf Club for those in passing vehicles.

In addition to fronting along two designated scenic roadways, there are designated off-road public hiking, biking, and equestrian trails in close proximity to the site that also offer public views of the Project site. The proposed Trail Management Plan of the Santa Monica Mountains National Recreation Area in its depiction of existing trail conditions near the Project site shows segments of the Backbone Trail as passing by the Project site in elevated terrain on public lands south of Encinal Canyon Road. In the years since the Trail Management Plan was proposed, a new segment of the Backbone Trail has been completed that extends the trail to the northwest along an alignment located to the west of the Project site. Other existing off-road trails that offer public views of the Project site include the Zuma Ridge Motorway, which extends from Encinal Canyon Road at a point approximately one mile east of the Project site entrance and traverses a high ridgeline in a southerly direction.

Existing Public Views from Scenic Highways or Public Trails

The topographic situation of scenic highways and trail routes, which are located at elevations considerably higher than those of the valley floor locations of the Project's development area, would suggest the existing golf course and associated facilities on the property would be readily visible from a number of directions. However, while the Project site can be viewed from the designated scenic roadways of Mulholland Highway and Encinal Canyon Road, as well as from the Backbone Trail, the low angles of site visibility that result from the relatively long distances from public viewpoints, the view-blocking effects of the rugged mountainous terrain on-site and of that surrounding the site, and the minimal number of highway turnouts and overlooking trail locations in the area combine to effectively limit the ease of visibility of the Project site. As such, it is predominantly the undeveloped peaks and ridges of the Project site that are seen from public viewpoints, and those features tend to conceal the lower-lying, currently developed portions of the site that would be affected by the Project.

The surrounding roadways and trails were evaluated in the field to determine where the public might have views of the developed portion of the Project site from legally and safely accessible viewpoints. A total of seven viewpoints were identified that met these criteria as representative of public views of the developed portion of the Project site, and a map of those viewpoint locations is presented in **Figure 5.1-2**. The viewpoints were chosen based on legal accessibility to the general public by roadway, and the availability of adequate space to safely park a vehicle out of traffic lanes, so an unhurried view of the Project site could be experienced. Additionally, one viewpoint was identified along a publicly accessible segment of the Backbone Trail. The site also may be intermittently visible from passing vehicles from roadway locations that are not evaluated here due to the fleeting nature of these views, as they are generally along roadway segments that lack adequate shoulder area for parking. Due to frequent sharp curves along roadways in the Project vicinity, particularly Mulholland Highway including a segment that



Source: GoogleEarth Pro, 2011.

THE MALIBU INSTITUTE PROJECT EIR

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Viewpoint Photo Location Map

FEET 0 600 1,200

FIGURE 5.1-2

is coincident with SR-23, traveling speeds are typically slower than on many State highways, however, views of the site from moving vehicles are generally brief as vehicles negotiate turns which direct views in various directions rather than providing a lengthy view of a particular panorama. In the following discussion of scenic views, viewpoint number designations refer to those depicted in Figure 5.1-2.

Public Views from Encinal Canyon Road

A designated public roadside scenic vista point (Viewpoint 1) is situated on Encinal Canyon Road shortly after it crosses a prominent local viewshed boundary and descends westerly into Trancas Canyon (as per the Malibu LCP). The photographic panorama depicted in **Figure 5.1-3** illustrates the westerly view available from a roadside turnout at Viewpoint 1 (elevation approximately 1,675 feet) that permits a distant view overlooking portions of the existing golf course area from a distance of approximately 0.4 to 1.4 miles. Intervening foreground terrain and mountain slopes that flank the golf course in Trancas Canyon combine to conceal much of the golf course as well as the structural development area of the Project site from view. As seen in Figure 5.1-3, due to the distance of the Project site from Viewpoint 1, and the resulting low viewing angle of the development area, many of the existing structures and fairway surfaces are visually screened by landscaping features, or are hidden from view by the surrounding terrain. As Encinal Canyon Road descends into Trancas Canyon, views of the existing golf course fairway surface areas of the Project site are increasingly screened by intervening ridgelines and roadside vegetation. A second public viewpoint (Viewpoint 2) documented for this analysis, located at an elevation of approximately 1,550 feet, allows westerly views of the Project site from Encinal Canyon Road at a lower elevation than Viewpoint 1. The existing conditions photograph taken from Viewpoint 2, shown in Figure 5.1-3, reveals some of the existing golf course playing surfaces as well as at least one of the existing onsite structures. However, mature trees and intervening terrain features and vegetation conceal or screen much of the development area.

At the entrance to the Project site, the intersection of Encinal Canyon Road and Clubhouse Drive (Viewpoint 3), raised terrain features and vegetation along the northern side of the roadway obscure all views of development on the Project site with the exception of the entry gate and sign and landscaping trees. Some elevated, undeveloped terrain areas of the Project site are intermittently visible from this segment of Encinal Canyon Road through gaps in the roadside landscaping and natural vegetation. The photographic view of the existing conditions as seen from Viewpoint 3, which is depicted in **Figure 5.1-4** illustrates the lack of visibility of the existing golf course area and interior structures from Encinal Canyon Road at the Clubhouse Drive entry road to the golf course.

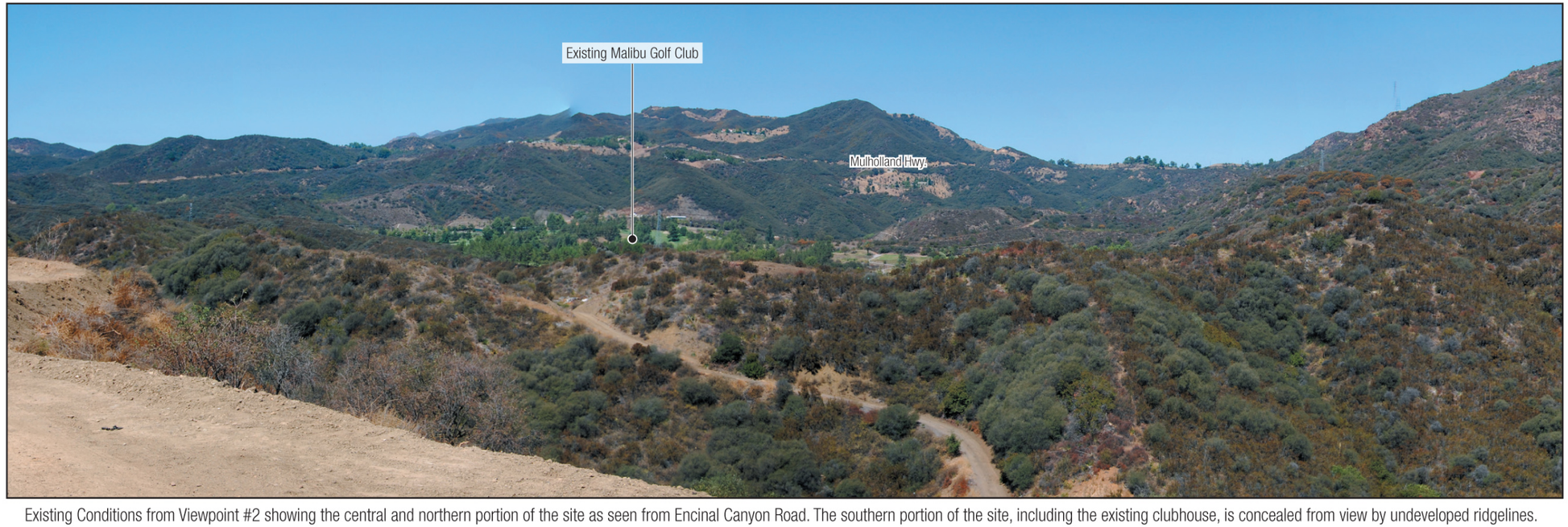
Public Views from Mulholland Highway

East of Westlake Boulevard, Mulholland Highway traverses the northern portion of the Trancas Canyon viewshed along steep mountainside contours in close proximity to, and across a portion of, the higher elevation areas of the Project site.

A public viewpoint of the Project site (Viewpoint 4) is located at a roadway turnout on Mulholland Highway approximately 1.5 miles west of the intersection with Encinal Canyon Road (approximate elevation 1,915 feet). Although Viewpoint 4 overlooks a portion of the Project site, as seen in Figure 5.1-4, due to the steepness of the terrain, and the location of the developed golf course along the canyon bottoms at a distance of approximately 0.6 to 1.1 miles, only undeveloped portions of the Project site are visible from this location and the existing golf course and associated structures are completely concealed.

At the intersection of Mulholland Highway and Westlake Boulevard, Viewpoint 5, a roadside shoulder turnout overlooks the developed area of the Project site to the south from an elevation of approximately 1,815 feet and a distance of 0.4 to 1.1 miles. As seen in the photographic panorama of southerly views

Existing Conditions from Viewpoint #1 showing the Project Site as seen from Encinal Canyon Road.



Existing Conditions from Viewpoint #2 showing the central and northern portion of the site as seen from Encinal Canyon Road. The southern portion of the site, including the existing clubhouse, is concealed from view by undeveloped ridgelines.

Viewpoints #1 and #2 – Existing Conditions Panorama and Westerly Views from Encinal Canyon Road

Existing Conditions from Viewpoint #3, showing the entrance to the project site.

Existing Conditions from Viewpoint #4, showing that the development portion of the project site cannot be viewed from this location.

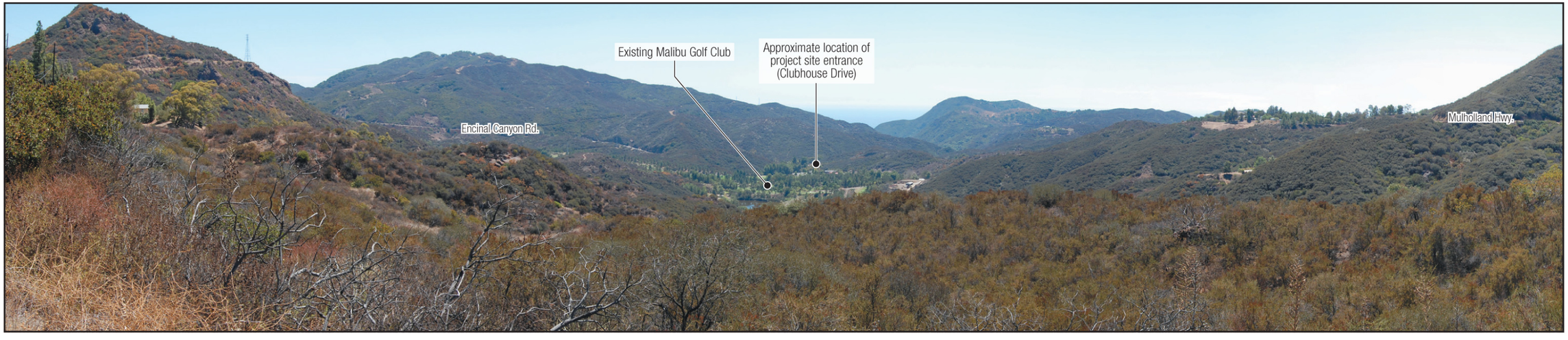
Viewpoints #3 and #4 – Existing Conditions Photos

taken from Viewpoint 5 (**Figure 5.1-5**), some portions of the existing golf course are visible as well as some associated structures along the western edge of the golf course, although at this distance, and with substantial screening by landscape trees, the scale of the structures would be considered subordinate to the surrounding undeveloped areas of the viewshed. The small pond visible in the middle of the photograph was created as part of the existing golf course development, and lies 3,700 feet from Mulholland Highway at an elevation approximately 500 feet below the roadway (along the bottom of Trancas Canyon). The view from Viewpoint 5 depicted in Figure 5.1-5 illustrates a typical southerly view from along this segment of Mulholland Highway, in which portions of the existing golf course and development area may be intermittently visible through gaps in the roadside vegetation as the roadway traverses the northern portion of the Project site. From this distant viewpoint, intervening terrain features conceal many of the developed golf course areas, and vegetation of the site's undeveloped areas as well as existing landscaping features provide visual screening of much of the existing structures and fairway surfaces.

West of Westlake Boulevard, Mulholland Highway gradually descends to the west of the Project site as a narrow two-lane roadway, traversing steep slopes along the Project site's northwestern boundary while negotiating a sequence of tight turns. Although relatively wide-ranging views of the Trancas Canyon floor area are intermittently visible from Mulholland Highway west of Westlake Boulevard, roadway shoulder areas or turnout areas that would allow for motorists to pull off the road to experience an unhurried view of the Project site are limited. A series of turnout areas approximately 0.7 miles south of the intersection of Mulholland Highway and Westlake Boulevard provide public viewpoints over the Project site to the east. The photographic panorama showing the scenic conditions from Viewpoint 6 as depicted in Figure 5.1-5 illustrates an easterly view from Mulholland Highway that overlooks the interior valleys of the Project site from an elevation of approximately 1,780 feet. While Viewpoint 6 does provide views of the higher-elevated westerly-facing slopes and floors of the eastern tributary canyons including some portions of the existing golf course fairways that are not readily visible from other viewpoints evaluated herein, foreground terrain near the roadway rises to block views of much of the golf course in the main Trancas Canyon area. Figure 5.1-5 also illustrates that in views from Viewpoint 6, a prominent, intervening ridgeline conceals the central and southern portion of the golf course development area including all of the existing structural facilities and the areas that would be developed with structures under the Project.

Public Views from Trails

Public trails that comprise segments of the Backbone Trail generally traverse elevated terrain in east and west directions to the south of Encinal Canyon Road, and to the northwest across public lands to the west of the Project site. Some portions of these trails offer intermittent views of the existing golf course on the Project site, although the majority of the Backbone Trail path is located below ridgelines that prevent views of the Project site from the trail. The northwesterly view from Viewpoint 7 depicted in **Figure 5.1-6** illustrates the extent of visibility of the Project site from an elevated segment of the Backbone Trail located south of Encinal Canyon Road. The higher trail elevation from this portion of the Backbone Trail allows some overviews of the southern portions of the Project site's existing developed area including golf course fairways and the northernmost structure of the existing development area. However, dense trailside vegetation exists along most of this trail segment, as shown in representative photos (Figure 5.1-6), which prevents trail users from viewing the Project site from most of the Backbone Trail. The visibility of the Project site from a public trail area could vary with the mode of transport of the trail user (i.e. an equestrian trail user could potentially experience less visual screening by trailside vegetation than a hiker), although intervening ridgelines would block views of the Project site for all trail users from the majority of the Backbone Trail. A short, unofficial connector trail (Camp 13 Trail) exists to the south of the Project site. The Camp 13 Trail begins at a trailhead located directly across Encinal Canyon Road from the Project entrance (Viewpoint 3, Figure 5.1-4) and provides an access route (approximately 0.7



Existing Conditions from Viewpoint #5 at the intersection of Mulholland Highway and Westlake Boulevard showing distant views of a maintenance shed and the clubhouse building within the developed golf course.

Existing Conditions from Viewpoint #6, showing the northern and eastern portions of the developed golf course. The southern portions of the site where all proposed structures would be located is concealed by topographical features in this view.

Viewpoints #5 and #6 – Existing Conditions Panorama Views from Mulholland Highway

FIGURE 5.1-5

Existing Conditions from Viewpoint #7 showing the developed golf course as seen from the Backbone Trail. The northernmost maintenance shed is visible in this view.

Representative photograph of existing conditions along the Backbone Trail showing dense vegetation on both sides of the trail.

Representative photograph of existing conditions along the Backbone Trail showing dense vegetation, blocking views of the project site, which is located in the valley floor. A small portion of the existing golf course is visible to the right side in this view.

Viewpoint #7 – Existing Conditions Panorama of Backbone Trail Views and Representative Photos of Trailside Vegetation

mile) to the Backbone Trail. Intervening ridgelines block views of the Project from this trail with the exception of the trailhead area, which presents views of the entrance gate at Clubhouse Drive.

The Backbone Trail segment that extends north of Encinal Canyon Road is located west of an intervening ridge that blocks views of the Project site from this segment, although as the trail continues north of Mulholland Highway (approaching Etz Meloy Motorway), some views of the Project site are intermittently available from distances of approximately 0.7 and 1.5 miles. However, these views are similar to those from Viewpoint 6 as shown in Figure 5.1-5, which illustrates an intervening ridgeline conceals the structures associated with the operation of the existing golf course.

Zuma Ridge Motorway is an unpaved roadway (not available for public motor vehicle use) that intersects with Encinal Canyon Road approximately one mile from the Project site entrance and extends along a high ridgeline in a southerly direction across mostly public lands. This unpaved roadway is used as a public trail, open to hikers, bikers, and equestrian trail users, and provides access to the Backbone Trail near Encinal Canyon Road, and also continues southward towards Malibu. This trail also provides access to a private residence at the crest of the ridgeline. Views of the Project site from this trail, along the segment that connects Encinal Canyon Road to the Backbone Trail are nearly identical to those provided from Viewpoint 7 represented in Figure 5.1-6. Farther south along the Zuma Ridge Motorway, the trail offers some intermittent views of the Project site, the most prominent of which is from a location approximately one mile from the existing clubhouse building, and at an elevation differential of over 700 feet higher than the Project site's development area. As seen from locations along this trail, existing views of the Project site include the developed golf course with associated structures and surrounding undeveloped open space. Due to the distance of these views and the elevation difference, the existing development does not block views of visual resources within the viewshed as seen from Zuma Ridge Motorway.

Visual Character and Quality of the Project Site

Although the majority of the Project site consists of undeveloped natural vegetation on steep slopes and ridges, the visual character of the site is generally defined by the golf course fairways and landscaping, as observed from the identified viewpoints where these features are not concealed by terrain or vegetation. These features are more noticeable due to scale and contrast with the surrounding environment compared to the existing structures on the site and the undeveloped open space areas. The existing structures associated with the golf course are located within the southern portion of the Project site at the base of northwest to southeast trending ridgelines that conceal these structures from viewpoints located to the west of the Project site, resulting in a visual perception of the Project site dominated by the existing golf course, with turf areas consisting of darker green hues than the natural palette of the surrounding undeveloped areas.

Existing Light and Glare Conditions

Lighting for the Project site under existing conditions consists of lighting for the driveway and parking areas, and the clubhouse/dining facility, including an outdoor "wine garden". The current dining facility is permitted to operate until 10:00 p.m., with staff clean-up activities generally not extending later than 11:00 p.m. Non-golf events, such as weddings, are held at the site and likewise are concluded by 10:00 p.m., with staff generally completing cleanup duties by approximately 11:00 p.m. (cleanup activities may occasionally continue until midnight). At the conclusion of activities related to the dining facility, only the driveway and parking lot lighting remains illuminated throughout the evening. There are no nighttime golfing, driving range, or maintenance activities onsite. As the majority of the site is undeveloped, the site is predominantly unlit at night.

There are no existing glare conditions affecting traffic due to the facilities being located at lower elevations than the surrounding roadways and the distance of views from those roadways.

5.1.2 Regulatory Setting

State

CEQA

State regulations applicable to this aesthetics analysis are limited to CEQA, California Public Resources Code Section 21000, *et seq*., and the CEQA Guidelines, California Code of Regulations, Title 14, Section 15000, *et seq*. CEQA considers aesthetics part of the environment to be protected.

California Coastal Act

Any potential visual resource impacts associated with development of the Project would be addressed by the California Coastal Commission, which would make determinations of the consistency of the Project with the visual resources protection goals and objectives of the California Coastal Act. In addressing visual resources, Coastal Act Section 30251 states:

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

Local

County of Los Angeles General Plan

The County of Los Angeles General Plan Conservation and Open Space Element (adopted November 25, 1980) includes a stated objective to preserve and protect sites of historical, archaeological, scenic and scientific value. In support of this stated objective, the General Plan contains Policy 16, which specifies development should "protect the visual quality of scenic areas including ridgelines and scenic views from public roads, trails and key vantage points".

Rural Outdoor Lighting District Ordinance

A rural outdoor lighting district to regulate outdoor lighting in the rural areas of Los Angeles County, including the proposed Project site, was established by an ordinance amending Title 22 - Planning and Zoning of the Los Angeles County Code (adopted November 13, 2012). Provisions in this ordinance include the requirement to:

- Permit reasonable uses of outdoor lighting for nighttime safety, utility, security, productivity and enjoyment;
- Minimize adverse offsite impacts including light trespass and obtrusive light;
- Curtail light pollution and preserve the nighttime environment;
- Protect the natural environment from the adverse effects of excessive outdoor lighting from artificial sources;

- Conserve energy and resources; and
- Promote dark skies for the enjoyment and health of humans and wildlife.

Specific development regulations included in the ordinance (Section 22.44.540) include requirements for all outdoor lighting to be fully shielded, and to limit other aspects of outdoor lighting such as pole heights, wattage, and operating hours.

Hillside Management Area Ordinance

The Hillside Management Area Ordinance of the Los Angeles County Code establishes regulations for development in areas having a natural slope of 25 percent or greater, designated as Hillside Management Areas (HMA). Prior to the issuance of building or grading permits within an HMA, a Conditional Use Permit is required in order to protect resources from incompatible development as described in Section 22.56.215 of the County Code. The stated objectives of this ordinance are:

- To protect scenic hillside views, consisting of slopes, hilltop summits, and ridgelines, and conserve natural hillside character and significant geological features through sensitive hillside site design and provision of open space; and
- To avoid excessive grading and landform alteration to protect hillside resources from incompatible development and land uses.

The purpose of this ordinance is not to preclude development within HMAs but to ensure, to the extent possible, that such development activities maintain and enhance scenic and environmental resources in HMAs.

The Department of Regional Planning has prepared a draft update to the Hillside Management Area Ordinance (dated December 6, 2012), which is currently under public review.

Malibu Local Coastal Program Land Use Plan

The Malibu Local Coastal Program (LCP) Land Use Plan, which was certified by the California Coastal Commission in December 1986 as part of the Los Angeles County Local Coastal Program, provides the following policies regarding aesthetics and visual resources for development within the Malibu Coastal Zone:

P91: All new development shall be designed to minimize impacts and alterations of physical features, such as ravines and hillsides, and processes of the site (i.e., geological, soils, hydrological, water percolation and run-off) to the maximum extent feasible.

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

P129: Structures should be designed and located so as to create an attractive appearance and harmonious relationship with the surrounding environment.

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

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

P133: Encourage the use of architectural design for new construction which reflects the unique visual and environmental character of the Malibu Coastal Zone. At the same time, encourage – within the design idiom – sufficient diversity in the design character (i.e., scale, height, density, etc.) so that visual monotony does not result. Some differentiation among structures should be encouraged to promote the establishment of a limited number of visual landmarks, except in highly scenic areas where new development should be subordinate to the character of its setting.

P134: Structures shall be sited to conform to the natural topography, as feasible. Massive grading and reconfiguration of the site shall be discouraged.

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

P138: Design considerations for commercial development should include:

- unifying architectural themes.
- visually aesthetic screening of service areas.
- height and bulk standards.

P138b: Buildings located outside of the Malibu Civic Center shall not exceed three (3) stories in height, or 35 feet above the existing grade, whichever is less.

P138e: Height limits specified in P138b shall not apply to specific architectural design features such as bell towers, stair towers, cupolas, roof parapets, kiosks, changes in roof elevations and roof monuments which do not add square footage, floor area or stories to the building and which do not exceed 15 feet above the required height limit.

P142: New development along scenic roadways as designated shall be set below the road grade on the downhill side wherever feasible, to protect designated scenic canyon and ocean views.

5.1.3 Thresholds of Significance

Based on the Initial Study Environmental Checklist Form prepared by the Los Angeles County Department of Regional Planning and Appendix G of the CEQA Guidelines, implementation of the Project would result in significant impacts to aesthetic resources if the Project would:

- Have a substantial adverse effect on a scenic vista;
- Be visible or obstruct views from a regional riding or hiking trail;

- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, character, or other features; and
- Create a new source of substantial shadows, light, or glare which would adversely affect day or nighttime views in the area.

5.1.4 Project Impacts

A visual impact analysis was conducted to determine the portions of the Project site that would be visible from area roadways as well as public recreation trails, and to provide a comparative evaluation of the level of visual impact of the Project on scenic views and the visual character of the site relative to existing conditions. This analysis consists of visual simulations prepared by LRS Architects that depict the proposed structures, as they would appear from three of the identified public Viewpoints (1, 5, and 7) as shown in Figure 5.1-2. Visual simulations were not prepared for Viewpoints 3, 4, or 6, as the proposed structures would not be visible from those viewpoints. Views from Viewpoint 2 were not prepared as they would be similar to those from Viewpoint 1 (although with less of the site visible due to intervening ridgelines and vegetation). In addition to showing the proposed buildings in their respective locations within the Project site, the proposed structures are depicted with colorations that are consistent with the Project designs to show the extent to which the Project would blend with the existing color palette of the surrounding environment.

These view simulations do not show renderings of future landscaping which would accompany development of the Project, the removal of an abandoned residence from the northern portion of the Project site, or the proposed remodeled golf course area, which is currently occupied by the existing golf course. With implementation of the Project, the addition of landscaping features including trees and shrubs would provide visual screening of some of the structures that are visible in the view simulations, which would further conceal Project components from public views, as compared to the visual simulations depicted below.

Simulations of the remodeled golf course areas have not been provided as those areas would continue to be maintained and operated as a golf course, and as such, the visual character of that part of the Project site would remain consistent with that of the existing fairway surfaces and golf course features, with the exception of changes in the landscaping palette. With implementation of the Project, approximately 1,500 non-native landscaping trees, planted during development of the existing golf course, would be removed, and native vegetation including oak and sycamore trees would be provided within the remodeled golf course and around proposed structures. While the proposed removal of non-native trees would eliminate some of the existing visual screening of the golf course fairway areas provided by those trees, by removing non-native trees, and providing landscaping that emphasizes native species including oak and sycamore trees, the Project site would appear more similar in coloration and character to the preserved native vegetation areas of the Project site as well as that of the surrounding vicinity.

Impacts on Scenic Views

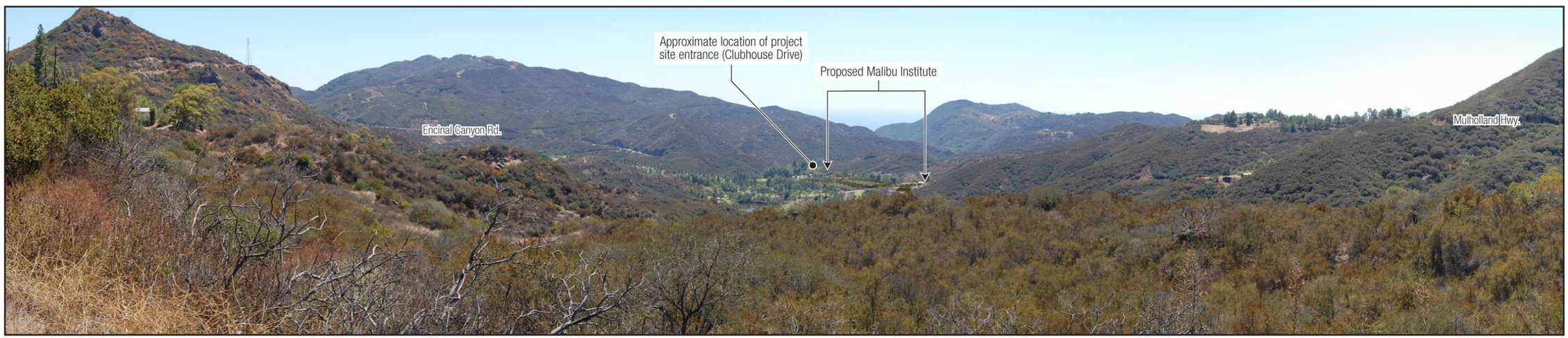
Threshold: Would the Project have a substantial adverse effect on a scenic vista?

Visual Simulation from Encinal Canyon Road

Figure 5.1-7 presents a visual simulation of the Project as seen from Viewpoint 1 (See Figure 5.1-2 for photo locations), and shows the scale of the proposed development as it would appear within the Project

Simulation of Westerly Views from Viewpoint #1 on Encinal Canyon Road showing proposed Malibu Institute structures (landscaping features have not been simulated).

Source: LRS Architects, Sep. 26, 2012.



Simulation of southerly views of the proposed project from Viewpoint #5 at Mulholland Highway and Westlake Boulevard Intersection (landscaping features have not been simulated).

Source: LRS Architects, Sep. 26, 2012.

Viewpoints #1 and #5 – Visual Simulations from Public Roadways

site. This simulation is based on the existing conditions photograph, shown in Figure 5.1-3, which was taken from this location.

As shown in this simulation, compared to the existing level of development, the Project would be located within the same development footprint. With the exception of the proposed security/information building located near the site entrance, the Project's northernmost and southernmost buildings (the proposed maintenance building and the educational conference facility, respectively) would occupy similar locations as those of existing structures (a maintenance shed and the clubhouse building, respectively), with additional buildings constructed in between. The largest proposed structure would be the educational conference facility located at the southern extent of the visible development area in this simulation, which would occupy the same footprint as the existing clubhouse. The existing condition photo presented in this figure shows the two-story clubhouse is almost completely concealed from view by an intervening ridgeline of undisturbed vegetation. The proposed structure that would occupy this site likewise would be a two-story structure and therefore also would be significantly screened from view by the undeveloped ridgeline.

The perceived significance of potential visual impacts from this location is somewhat limited due to the distance of these views (approximately 1 mile from the nearest proposed structure). Additionally, the Project includes layout and design features to minimize visual impacts, such as constructing all development within a previously disturbed area, locating structures at various elevations that make use of the existing topography and follow the existing contours so that the proposed buildings are organized and articulated within the landscape to not stand out in the viewshed. The proposed structures would occupy elevations that are lower than the identified public viewpoints, and would incorporate design elements that blend the new building designs with the surrounding topography and color palette, such as earthtone exteriors with wood and stone facades as seen in Figures 3-6 and 3-7. The Project also proposes to provide "green roofs" consisting of live vegetation covering proposed structures that would blend with the color and texture of the landscaping features and golf course turf areas. Based on the visual simulations prepared for this viewpoint, the Project would be consistent with the visual resource policies of the LUP listed above, including protection of ridgeline and scenic views, and developing below the road grade within sloped terrain, as well as being compatible with the character of the setting. Figure 5.1-3 also shows existing views of the Project site from a lower vantage point (Viewpoint 2) along Encinal Canyon Road, which would offer similar views described above, except the lower viewing angle would allow intervening topographic features to screen more of the development area. Although a visual simulation was not prepared for this location, Figure 5.1-3 shows that from Viewpoint 2, the existing clubhouse, the largest building currently on the site, is concealed from view by the topographic features of the site. As the proposed educational conference facility would replace the existing clubhouse and occupy the same location, site topography and vegetation would likewise provide visual screening of that portion of the development. As shown in Figure 5.1-4 (Viewpoint 3), the interior development and structures of the Project are not visible from the entry gate, and as such, no visual simulation was prepared for that location. Although the entryway area design may change somewhat with the proposed removal of existing palm trees, and the construction of a security/information building at the end of the entry drive (approximately 500 feet from Encinal Canyon Road), the Project would provide new landscaping, including native trees, which combined with existing topographical features would visually screen all other onsite structures and parking areas as seen from Viewpoint 3.

Visual Simulation from Mulholland Highway

Public viewpoints along Mulholland Highway from northeast of the Project site, represented by Viewpoint 4 (Figure 5.1-4), only allow views of the undeveloped peaks and ridgelines of the site and, as such, the Project would not change these views or result in any potential impacts. Views of the site from

the northwestern portion of the property allow distant views of the existing development areas including some portion of existing structures. Figure 5.1-7 presents a visual simulation of Project conditions as seen from the northern portions of the Project site, at the intersection of Mulholland Highway and Westlake Boulevard (Viewpoint 5). This simulation depicts how the long distance and low angle of this view, combined with the somewhat linear aspect of the structural layout of the Project, which roughly parallels the sightlines from this viewpoint, minimizes the perceived scale of the development. The design elements incorporated into the Project also blend visually with the surrounding colors and textures of the region, thus the Project would minimize potential visual impacts from this viewpoint.

An attempt was made to create a visual simulation of the Project as seen from the segment of Mulholland Highway that lies just west of the Project site (Viewpoint 6). However, it was determined the proposed structures would be completely concealed by an intervening undeveloped ridgeline and would not be able to be viewed from this portion of the roadway. As seen in Figure 5.1-5, under existing conditions no onsite structures currently can be viewed from Viewpoint 6. Therefore, the visual character of this view would remain unchanged from existing conditions.

Summation of Scenic Vista Impact Analysis

As described above, and shown in the visual simulations of Figures 5.1-7, the Project would introduce buildings that individually would be visually consistent with the size of the existing buildings on the site, and would use earthtone colors and natural exterior materials such as wood and stone, and incorporate vegetated "green roofs" to blend with the surrounding vegetation palette. The proposed buildings would be placed at varying elevations and would follow the existing contours of the Project site and the adjacent slopes rising to the west in order to blend into the viewshed. The structures would be located at lower elevations than the designated scenic highways and public viewpoints from which they could be viewed and at such distances that they would not block views of designated scenic elements or intrude into the skyline above significant ridgelines, so that all aspects of the proposed structural development would be subordinate to the surrounding environment. The Project also would remove an abandoned residence from a blufftop in the northern portion of the site, which would remove an existing structure that is inconsistent with the surrounding color palette of the natural features of the viewshed. As such, the Project would have a less than significant impact on scenic vistas (**Class III**).

Views From Regional Trails

Threshold: Would the Project be visible or obstruct views from a regional riding or hiking trail?

Views of the Project site from public trails are intermittent and limited, particularly the lower elevations of the site that include the development footprint, due to the rugged terrain of the surrounding environment. The number of public viewpoints of the Project site from the Backbone Trail is very limited due to the trail's alignment being generally located on the opposite side of intervening ridges, as well as due to thick trailside vegetation that blocks views from trail segments that would potentially overlook the Project site. As shown in **Figure 5.1-8**, a visual simulation of the Project as seen from Viewpoint 7 shows some proposed structures at the northern extent of the development footprint potentially would be seen from this viewpoint on the Backbone Trail. This view would be generally consistent with the current views, which show that portions of the golf course and some of the existing buildings of the current development can be seen from this viewpoint. As discussed above, although not shown in this simulation, the Project would include removal of many non-native trees from the site, and planting of landscaping vegetation including native species of trees and shrubs that would provide at least partial visual screening of proposed structures as seen from this location, with screening effects increasing over time as the landscaping vegetation matures. As such, due to distance, terrain, and screening effects

Source: LRS Architects, Sep. 26, 2012.

Simulation of westerly view of the proposed Malibu Institute from Viewpoint #7 along the Backbone Trail (landscaping features have not been simulated).

Viewpoint #7 – Visual Simulation of Westerly Views from the Backbone Trail

FIGURE 5.1-8

from trailside vegetation as well as proposed onsite landscaping, this view would not be significantly altered from existing conditions, and proposed facilities would be visually subordinate to the surrounding features of this viewshed.

Intermittent views of the Project site from the Zuma Ridge Motorway trail, in which the existing developed golf course and associated buildings currently can be seen, would continue to offer views of the proposed development and golf course, although views of the Project site are blocked by intervening ridgelines along a majority of this trail. As with views from the Backbone Trail, views from this trail likewise would not be significantly altered from existing conditions due to distance, terrain, and screening effects from trailside vegetation as well as proposed onsite landscaping.

The Project includes layout and design features to minimize visual impacts on views from trails, such as constructing all development within a previously disturbed area, locating structures at various elevations that make use of the existing topography and follow the existing contours so that the proposed buildings are organized and articulated within the landscape to not stand out in the viewshed. The proposed structures would incorporate design elements that blend the new building designs with the surrounding topography and color palette, such as earthtone exteriors with wood and stone facades as seen in Figures 3-6 and 3-7. By restricting structures to within the currently developed footprint, placing them to follow the contour of the existing terrain, incorporating earthtone colors and materials chosen to blend with the surrounding color palette of natural features, and preserving the majority of the site as undeveloped open space, the Project would remain visually subordinate to the surrounding features of this viewshed. As such, although portions of the Project would be visible from limited viewing locations along regional trails, the proposed structures would not obstruct views from any off-site trails and would have a less than significant impact on views from regional trails (**Class III**).

Impacts on Scenic Resources

Threshold: Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

As described in Section 3.0, Project Description, and Section 4.0, Environmental Setting, the proposed development would occupy the lower elevations of the Project site, which consists of a bowl-like depression surrounded by high ridgelines. Additionally, area roadways with views of the Project site are located at higher elevations than the proposed development area. As such, the Project would not block public views of designated scenic resources (identified in Figure 5.1-1), which consist of significant ridgelines, a rocky outcrop that forms one of those ridgelines, or views from scenic highways. Although a designated scenic highway (Mulholland Highway) traverses the northern portion of the site, the Project proposes to preserve 450 acres of undeveloped habitat as open space, including the area adjacent to that highway. Therefore, the Project would have a less than significant impact on scenic resources (**Class III**).

Visual Character

Threshold: Would the Project substantially degrade the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, character, or other features?

The Project would develop a net increase of 201,452 square feet of structures on the Project site, which would be an increase in the scale of onsite development. This increase in developed square footage would be distributed among a total of 46 individual buildings clustered along the western portion of the site previously developed as part of the existing Malibu Golf Club. The proposed structures would be

nestled into the surrounding slopes in a layout conforming to the contours of the existing topography minimizing terrain alteration from grading activities. The majority of the proposed buildings would have overall heights ranging from 18 to 26 feet above grade, while the three largest buildings proposed would have maximum heights of 35 feet above grade. The average heights of these buildings above grade would be less than the maximum heights due to the sloped grades of the site, to which the buildings have been designed to conform. The Project would incorporate design elements that blend the new building designs with the surrounding color palette, such as earthtone exteriors with wood and stone facades chosen to blend with the pattern and character of the natural features of the 450 acres of surrounding Project site areas proposed to be preserved as undeveloped open space. The Project also proposes to provide "green roofs" for the structures, featuring live vegetation that would visually blend with the existing character of the Project site's developed area, which predominantly consists of turf. Additionally, the Project would remove 1,590 non-native trees and provide landscaping that emphasizes native species including oak and sycamore trees, which would be consistent with the visual character of the surrounding vegetation in color and texture.

As with most development, the Project would increase the scale of the built environment on the site, however, design features have been incorporated into the Project, such that the proposed structures would be consistent with the existing conditions regarding building height, bulk, pattern, and character. In addition, the preservation of 450 acres of the Project site as protected open space would be consistent with the existing visual character of the site. As such, the Project would not substantially degrade the visual character of the site, and thus impacts in this regard would be less than significant (**Class III**).

Although the Project proposes to include features that would result in less than significant visual character impacts, to ensure that Project designs retain those features, mitigation measures MM5.1-1 through MM5.1-3 have been recommended.

Light and Glare Impacts

Threshold: Would the Project create a new source of substantial shadows, light, or glare which would adversely affect day or nighttime views in the area?

Lighting

The proposed lighting for the Project site would consist of parking lot, driveway, and walkway lighting for security and safety, including lighting for the proposed overnight accommodations. While the Project would introduce additional lighting sources as compared to existing conditions, all new outdoor lighting would be consistent with requirements of the County's Rural Outdoor Lighting District Ordinance to prevent light trespass and limit sky glow as defined by the Ordinance.

Due to the Project's remote location, the nearest occupied properties are residences along Mulholland Highway to the west of the Project site at a distance of over 1,000 feet from the proposed development area and at an elevation of over 300 feet higher than the proposed structures. As such, distances and surrounding terrain would prevent light trespass, or spillover, to adjacent properties. Additionally, all outdoor lighting would incorporate fixtures that are directed downward and fully shielded to allow no direct light emissions above a horizontal plane, to limit sky glow. The Ordinance would further restrict lighting impacts by limiting wattage and hours of operation where not required for safety, which would reduce the Project's lighting impacts. The Project would remove existing pole-mounted parking lot and driveway lights that produce outdoor lighting that can be seen offsite, and replace them with fixtures fully shielded and compliant with the requirements of the Rural Outdoor Lighting District Ordinance. As with the existing Malibu Golf Club, the Project would not provide lighting for any golfing activities including night golfing or driving range practice. Discussion of lighting impacts related to wildlife activities are

discussed in Section 5.3, Biology. Therefore, visual impacts due to lighting would be less than significant (**Class III**).

Glare

Glare is defined as a harsh uncomfortably bright light, and can be either direct from a light source, or indirect from reflected light. Buildings constructed of highly reflective materials from which the sun reflects at a low angle may cause adverse glare. As stated above regarding scenic views, the Project site is located at lower elevations than roadways from which the site can be viewed, which minimizes the potential for reflected sunlight to cause glare impacts along those roadways, as well as to the scattered residences in the area which are also located at higher elevations than the structural development area of the Project site. The scenic view analysis also shows that the Project's proposed structures would not be visible from western view locations, including roadways, and public views of the structures from the east (Encinal Canyon road) would be at distances of 0.7 mile to one mile. The Project would include exteriors that feature earthtone colors and natural materials such as wood and stone with minimally reflective properties. The Project would not use mirrored glass for exterior windows that could be viewed from off-site. As the Project structures cannot be seen from public viewpoints to the west, the Project would not produce glare impacts in the afternoon hours as the sun's rays would be striking the Project from the west. Views from the north would provide distant views of the proposed structures, however, the sun's rays would be incident from a southerly direction, which would prevent northerly glare impacts from the Project. Early morning south/westbound traffic on Encinal Canyon Road could potentially have views of Project structures as the sun rises, however, due to the Project being located at lower elevations than the roadway's viewpoints, the angle of reflection of the sun's rays from a vertical window pane would predominantly be reflected downward, thus not causing an adverse glare impact on the roadway at a distance of approximately 0.7 mile to one mile.

The Project proposes to install solar panels over parking lot shade structures with the goal of supplying all of the Project's electricity needs. To produce electricity from sunlight effectively, solar panels are designed to absorb light and minimize reflection in order to maximize the electricity generated. The solar panels proposed for this project would be constructed of non-glare material that would minimize reflected light and associated glare impacts.

One method to determine an object's reflectivity is to measure the albedo, which is the ratio of solar radiation across the visible and invisible light spectrum reflected by a surface. Albedo varies between 0, a surface that reflects no light, and 1, a mirror-like surface that reflects all incoming light. To provide a comparison of the reflectivity of solar panels to the surrounding environment, solar panels with a single anti-reflective coating have a reflectivity of between 0.03 and 0.18 as a measured albedo. By comparison, sand has an albedo rating of between 0.15 and 0.45 and agricultural vegetation has an albedo of between 0.18 and 0.25. This indicates that the solar panels would not exceed the reflectivity of the area's prevailing grasses and vegetative ground cover.[2]

Although not depicted in the above visual simulations, the Project would provide landscaping features of native vegetation including oak and sycamore trees that would provide additional visual screening of structures and thereby also reduce the potential for glare impacts as well. Therefore potential visual resource impacts related to glare would be less than significant (**Class III**).

[2] ESA, Solar Glare Analysis of Proposed Calipatria Solar Farm I & II, March 24, 2011.

Policy Consistency Analysis

The applicable visual resource policies as listed above have particular relevance to issues of site location, site character, and ridgeline/skyline preservation. The Project would be developed entirely within an existing development footprint to minimize impacts and alterations of physical features, such as ravines and hillsides. The individual structural components of the Project would be of similar height and scale to the existing buildings on the site that would be replaced. In addition, the Project would cluster building development on 20 acres within the southern portion of the Project site and would preserve over 450 acres of undeveloped hillsides and ridgelines, surrounding the proposed development. Therefore, the proposed structural development of the Project would remain visually subordinate to the character of the Project setting, as shown in the visual simulations presented in Figures 5.1-7, and 5.1-8. All proposed development would be located within the lower elevations of the Project site such that structures would not intrude into any views of ridgelines or other designated scenic resources in the vicinity. As such, the Project would be consistent with the LUP policies as they relate to the proposed development in this location. A complete policy consistency analysis is provided in Section 5.9, Land Use.

5.1.5 Cumulative Impacts

Related projects located in the Project site's vicinity were evaluated to assess potential cumulative visual impacts. Of the fourteen related projects identified (as listed in Table 4-1), twelve are located within the Cities of Agoura Hills or Malibu at distances of three or more miles from the Project site. With intervening significant ridgelines of the Santa Monica Mountains that prevent simultaneous views of the Project with the projects in those cities, the Project would not contribute to cumulative view impacts with those projects. Of the two related projects that are located in unincorporated Los Angeles County, Project No. 1, a subdivision of land for two single-family residences, is not located within the same viewshed as the Project and, as such, would not factor into the Project's cumulative visual impacts. Project No. 2, the renovation of a County juvenile detention camp (Camp Kilpatrick) at 427 South Encinal Canyon Road, is located at the northeastern extent of the Project's viewshed. With the exception of the Camp's existing 500,000 gallon water tank located atop the viewshed's defining ridgeline, which would remain in place,[3] the existing and proposed development at Camp Kilpatrick is concealed from the Project site by the ridgeline, which prevents these projects from being viewed simultaneously from any public roadway. Therefore, the Project's cumulative aesthetic impacts to visual resources and scenic views would remain less than significant. Since the Camp operates as a secure detention facility, it currently employs bright lighting throughout the night (to deter escape) as an existing condition, which creates noticeable sky glow, particularly during overcast evenings. The Camp would be expected to continue to use bright lighting, as it would continue to serve the same purpose. The Project's outdoor lighting fixtures would be located approximately one mile distant and at elevations that are approximately 400 feet lower than the Camp, and the Project would replace existing lighting that can be seen offsite, with fully shielded fixtures to be restricted in wattage and hours of operation per the requirements of the County's Rural Outdoor Lighting District Ordinance. As such, the Project would not result in a cumulatively significant contribution to lighting impacts regarding sky glow or light trespass. Therefore potential cumulative impacts related to aesthetics would be less than significant (**Class III**).

5.1.6 Mitigation Measures

Views of Visual Resources/Scenic Views

The Project would not result in significant impacts on identified visual resources or scenic views and therefore mitigation measures are not required.

[3] County of Los Angeles, Draft Initial Study/Mitigated Negative Declaration Camp Vernon Kilpatrick Replacement Project County of Los Angeles, California (Capital Project No. 77295), September 2012.

Visual Character, Quality, and Compatibility

The Project would not result in significant visual resource impacts due to design features that blend with the surrounding environment and compliance with regulations such as the County's Rural Outdoor Lighting District Ordinance; therefore, no mitigation is required. However, the following measures are recommended to ensure the implementation of specific Project features, which would keep potential impacts less than significant.

MM5.1-1 Building materials compatible in color tone and/or texture with the surrounding natural terrain shall be employed on the exteriors of all structures and retaining walls, with the exception of solar panels to be installed above the parking lot shade structures.

MM5.1-2 Aesthetically compatible native landscaping shall be provided along the Project entrance (Clubhouse Drive) to screen vehicle lights within onsite parking and driveway areas from Encinal Canyon Road.

MM5.1-3 The applicant's detailed landscape plan shall be designed to provide aesthetically compatible accenting to and/or visual screening of the Project's hardscape features and walls, as viewed from the identified public viewpoints. With the exception of the golf course greens and turf, the majority of the landscaping shall use native species of plants, shrubs and grasses. Prior to the issuance of building permits, the landscaping plan shall be reviewed and approved by the County of Los Angeles Department of Regional Planning and Fire Department and shall address the following:

- Landscaping shall be provided in a manner consistent with fire safety needs, to help conceal visible linear elements and hard edge surface effects resulting from site grading, the use of retaining walls, and the construction of new buildings.
- Street trees and median trees, compatible with the adjacent undeveloped areas, shall be planted along Clubhouse Drive, and at the main entrance adjacent to Encinal Canyon Road.
- Appropriate landscaping, including trees and vegetated walls, shall be planted to minimize views of retaining walls.
- Project landscaping shall consist of native fire retardant species included on the Los Angeles County Fire Department Fuel Modification Plan Guidelines, located to partially screen views of the structural components of the Project from public viewpoint areas as identified above under the subheading Existing Views from Scenic Highways and Trails. Landscaping shall be compatible with the character of the surroundings and architectural style of the structures.

5.1.7 Residual Impacts

The Project would result in less than significant impacts on visual resources, scenic views, visual character/quality/compatibility, and light and glare issues (**Class III**). The Project would not result in any significant unavoidable adverse impacts regarding aesthetics.

5.2 AIR QUALITY

This section evaluates the Project's potential impacts on air quality. The analysis is based on the Air Quality Impact calculations for the Malibu Institute Project dated January 14, 2013, which are included as Appendix B.

5.2.1 Existing Conditions

Atmospheric Setting

South Coast Air Basin

The South Coast Air Basin (SCAB) is a 6,600 square mile coastal plain bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The SCAB includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties.

The SCAB is arid, with virtually no rainfall and abundant sunshine during the summer months. Low temperature inversions, light winds, shallow vertical mixing, and extensive sunlight, in conjunction with topographical features such as adjacent mountain ranges that hinder dispersion of air pollutants, combine to create degraded quality, especially in inland valleys of the basin. The combination of poor dispersion and abundant sunshine in the basin drives the photochemical reactions to form pollutants such as ozone and provide conditions especially favorable to the formation of smog.

Regional Climate

Warm summers, mild winters, infrequent rainfall, moderate afternoon breezes, and generally fair weather characterize the climate of the western Santa Monica Mountains, including the Project site. The clouds and fog that form along the Southern California coastline frequently cover coastal areas at night, but often burn off quickly during the morning hours. The persistent onshore flow normally has very low pollution levels unless the marine air has previously spent time over land. Compared to other parts of the SCAB, the western Santa Monica Mountains region generally has much less smog and other air pollutants during normally high pollution periods from spring to fall because of prevailing wind patterns.

Temperatures near the Project site average 62 degrees Fahrenheit (^{o}F) year-round, with summer highs typically in the upper 70s (^{o}F) and winter lows in the mid 40s (^{o}F). Extremely hot or cold temperature readings are rare in this region of the Santa Monica Mountains, with temperatures rarely exceeding 90°F in summer or dropping below 35°F in winter.

Rainfall in the Project area varies considerably due to local topography, and can range from 10 to 18 inches annually. Almost all of the region's annual rainfall occurs from late November to early April, with summers often passing without a significant precipitation event.

Winds blow primarily from southwest to northeast by day and from north to south at night in response to the regional pattern of onshore flow by day and offshore flow at night. This airflow pattern acts to rapidly disperse locally generated air pollutants throughout the area during the day. At night, the pooling of cool air in low elevations, combined with light winds, may allow for air stagnation in valley bottoms, which could result in a small area having a relatively higher concentration of air pollutants, particularly Carbon Monoxide (CO), especially near local emissions sources such as highways. An area that experiences elevated CO levels due to these conditions is known as a "hot spot". As discussed in Section 5.13, Transportation and Traffic, traffic densities are very low in the western Santa Monica Mountains,

and as such, there is little potential for any local "hot spots" to be encountered in the vicinity of the Project site.

Southern California also experiences temperature inversions that can slow the dispersal of air pollutants by limiting the vertical depth of the air column through which pollution can be mixed. In summer, coastal areas are characterized by a sharp discontinuity between the cool marine air at the surface and the warm, sinking air aloft within the high-pressure cell over the ocean to the west. This marine/subsidence inversion allows for good local mixing, but acts like a giant lid over the SCAB. Air starting onshore at the beach is relatively clean, but becomes progressively more polluted as sources continue to add pollution from below without any dilution from above. Some dilution occurs in the thermal chimneys along the heated slopes of the Santa Monica Mountains, but not enough to provide an adequate mixing volume to contain the large amount of pollution initially generated or subsequently formed by atmospheric chemical reactions.

A second inversion type forms on clear, winter nights when cold air off the mountains sinks to the surface while the air aloft remains warm. This process forms radiation inversions. These inversions, in conjunction with calm winds, trap pollutants such as automobile exhaust near their source. Both types of inversions occur throughout the year to some extent, but the marine inversions are very dominant during the day in summer, and radiation inversions are much stronger in winter when nights are long and air is cool. Inversion measurements at Santa Monica Airport show a frequency of elevated subsidence inversions at 1,500 feet and below on over 80 percent of summer afternoons and surface based radiation inversions on 70 percent of all winter nights. The governing role of these inversions in atmospheric dispersion leads to a completely different air quality environment during the summer in the Malibu area than during the winter.

5.2.2 Regulatory Setting

Ambient Air Quality Standards

The South Coast Air Quality Management District (SCAQMD) regulates stationary source emissions and oversees air quality planning for air pollution sources in the SCAB. The Southern California Association of Governments (SCAG) is also involved in air quality planning and, with the SCAQMD, prepares the Air Quality Management Plan (AQMP), which provides the framework for air pollution management in the SCAB. There are two general categories of sources from which air pollutants are generated: stationary sources and mobile sources. Stationary sources relate to sources that are immobile (i.e., fireplaces in homes, industrial exhaust vents, etc.), whereas mobile sources refer to those sources that are movable (i.e., automobiles, construction vehicles, etc.).

In order to gauge the significance of the potential air quality impacts of the Project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, collectively referred to as "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended many times, most recently in 1990. National ambient air quality standards (NAAQS) were established in 1971 for six pollutants, with states retaining the option to add other pollutants, require more stringent compliance, or include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule which extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established California Ambient Air Quality Standards (CAAQS) several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practicable date. Those standards currently in effect in California are shown in **Table 5.2-1**. Sources and health effects of various pollutants are shown in **Table 5.2-2**.

The Federal Clean Air Act Amendments of 1990 required the EPA review all NAAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM-2.5"). New NAAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for PM-2.5 and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled EPA did not require specific congressional authorization to adopt national clean air standards.[1] The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, there was some inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to “non-attainment” for the 8-hour ozone standard.

Evaluation of the most current data on the health effects of inhalation of fine particulate matter (PM) prompted the California Air Resources Board (ARB) to recommend adoption of the statewide PM-2.5 standard more stringent than the federal standard. This standard was adopted on June 20, 2002. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Similarly, the ARB extensively evaluated health effects of ozone exposure. A new state standard for an 8-hour ozone exposure was adopted in April 2005, which mirrors the federal standard. The California 8-hour ozone standard of 0.07 ppm is more stringent than the federal 8-hour standard of 0.08 ppm. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards, but there are no hard deadlines or any consequences of non-attainment. As part of the same re-evaluation process, the ARB adopted an annual state standard for nitrogen dioxide (NO_2) that is more stringent than the corresponding federal standard, and strengthened the state one-hour NO_2 standard.

[1] Christine Todd Whitman, Administrator of Environmental Protection Agency, et al. v. American Trucking Associations, Inc., et al. Decided February 2001

Table 5.2-1
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
Ozone (O_3)	1 Hour	0.09 ppm (180 μg/m^3)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (137 μg/m^3)		0.075 ppm (147 μg/m^3)		
Respirable Particulate Matter (PM-10)	24 Hour	50 μg/m^3	Gravimetric or Beta Attenuation	150 μg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 μg/m^3		–		
Fine Particulate Matter (PM-2.5)	24 Hour	–	–	35 μg/m^3	Same as Primary Standard	Inertial Separation and Gravimetic Analysis
	Annual Arithmetic Mean	12 μg/m^3	Gravimetric or Beta Attenuation	15 μg/m^3		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	–	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 μg/m^3)	Gas Phase Chemiluminescence	0.10 ppm (188 μg/m^3)	–	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 μg/m^3)		0.053 ppm (100 μg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)	1 Hour	0.25 ppm (655 μg/m^3)	Ultraviolet Fluorescence	0.075 ppm (196 μg/m^3)	–	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	–		–	0.5 ppm (1,300 μg/m^3)	
	24 Hour	0.04 ppm (105 μg/m^3)		0.14 ppm (for certain areas)	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)	–	
Lead	30-Day average	1.5 μg/m^3	Atomic Absorption	–	–	High Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 μg/m^3 (for certain areas)	Same as Primary Standard	
	Rolling 3-Month Average	–		0.15 μg/m^3		
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer– visibility of 10 miles or more (0.07–30 miles or more for Lake Tahoe)	Beta Attenuation and Transmittance through Filter Tape.	**No Federal Standards**		
Sulfates	24 Hour	25 μg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride	24 Hour	0.01 ppm (26 μg/m^3)	Gas Chromatography			

Source: California Air Resources Board. February 7, 2012.

Table 5.2-2
Health Effects of Major Criteria Pollutants

Pollutants	Sources	Most Relevant Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Fine Particulate Matter (PM-10)	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	• Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.	• Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases • (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.
Source: California Air Resources Board, 2002.		

As part of EPA's 2002 consent decree on clean air standards, a further review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for PM-2.5 were strengthened, a new class of PM in the 2.5 to 10 micron size was created, some PM-10 standards were revoked, and a distinction between rural and urban air quality was adopted. In December 2012, the federal annual standard for PM-2.5 was reduced from 15 µg/m3 to 12 µg/m3, which matches the California AAQS. The severity of the basins non-attainment status for PM-2.5 may be increased by this action.

In response to continuing evidence ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthful, the EPA has proposed a further strengthening of the 8-hour standard. A draft version of the proposed revision would establish an 8-hour standard of 0.065 ppm, however this more stringent standard has not been adopted at this time.

A new federal one-hour standard for nitrogen dioxide (NO_2) has also recently been adopted which is more stringent than the existing state standard. Despite the additional stringency of the federal NO_2 standard, air quality monitoring data in the SCAB suggests this standard is met in the region. The federal primary standard for sulfur dioxide (SO_2) was similarly modified in 2010. Because California requires use of lower sulfur fuel and burns negligible amounts of sulfur-bearing coal, SO_2 is not a problem pollutant in the State.

Air Quality Planning

The 1977 Amendments to the Federal Clean Air Act required designated agencies in any area of the nation not meeting national clean air standards to prepare a plan demonstrating the steps to be implemented to bring the area into compliance with all national standards. The SCAB could not meet the deadlines for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the SCAG. The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times as earlier attainment forecasts were shown to be overly optimistic.

The 1990 Federal Clean Air Act Amendment required all states with air sheds with "serious" or worse ozone problems submit a revision to the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised and approved over the past decade. The most current regional attainment emissions forecast for ozone precursors (ROG and NOx) and for carbon monoxide (CO) and for particulate matter are shown in **Table 5.2-3**. Substantial reductions in emissions of ROG, NOx and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air "blueprint" in August 2003. The EPA approved the 2003 AQMP in 2004. The AQMP outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006. The 2003 AQMP was based upon the federal one-hour ozone standard, which was revoked in 2006 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With redesignation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. As previously noted, the attainment date was revised from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard.

Projected attainment by 2021 requires control technologies that do not exist yet. These long-term measures are often referred to as "black box" measures and go beyond the short-term measures that are based on known and demonstrated technologies. Because of the need to rely on undeveloped measures, the SCAQMD requested a voluntary "bump-up" from a "severe non-attainment" area to an "extreme non-attainment" designation for ozone. The extreme designation will allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on "black-box" measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April 2010, the EPA approved the change in the non-attainment designation from "severe-17" to "extreme." This reclassification sets a later attainment deadline, but also requires the air basin to adopt even more stringent emissions controls.

Table 5.2-3
South Coast Air Basin Emissions Forecasts
(Emissions in tons/day)

Pollutant	2008[a]	2010[b]	2015[b]	2020[b]
NOx	917	836	667	561
ROG	632	596	545	525
CO	3,344	3,039	2,556	2,281
PM-10	308	314	328	340
PM-2.5	110	110	111	113

Source: California Air Resources Board, California Emissions Projection Analysis Model, 2009
[a] 2008 Base Year.
[b] With current emissions reduction programs and adopted growth forecasts.

In other air quality attainment plan reviews, EPA has disapproved part of the SCAB PM-2.5 attainment plan included in the AQMP. EPA has stated the current attainment plan relies on PM-2.5 control regulations that have not yet been approved or implemented. It is expected a number of rules that are pending approval will remove the identified deficiencies. If these issues are not resolved within the next several years, federal funding sanctions for transportation projects could result. The 2012 AQMP update currently in public review is expected to remedy identified PM-2.5 planning deficiencies.

The currently applicable 2007 AQMP was adopted in June 2007, after extensive public review. The 2007 AQMP recognizes the interaction between photochemical processes that create both ozone and the smallest airborne particulates (PM-2.5). The 2007 AQMP is therefore a coordinated plan for both pollutants. Key emissions reductions strategies in the updated air quality plan include:

- Ultra-low emissions standards for both new and existing sources (including on-and-off-road heavy trucks, industrial and service equipment, locomotives, ships and aircraft);
- Accelerated fleet turnover to achieve benefits of cleaner engines;
- Reformulation of consumer products; and
- Modernization and technology advancements from stationary sources (refineries, power plants, etc.).

Development projects such as the Project do not directly relate to the AQMP in that there are no specific air quality programs or regulations governing general development projects. Conformity with adopted

plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of master planned growth is determined.

Baseline Air Quality

Existing levels of ambient air quality and historical trends and projections in the Project vicinity are best documented from measurements made by the South Coast Air Quality Management District (SCAQMD). SCAQMD operates an air quality monitoring station located in West Los Angeles at the Veterans Affairs (VA) Hospital which monitors regional air pollutants such as ozone and carbon monoxide (CO) and nitrogen oxides (NO_x) which tend to be more related to local source-receptor relationships. Measurements of 10-micron diameter or less particulate matter (PM-10) are not made at the West Los Angeles site and are not available from any SCAQMD site that would be representative of the Project vicinity. The geographically closest air monitoring station for PM-10 or PM-2.5 data is in downtown Los Angeles.

Because of lower development density in the western Santa Monica Mountains than in West Los Angeles, Project site air quality is likely better than at the nearest SCAQMD station. Data from West Los Angeles is therefore a worst-case representation of the Project site air quality baseline. **Table 5.2-4** summarizes the last five years of published data for the West Los Angeles air monitoring station. Table 5.2-4 also contains PM-10 and PM-2.5 data from the downtown Los Angeles air monitoring station for informational purposes.

Ozone, the primary ingredient in photochemical smog, is an important pollution problem in the Los Angeles basin. However, near western Los Angeles, there have been only eight violations in the past five years of the federal 8-hour standard. Three days per year in the last five years exceeded the California one-hour standard. The federal 8-hour standard has been exceeded less than twice per year in the last five years. The hourly ozone maximum was highest in 2009, but there has been some improvement since. The Western Los Angeles ozone air quality problem is much less severe than in inland valleys of the basin.

The downtown Los Angeles area experiences occasional violations of standards for 10-micron diameter respirable particulate matter (PM-10). High dust levels occur during Santa Ana wind conditions, as well as from the trapped accumulation of soot, roadway dust and byproducts of atmospheric chemical reactions during warm season days with poor visibility. In downtown Los Angeles, approximately four percent of all days in the recent past experienced a violation of the State PM-10 standard. The three-times less stringent federal PM-10 standard has not been exceeded in the past five years. Maximum 24-hour PM-10 concentrations appear to be declining following a small spike in 2007.

The federal 24-hour standard was lowered from 65 to 35 micrograms per cubic meter µg/m3 in 2006. In downtown Los Angeles, the current federal 24-hour AAQS for ultra-fine particulate matter (PM-2.5) has been exceeded an average of three percent of all days since 2007.

More localized pollutants, such as carbon monoxide (CO), nitrogen oxides (NOx), etc., are low near the Project site because background levels never exceed allowable levels. There is substantial excess dispersive capacity to accommodate localized vehicular air pollutants such as NOx or CO without any threat of violating applicable ambient air quality standard.

Table 5.2-4
Project Area Air Quality Monitoring Summary
(Number of Days Standards Were Exceeded and Maximum Levels During Such Violations)

Pollutant/Standard	2007	2008	2009	2010	2011
Ozone					
1-Hour > 0.09 ppm (S)	2	3	6	2	2
8-Hour > 0.07 ppm (S)	2	8	5	3	0
8- Hour > 0.075 ppm (F)	2	2	3	1	0
Max. 1-Hour Conc. (ppm)	0.117	0.111	0.131	0.099	0.098
Max. 8-Hour Conc. (ppm)	0.088	0.097	0.095	0.078	0.069
Carbon Monoxide					
1-Hour > 20. ppm (S)	0	0	0	0	0
1-Hour > 9. ppm (S, F)	0	0	0	0	0
Max 1-Hour Conc. (ppm)	2.7	2.7	2.0	2.0	3.6
Max 8-Hour Conc. (ppm)	2.0	1.8	1.5	1.4	1.7
Nitrogen Dioxide					
1-Hour > 0.18 ppm (S)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.082	0.090	0.077	0.071	0.081
Inhalable Particulates (PM-10)[a]					
24-Hour > 50 $\mu g/m^3$ (S)	5/56	2/45	4/60	0/56	1/59
24-Hour > 150 $\mu g/m^3$ (F)	0/56	0/45	0/60	0/56	0/59
Max. 24-Hr. Conc. ($\mu g/m^3$)	77	64	70	27	53
Ultra-Fine Particulates (PM-2.5)[a]					
24-Hour > 35 $\mu g/m^3$ (F)	20/324	10/324	7/365	2/335	8/356
Max. 24-Hr. Conc. ($\mu g/m^3$)	64.2	78.3	64.1	39.2	49.3

Source: SCAQMD West Los Angeles Station (VA Hospital)
(S) = State ambient standard; (F) = Federal ambient standard
[a] = downtown Los Angeles

County of Los Angeles General Plan

The County of Los Angeles General Plan General Goals and Policies Element (adopted November 25, 1980) includes a stated objective to conserve resources and protect the environment, including eliminating air, noise and water pollution to protect health and safety. In support of this stated objective, the General Plan contains Policy 14, which seeks to "restore and protect air quality through the control of industrial and vehicular emissions, improved land use management, energy conservation and transportation planning." The General Plan Open Space and Conservation Element includes a stated objective to "support local efforts to improve air quality" and contains Policy 1 to "actively support strict air quality regulations for mobile and stationary sources, and continued research to improve air quality." Policy 1 also promotes "vanpooling, car pooling, and improved public transportation."

Local Significance Thresholds

To ensure communities already impacted by air quality issues are not unfairly impacted by additional air pollution, such as diesel exhaust, SCAQMD has developed Local Significance Thresholds (LSTs) for already impacted communities. LSTs were developed in response to the SCAQMD Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

The SCAQMD has recommended LST evaluation be incorporated into CEQA analysis for all projects, regardless of the community affected, although the use of LST thresholds is voluntary. For commercial and residential uses, LSTs are only applicable to construction activities. SCAQMD provides LST screening tables for specific source/receptor subregions of the Air District that list allowable emissions rates as a function of receptor distance from a source boundary of site.[2]

5.2.3 Thresholds of Significance

Air quality impacts are considered "significant" if they cause clean air standards to be violated where they are currently met, or if they "substantially" contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact. Three sources were consulted during the development of thresholds of significance to evaluate the Project's potential impacts to air quality: the County of Los Angeles Environmental Checklist Form (Initial Study), Appendix G of the CEQA Guidelines and SCAQMD Emissions Significance Thresholds.

Primary Pollutants

Pollutants that are emitted in their already unhealthful form, such as CO, are known as Primary Pollutants, and can generally be evaluated directly in comparison to appropriate clean air standards. Air quality impacts from primary pollutants are highest near a source of these emissions, such as a congested traffic intersection. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the SCAB for PM-10 and PM-2.5, an aggressive dust control program is required to control fugitive dust for any new construction. As stated above, a violation of the applicable standards for these pollutants where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact.

Secondary Pollutants

Some pollutants begin as a relatively benign emission, but over time can react with other atmospheric components to transform into a more unhealthful contaminant. These are referred to as Secondary Pollutants, and their impact occurs regionally, and potentially far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified without complex photochemical computer models. Therefore, SCAQMD has provided specific quantities of such emissions, independent of atmospheric transformation processes, by which an evaluation of significance can be made regarding the emissions produced by a specific project.

Table 5.2-5 presents a list of pollutants and associated emissions thresholds that has been provided by the SCAQMD for evaluating the regional impact significance of individual projects. Impacts from projects within the SCAB with emissions that exceed any of the daily emission thresholds listed in Table 5.2-5 are recommended by the SCAQMD to be considered significant.

[2] South Coast Air Quality Management District, Appendix C - Mass Rate LST Look-up Table (revised October 21, 2009), accessed at http://www.aqmd.gov/ceqa/handbook/lst/lst.html, January 24, 2013.

Table 5.2-5
SCAQMD Emissions Significance Thresholds (lbs/day)

Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3
Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.		

Sensitive Receptors

Air quality impacts are analyzed relative to those persons with the greatest sensitivity to air pollution exposure. Such persons are called "sensitive receptors." Sensitive population groups include young children, the elderly and the acutely and chronically ill (especially those with cardio-respiratory disease).

Existing residential areas are considered to be sensitive receptors because they may be occupied for extended periods, and residents may be outdoors when exposure is highest. There are no sensitive receptors immediately adjacent to the proposed development area on the Project site. The nearest existing residence is approximately 1,200 feet west of the Project site.

The SCAQMD CEQA Handbook also identifies various secondary significance criteria related to toxic, hazardous or odorous air contaminants. Health risks from toxic air contaminants (TACs) are assessed based on exposure over an assumed 70-year lifespan. Because the Project's construction activities would occur over a brief portion of the Project's lifetime, measurable off-site public health risk from diesel TAC exposure would be limited to only a brief time and significance thresholds related to TACs were not further evaluated. Additionally, recently adopted policies regarding PM-2.5 emissions associated with diesel exhaust require the gradual conversion of delivery fleets to diesel alternatives, or the use of "clean" diesel if their emissions are demonstrated to be as low as those from alternative fuels.

Based on the Initial Study Environmental Checklist prepared by the Los Angeles County Department of Regional Planning and Appendix G of the CEQA Guidelines, implementation of the Project would result in significant impacts if the Project would:

- Conflict with or obstruct implementation of applicable air quality plans of either the South Coast Air Quality Management District (SCAQMD) or the Antelope Valley Air Quality Management District (AVAQMD);
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Exceed a SCAQMD significance threshold;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

- Expose sensitive receptors to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people.

5.2.4 Project Impacts

Criteria Pollutant Emissions

Threshold: Would the Project conflict with or obstruct implementation of applicable air quality plans of either the South Coast Air Quality Management District (SCAQMD) or the Antelope Valley Air Quality Management District (AVAQMD)?

Threshold: Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Threshold: Would the Project exceed a SCAQMD significance threshold?

The California Emission Estimator Model (CalEEMod) 2011.1.1 was developed by the SCAQMD and provides a model to calculate construction emissions and operational emissions from a commercial land use project. It calculates the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions. Some of the proposed uses that are modeled represent a continuation of an existing use, and as such would not be a "new" source of emissions. For a conservative analysis, however, this evaluation has included estimations of emissions from the following proposed uses as a worst-case emissions scenario. The following Project components were modeled for construction and operation emissions:

- Educational Facilities – 48,164 square feet;
- Golf Course – 107 acres;
- Restaurant/Clubhouse – 30,147 square feet;
- Bungalows (40 units) – 109,140 square feet; and
- Support Facilities (maintenance building, warehouse, golf cart storage, security building, poolside shower/changing building) – 37,636 square feet.

Construction Period Impacts

Construction of the Project would require grading of 120,000 cubic yards of cut and 120,000 cubic yards of fill with grading balanced on-site. As such, equipment emissions were calculated presuming the cut and fill grading would be balanced on-site and no soil import or export would be required.

Construction-Related Exhaust Emissions

Exhaust emissions would result from on- and off-site heavy equipment. The types and numbers of equipment would vary among contractors such that estimated emissions cannot be quantified with certainty. No import or export of fill material would be required for the Project and earthwork would be balanced on site. It was estimated Project construction would commence in 2014.

Initial site preparation and grading would gradually shift toward infrastructure development, followed by paving and painting, resulting in variations in daily and annual construction emissions as construction of the Project progresses. The CalEEMod 2011.1.1 computer model was used to calculate construction activity emissions based on CalEEMod's default fleet for a project of this size with the addition of grading equipment. **Table 5.2-6** shows the representative construction equipment fleet used in the CalEEMod analysis to calculate the Project's estimated maximum daily emissions from construction activities.

Table 5.2-6
CalEEMod Construction Activity Equipment Fleet

Site Prep (6 months)	3 Dozers
	4 Tractor/Loader/Backhoes
Grading (6 months)	1 Excavator
	1 Dozer
	1 Grader
	3 Scrapers
	2 Tractor/Loader/Backhoes
Construction (2 years)	1 Crane
	3 Forklifts
	1 Generator Set
	3 Tractor/Loader/Backhoes
	1 Welder
Paving (2 months)	2 Pavers
	2 Paving equipment
	2 Rollers

Utilizing this indicated equipment fleet, the worst-case daily emissions from Project construction are calculated by CalEEMod and are listed in **Table 5.2-7** below. The off-road equipment emissions load factors were adjusted in CalEEMod to account for a 33 percent reduction attributable to overestimation of load factors, which CARB has indicated to be appropriate.[3] The only required mitigation measure analyzed was to water exposed surfaces three times per day for dust control. The full CalEEMod report is provided in Appendix B.

Table 5.2-7
Construction Activity Emissions
Maximum Daily Emissions (pounds/day)

Construction Emissions (Estimated Maximum)	ROG	NOx	CO	SO_2	PM-10	PM-2.5	CO_2 (e)
2014							
Unmitigated	8.6	70.3	37.8	0.1	20.8	12.4	8,612.9
Mitigated	8.6	70.3	37.8	0.1	9.7	6.3	8,612.9
2015							
Unmitigated	4.0	25.6	23.7	0.1	2.8	1.5	4,487.8
Mitigated	4.0	25.6	23.7	0.1	2.8	1.5	4,487.8
2016							
Unmitigated	64.1	23.4	23.1	0.1	2.6	1.4	4,475.6
Mitigated	64.1	23.4	23.1	0.1	2.6	1.4	4,475.6
2017							
Unmitigated	64.0	2.2	2.6	0.0	0.4	0.2	440.9
Mitigated	64.0	2.2	2.6	0.0	0.4	0.2	440.9
SCAQMD Thresholds	75	100	550	150	150	55	-

Source: CalEEMod.2011.1.1 (output included in Appendix B)
Mitigated refers to emission reductions from applying water to exposed surfaces three times daily for dust control

[3] In September 2010, the CARB announced that its methods used to estimate the load factor for off-road equipment were incorrect and led to an overestimate of emissions by a factor of 33 percent. CARB is currently revising their emissions model, OFFROAD which has not yet been released. CalEEMod is based on OFFROAD.

As shown in Table 5.2-7, the Project's peak daily construction activity exhaust emissions are below their respective SCAQMD CEQA significance thresholds. Therefore, the Project's air quality impacts from exhaust emissions during construction activities would be less than significant (**Class III**).

Construction-Related Fugitive Dust Emissions

Dust is typically a major concern during construction activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Emission rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). These parameters are not known with any reasonable certainty prior to Project development and may change from day to day. Any assignment of specific parameters to an unknown future date is speculative and conjectural.

Because of the inherent uncertainty in the predictive factors for estimating fugitive dust generation, regulatory agencies typically use one universal "default" factor based on the area disturbed assuming all other input parameters into emission rate prediction fall into midrange average values. This assumption may or may not be totally applicable to site-specific conditions on the Project site. As noted previously, emissions estimation for Project-specific fugitive dust sources is therefore characterized by a considerable degree of imprecision.

Average daily PM-10 emissions during site grading and other disturbance are shown in the CalEEMod.2011.1.1 computer model to be about 10 pounds per acre (Table 5.2-7). This estimate presumes the use of reasonably available control measures (RACMs) as shown in MM5.2-1. The SCAQMD requires the use of best available control measures (BACMs) for fugitive dust from construction activities. In addition, the Project would comply with SCAQMD Rule 403 (Fugitive Dust), which would require measures to control fugitive dust and ensure fugitive dust would not significantly impact offsite receptors.

Current research in particulate-exposure health suggests the most adverse effects derive from ultra-small diameter particulate matter comprised of chemically reactive pollutants such as sulfates, nitrates or organic material. A national clean air standard for particulate matter of 2.5 microns or smaller in diameter (PM-2.5) was adopted in 1997. A limited amount of construction activity particulate matter is in the PM-2.5 range. PM-2.5 emissions are estimated to comprise 10 to 20 percent of PM-10.

In addition to fine particles that remain suspended in the atmosphere semi-indefinitely, construction activities generate many larger particles with shorter atmospheric residence times. This dust is comprised mainly of large diameter inert silicates that are chemically non-reactive and are further readily filtered out by human breathing passages. These fugitive dust particles therefore pose more of a potential soiling nuisance as they settle out on parked cars, outdoor furniture or landscape foliage rather than an adverse health hazard. The deposition distance of most soiling nuisance particulates is less than 100 feet from the source[4] under normal wind conditions. There are no sensitive uses within 100 feet of the construction grading activity.

As shown in Table 5.2-7, the Project's peak daily construction activity dust emissions (PM-10 and PM-2.5) are below their respective SCAQMD CEQA significance thresholds. Therefore, the Project's air quality impacts from dust emissions during construction activities would be less than significant (**Class III**).

[4] USEPA, AP-42, Compilation of Air Pollutant Emission Factors, Chapter 13.2. 1995.

Operational Impacts

Operation of the Project would result in emissions of air pollutants generated directly by mobile and stationary sources, as well as indirectly from off-site sources such as electricity generation facilities. Operational emissions for proposed uses were calculated using CalEEMod 2011.1.1, for an assumed build-out year of 2017.

Direct emissions from mobile sources would be generated by transportation for staff and guests of the Project. The Project's expected emissions from mobile sources were evaluated using the trip generation factors specified in Section 5.13, Transportation and Traffic, which determined the Project would generate 998 average daily trips (ADT) for vehicles accessing the site. The Project would provide shuttle service to local airports to minimize the number of guest vehicles accessing the site, however, any resulting traffic reductions have not been quantified and thus are not considered in this evaluation.

Operation of the Project's facilities, including overnight accommodations, would generate area source emissions derived from organic compounds from cleaning products and landscape equipment (including lawn mowers, roto-tillers, blowers, hedge trimmers, chain saws, sprayers air compressors and pumps) and maintenance, etc. The contribution of these sources is incorporated into the analysis below.

The Project's operation would also result in indirect emissions produced by electrical generation plants operated by Southern California Edison (SCE). Such off-site emissions would be substantially reduced, as the Project would provide photovoltaic panels above parking structures with the goal of providing renewable energy to meet most of the Project's needs. For a conservative analysis, this evaluation analyzes indirect emissions from energy generation in the absence of onsite provision of electricity from renewable sources (without Project features), and with provision of solar panels to produce 50 percent of the Project's electricity needs on-site (with Project features).

Table 5.2-8 shows the emissions to be generated by the Project without the incorporation of Project design features as calculated using CalEEMod. **Table 5.2-9** shows the Project's emissions with incorporation of Project features such as onsite solar panels (assuming production of 50 percent of Project demands) and water efficiency features such as a more efficient irrigation system and water-wise turf provided for the remodeled golf course to reduce irrigation demands. Estimated emissions shown in Table 5.2-9 also include reductions from Project features that would provide gas-fired hearths and not wood burning fireplaces.

Table 5.2-8
Daily Operational Impacts without Project Features

Source	Operational Emissions (lbs/day)						
	ROG	NOx	CO	SO_2	PM-10	PM-2.5	CO_2
Area	10.1	0.2	16.6	0.0	2.1	2.1	1,037.2
Energy	0.3	2.8	2.3	0.0	0.2	0.2	3,449.5
Mobile	4.4	9.9	41.6	0.1	9.9	0.6	8,231.5
Total	**14.8**	**13.3**	**60.4**	**0.1**	**12.2**	**3.0**	**12,718.3**
SCAQMD Threshold	55	55	550	150	150	55	-
Exceeds Threshold?	No	No	No	No	No	No	NA

Table 5.2-9
Daily Operational Impacts with Project Features

Source	Operational Emissions (lbs/day)						
	ROG	NOx	CO	SO_2	PM-10	PM-2.5	CO_2
Area	5.9	0.0	3.4	0.0	0.1	0.1	773.1
Energy	0.3	2.8	2.3	0.0	0.2	0.2	3,449.5
Mobile	4.4	9.9	41.6	0.1	9.9	0.6	8,231.5
Total	**10.6**	**12.8**	**47.2**	**0.1**	**10.2**	**0.9**	**12,454.2**
SCAQMD Threshold	55	55	550	150	150	55	-
Exceeds Threshold?	No	No	No	No	No	No	NA

As shown in Table 5.2-8, even without inclusion of Project design features, the Project's emissions would not exceed significance thresholds. As such, the Project's operational emissions, both unmitigated and mitigated, would be less than significant (**Class III**). Nevertheless, the Project would implement several design features to reduce its indirect emissions, and mitigation measure 5.2-3 has been included to further reduce potential impacts.

Micro-Scale Emissions Impacts

There is a direct relationship between traffic congestion and carbon monoxide (CO) impacts since exhaust fumes from vehicular traffic are the primary source of CO. Because CO is a localized gas that dissipates very quickly under normal meteorological conditions, CO concentrations decrease substantially as distance from a source increases. The highest CO concentrations are typically found in areas directly adjacent to congested roadway intersections where vehicle exhaust has the potential to accumulate in create pockets of elevated levels of CO which are called "hot spots".

Micro-scale air quality impacts have traditionally been analyzed in environmental documents where the air basin was a non-attainment area for CO. However, the SCAQMD has demonstrated in the CO attainment redesignation request to EPA there are no "hot spots" anywhere in the air basin, even at intersections with much higher traffic volumes and congestion than that observed in the rural areas of the western Santa Monica Mountains. If the worst-case intersections in the air basin have no "hot spot" potential (i.e., locations where emission concentrations expose individuals to elevated risks of adverse health effects), any local impacts near the Project site would be well below thresholds with an even larger margin of safety.

To verify this conclusion, a CO screening analysis was performed at the intersection of Mulholland Highway and Kanan Road, which is the intersection that experiences the highest level of congestion in the vicinity of the Project area as evaluated in the Project's traffic report (Appendix H). One-hour CO concentrations were calculated from the edge of pavement adjacent to this intersection. The significance of localized project impacts depends on whether the Project would cause substantial concentrations of CO due to Project-related mobile-source emissions that result in an exceedance of the California one-hour and eight-hour CO standards as shown in Table 5.2-1, which are 20 ppm and 9 ppm, respectively.

To determine CO concentration levels at area intersections for existing and future traffic conditions for the A.M. and P.M. peak hours, calculations were made for a microscale impact analysis using turning movement data and levels of service (LOS) provided in the Project traffic report (Appendix H). The results of the microscale impact analysis showed with Project implementation, inclusive of the local

background concentration, maximum one-hour concentration would be 4.1 ppm, which would be well below the one-hour standard of 20 ppm. The maximum ambient 8-hour CO concentration with the Project would be 1.9 ppm inclusive of the background concentration, which is below the 9 ppm significance threshold. Therefore, micro-scale (CO hot spots) air quality impacts would be less than significant (**Class III**).

AQMP Consistency

Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The Project would not develop residences that would affect population projections considered in development of the AQMP, and would thus be considered consistent with the air quality related regional plans and should not jeopardize attainment of state and federal ambient air quality standards in the South Coast Air Basin. Therefore, impacts related to population growth would be less than significant (**Class III**).

Developments such as the Project do not directly relate to the AQMP in that there are no specific air quality programs or regulations governing general development. The Project would not increase population and would thus be consistent with regional growth projections; however, the SCAQMD does not favor designating regional impacts as less than significant solely based on consistency with regional growth projections. The previous impact evaluation presented in subsection 5.2.4 provides a Project-specific analysis of emissions in comparison to significance thresholds provided by SCAQMD, based on the results of the Project's emissions analysis, which indicate that the Project would not exceed SCAQMD thresholds, as well as being consistent with projected growth.

Sensitive Receptor Impacts

Threshold: Would the Project expose sensitive receptors to substantial pollutant concentrations?

Health Risk Assessment

Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24 hour per day, 365 days per year, 70-year lifetime exposure. The SCAQMD does not generally require the analysis of construction-related diesel emissions relative to health risk due to the short period for which diesel exhaust would occur. The majority of diesel exhaust would occur during the grading phase, which would be a period of approximately six months. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over a period of several years due to the lack of health risk associated with such a brief exposure. As such, construction related impacts due to diesel exhaust toxicity would be less than significant (**Class III**).

Local Significance Impacts

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to the SCAQMD Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the Project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours, such as a residence, hospital or convalescent facility.

Although the western Santa Monica Mountains region in which the Project would be located does not generally have highly impacted areas, in order to present a thorough analysis of the Project's air quality impacts, emissions resulting from all project construction activities were evaluated for LST impacts. The LST analysis was based on the nearest sensitive receptors to the proposed grading areas, which are residences, located approximately 1,200 feet west of the development area. The Project's construction emissions were compared to the SCAQMD Mass Rate LST Look-up Table's reported allowable emissions for the Northwest Coastal LA County Source Receptor Area[5] where the site is located. Since construction activity that would occur at this nearest distance from an existing residence would only represent a portion of the overall construction activities, using the construction emissions for the entire Malibu Institute Project site provides for a conservative analysis. Most construction activity would have a greater separation distance from sensitive receptors.

Sensitive receptors in the Project vicinity would include rural residences located west of the Project site along Mulholland Highway. These homes are approximately 1,200 feet from the Project's proposed development area and are considered the closest sensitive uses for this analysis. Additionally, there are two youth offender correctional facilities (Camps Miller and Kilpatrick) that are located east of the Project site lying north of Encinal Canyon Road. These youth camps are approximately 2,000 feet from the Project's proposed development area.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NOx), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant concentration data is currently published for 1, 2, and 5-acre sites for varying distances. Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, the following tables should be used to determine the maximum daily disturbed-acreage for comparison to LSTs. **Table 5.2-10** shows the maximum acreage to be disturbed on a daily basis.

Table 5.2-10
Maximum Daily Disturbed Acreage

Equipment Type[a]	Number of Vehicles (operating simultaneously)	Acres/8-hr-day	Total Acres Disturbed/8-hr-day
Crawler Tractor	2	0.5	1.0
Graders	1	0.5	0.5
Rubber Tired Dozers	1	0.5	0.5
Scraper	3	1.0	3.0
		Total	**5.0**

[a] SCAQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds, accessed at http://www.aqmd.gov/ceqa/handbook/lst/CalEEModguidance.pdf, January 14, 2013.

[5] South Coast Air Quality Management District, Appendix C - Mass Rate LST Look-up Table (revised October 21, 2009), accessed at http://www.aqmd.gov/ceqa/handbook/lst/lst.html, January 24, 2013.

Based on Table 5.2-10, the Project would result in a maximum of 5 acres disturbed during peak construction grading activity.

SCAQMD provides LST screening tables for 25, 50, 100, 200, and 500-meter source-receptor distances. The nearest residential use is more than 1,200 feet (approximately 365 meters) from the Project perimeter and therefore a receptor distance of 350 meters was utilized for analysis by interpolating between the 200 and 500 meter data. **Table 5.2-11** provides a comparison of the Project emissions (pounds per day) to the appropriate LST.

Table 5.2-11
LST and Project Emissions (pounds/day)

Construction Activities	Max On-Site Emissions [a]			
	CO	NOx	PM-10	PM-2.5
Site Prep	29	51	9	6
Grading	37	70	8	4
Construction	18	24	2	2
Paving	16	22	2	2
Project LST [b]	7,425	280	129	62

[a] CalEEMod Output in Appendix B (maximum mitigated emissions from on-site construction).
[b] Based on maximum disturbance of 5 acres/day with sensitive receptors at 350 meters (NW Coastal Los Angeles).

As seen in Table 5.2-11, on-site emissions would be well below the LST for construction activities based on the acreage to be disturbed and the distance to sensitive receptors. Therefore, LST impacts would be less than significant (**Class III**).

Objectionable Odors

Threshold: Would the Project create objectionable odors affecting a substantial number of people?

The Project would provide an onsite wastewater treatment and water recycling system designed to treat 100 percent of effluent to standards for irrigation use on the remodeled golf course. The treatment system would be installed underground near the security/information building. The nearest off-site sensitive receptor would be residences located to the west of the Project site along Mulholland Highway at a distance of at least 2,600 feet (approximately 0.5 miles) from the wastewater treatment and water recycling system. As a commercial enterprise designed to accommodate guests for overnight stays, the Project would provide a system that would not result in odor generation that would be considered objectionable within the proposed development area, or at off-site receptors. The proposed wastewater treatment facility would use a biological odor control filter to capture and treat the headspace of all below ground tanks in the secondary/tertiary treatment system area. The biological odor control filter consists of a duplex odor control blower and an odor control filter containing activated carbon media. The Project's air quality impacts related to objectionable odors would be less than significant (**Class III**).

5.2.5 Cumulative Impacts

Threshold: Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or

state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

A project would have a less-than-significant cumulative air quality impact if it were consistent with an adopted General Plan designed to evaluate regional conditions.[6] The Project would not create any substantial increase in regional emissions not already anticipated in SCAG's Regional Comprehensive Plan. Cumulative impact significance is based upon a "substantial" contribution to regional emissions. The generation of 998 additional daily trips would not contribute substantially to regional air pollution. The SCAQMD CEQA Handbook further suggests a performance standard for average vehicle ridership (AVR) of 1.5 persons per vehicle as evidence of mitigation of any cumulative impacts. The Project would provide multi-occupant shuttle services from major airports and from meeting participant employment centers to raise the AVR to above the recommended performance standard. Cumulative air quality impacts would be less than significant (**Class III**).

5.2.6 Mitigation Measures

Project construction emissions from diesel exhaust and fugitive dust would be below SCAQMD recommended CEQA thresholds without mitigation measures incorporated. As all construction projects can produce fugitive dust emissions, the County requires the application of standard dust control measures for all discretionary construction activities even if CEQA thresholds are not exceeded. Although not required to achieve a less-than-significant impact, the following mitigation measures are recommended to minimize fugitive dust generation and equipment emissions to the maximum extent feasible.

MM5.2-1 The applicant shall prepare a Construction Management Plan to comply with SCAQMD established minimum requirements for construction activities to reduce fugitive dust emissions. The Plan shall include the following dust control measures:

- The simultaneous mass grading disturbance area shall be limited to 10 acres per day. Application of soil stabilizers to inactive areas according to manufacturers specifications (previously graded areas inactive for ten days or more);
- Preparation of a high wind dust control plan, implementation of plan elements, and termination soil disturbance when winds gusts exceed 25 mph;
- Stabilization of previously disturbed areas if subsequent construction is delayed;
- Covering all stockpiles with tarps if left unattended for more than 48 hours;
- All trucks hauling dirt, sand, soil or other loose materials are to be covered;
- Appoint a construction relations officer to act as community liaison concerning on-site construction activity including resolution of issues related to PM-10 generation.
- Portions of the site that are undergoing surface earth moving operations shall be watered. Exposed surfaces and haul roads will be watered three times/day.
- Vegetative cover to be utilized onsite shall be planted as soon as possible to reduce the disturbed area subject to wind erosion. Irrigation systems required for these plants shall be installed as soon as possible to maintain good ground cover and to minimize wind erosion of the soil.
- Any construction access roads (other than temporary access roads) shall be paved as soon as possible and cleaned after each workday. The maximum vehicle speed on unpaved roads shall be 15 mph.
- Grading operations shall be suspended during any first stage ozone episodes.

[6] SCAQMD, CEQA Handbook, Section 9.5, 1993.

MM5.2-2 Non-particulate construction activity emissions are not predicted to exceed SCAQMD CEQA thresholds. Nonetheless, the following control measures shall be implemented:

- Construction parking shall be configured to minimize the potential for traffic interference and vehicle idling.
- Any construction equipment using direct internal combustion engines shall use a diesel fuel with a maximum of 0.05 percent sulfur and a four-degree retard.
- Equipment and vehicle engines shall be maintained in good condition and in proper tune, according to manufacturer's specifications and per SCAQMD rules, to minimize exhaust emissions. Tier 3 rated engines shall be used for all equipment during site grading, if available.
- Equipment whose engines are equipped with diesel oxidation catalysts shall be utilized, if available. Construction operations affecting off-site roadways shall minimize obstruction of through-traffic lanes and shall be limited to off-peak hours, as permitted. Truck deliveries occurring during construction shall be consolidated to the extent feasible.
- Idling trucks or heavy equipment shall turn off their engines if the expected duration of idling exceeds five (5) minutes as required by law.
- On-site heavy equipment used during grading and construction shall be equipped with diesel particulate filters if feasible.
- All building construction shall comply with energy use guidelines in Title 24 of the California Code of Regulations.
- Construction equipment operations shall be suspended during any first stage smog alert.
- Low VOC architectural and asphalt coatings shall be used on site and shall comply with AQMD Rule 1113-Architectural Coatings.

MM5.2-3 Operational emissions are not predicted to exceed SCAQMD CEQA thresholds. Nonetheless, to further reduce potential operational emissions, the applicant shall install gas lines for any hearth applications and prohibit wood burning in Project hearths.

5.2.7 Residual Impacts

The Project would not result in an exceedance of SCAQMD significance thresholds regarding emissions from construction or operational activities. As such, all air quality impacts would be less than significant without mitigation. Mitigation measures identified above would further reduce emissions generated by the Project to the extent feasible. Therefore, the Project's residual impacts to air quality would be less than significant (**Class III**).

5.3 BIOLOGICAL RESOURCES

This section identifies biological resources present on the Project site and assesses the Project's impacts upon those resources. It is based on previous biological studies of the site, a review of those studies listed below, and field assessment and research conducted by Envicom Corporation.

5.3.1 Existing Conditions

This section discusses the regional setting, site conditions, and the existing and potentially occurring biological resources at the Project site. Where relevant, biological resources within the surrounding area are also discussed. For purposes of this discussion, Project site refers to the entire 650-acre property, while the term disturbance limits refer to the limits of the proposed future buildings, golf course, associated infrastructure, and fuel modification areas.

Methodology

The description of existing conditions provided below is based on literature review, field surveys and investigations, and additional research.

Literature Review

The literature review included information available in standard biological references (e.g., Baldwin, et al. 2012; Sawyer, Keeler-Wolf, and Evens 2009; Reid 2006; Stebbins 2003; and Raven, Thompson, Prigge 1986), peer reviewed journals, and relevant lists and databases maintained by California Department of Fish and Wildlife (CDFW),[1] and other resource agencies pertaining to the status and known occurrences of sensitive and special-status biological resources. Other sources of information included aerial photographs, topographic maps, soil survey maps, climatic data, relevant policy and planning documents, and site-specific and non-site-specific biological studies of the site. The following sources were among those reviewed or consulted during preparation of this section (for a complete list see the references section):

- *California Natural Diversity Database (CNDDB) Rarefind 3 Element Occurrence Report for Triunfo Pass, Point Dume, Malibu Beach, Newbury Park, Thousand Oaks, and Calabasas Quadrangles*, CDFW, data as of September 2012;
- *List of Special Vascular Plants, Bryophytes, and Lichens,* CDFW, October 2012;
- *Special Animals*, CDFW, January 2011;
- *California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California report for the 7.5' USGS Triunfo Pass, Point Dume, Malibu Beach, Newbury Park, Thousand Oaks, and Calabasas Quadrangles*, CNPS, data as of September 2012;
- *FWS Critical Habitat Mapper for Threatened and Endangered Species*, U.S. Fish and Wildlife Service (USFWS), data as of September 2012;
- *Biogeographic Information and Observation System (BIOS),* CDFW, data as of September 2012;
- *List of Vegetation Alliances and Associations (Natural Communities List)*, CDFW, September 2010;
- *A Manual of California Vegetation, 2nd ed*., Sawyer, J.O., et al., 2009;
- *Malibu Local Coastal Plan*, Los Angeles County, 1982.

[1] Formerly known as the California Department of Fish and Game (CDFG).

- *County of Los Angeles General Plan Conservation and Open Space Element,* County of Los Angeles, November 25, 1980;
- *Draft Los Angeles County Plan 2035 Conservation and Natural Resources Element,* County of Los Angeles, May 2012;
- *National Park Service Santa Monica Mountains National Recreation Area Land Protection Plan*, National Park Service, 1998;
- *Malibu Golf Club Project Biological Constraints Analysis,* Envicom Corporation, September 21, 2012;
- *Malibu Institute Project Biota Report,* Envicom Corporation, 2013;
- *Malibu Institute Project Jurisdictional Delineation,* Envicom Corporation, 2013;
- *Malibu Institute Oak Tree Report,* TREES, Etc., July 20, 2012;
- *Malibu Institute Project: A Plan toward Restoring Trancas Creek, a Significant Stream in the Santa Monica Mountains National Recreation Area,* Dr. Lee B. Kats, 2013; and,
- *Malibu Institute Project: A Plan toward Restoring Trancas Creek, a Significant Stream in the Santa Monica Mountains National Recreation Area. A Report on California Newt and Western Pond Turtle Surveys --- 2013,* Dr. Lee B. Kats, 2013.

Biological Surveys

Biological field surveys were conducted from late summer through late fall of 2007 and annually in the spring from 2009 through 2013 by Envicom Corporation biologists C. Wishner, J. Anderson, T. Barns, and/or S. Jones. All surveys were conducted on foot. The surveys involved a search for protected and regulated biological resources, including rare, threatened, and endangered plant and wildlife species, special habitats, sensitive natural communities, and other protected resources, and evaluation of the importance of the site for wildlife movement. Surveys were performed by walking roads and trails that traverse the site, as well as exploring areas where vegetation was penetrable, which allowed visual access to all but the densest areas of chaparral. The survey methodology resulted in an investigation of all plant communities and habitat types throughout the Project site, e.g., chaparral, riparian woodlands, coastal scrub, rock outcrops, disturbed sites, roadside vegetation, and ponds.

An inventory of the vascular plants and wildlife observed at the site was recorded and all species were identified to the taxonomic level necessary to determine their status. Vascular plant species determinations were made using *The Jepson Manual: Vascular Plants of California, 2nd edition*. Vertebrate wildlife species observed were identified by direct observation, sign (e.g., tracks, scat, or burrows), or vocalization. Wildlife species identification typically relied upon Reid (2006), Sibley (2009), and Stebbins (2003). Populations of special-status species and in some cases sensitive natural communities were geo-referenced using a handheld GPS unit. For additional information on the field surveys, including dates, times, personnel, conditions, and scope, see the methods section of the *Malibu Institute Project Biota Report* (Envicom Corporation, 2013) in Appendix D.1 of this Draft EIR.

A butterfly survey was conducted on April 15, 2009. The survey was performed by walking accessible trails and roads throughout the site, while focusing on native habitats surrounding the existing golf course. Butterflies were captured for identification and released. For a list of the butterfly species observed during the survey, see Appendix D.1.

Focused surveys for the California newt (*Taricha torosa*) were conducted on March 26 and June 3, 2013 by and under the supervision of Dr. L. Kats of Pepperdine University. The surveys were conducted within the on-site stream course that is most likely to be breeding habitat, as well as at the golf course ponds and within upland habitats near the headwaters of Trancas Creek. The methods and results of the surveys are provided in *Malibu Institute Project: A Plan toward Restoring Trancas Creek, a Significant Stream in the Santa Monica Mountains National Recreation Area – A Report on California Newt and Western Pond Turtle Surveys -- 2013* by Dr. L. Kats (See Appendix D.3).

Focused surveys for the western pond turtle (*Emys marmorata*) were conducted at the three largest golf course ponds between June 13 and June 22 and again between mid-July to mid-August, 2013 by and under the supervision of Dr. L. Kats of Pepperdine University. The surveys involved the daily inspection of baited collapsible mesh traps as well as visual surveys two days in June. All turtles captured were released back into the ponds. The methods and results of the surveys are provided in *Malibu Institute Project: A Plan toward Restoring Trancas Creek, a Significant Stream in the Santa Monica Mountains National Recreation Area – A Report on California Newt and Western Pond Turtle Surveys -- 2013* by Dr. L. Kats (See Appendix D.3).

A delineation of jurisdictional waters, wetlands, and riparian habitat for areas within the Project limits of disturbance and areas approximately 100 feet upstream was conducted in October and December 2012 by Envicom Corporation, using the methods described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (September 2008) and definitions and protocols described by the CDFW for identifying and classifying jurisdictional streambed and riparian habitats. A delineation of areas meeting the single-parameter wetland definition used by the California Coastal Commission also was performed. For additional details on the field investigation and methodology, refer to the *Malibu Institute Project Jurisdictional Delineation Report* (Envicom Corporation, 2013) in Appendix D.2 of this Draft EIR.

TERACOR biologists collected field data during multi-season surveys from May 2006 to 2007. Field surveys were conducted on foot within accessible habitat throughout the Project site. Steep cliffs and extremely dense brush were generally avoided for safety reasons. TERACOR field personnel conducted focused surveys for flora and performed a delineation of areas under Army Corps of Engineers (USACE) and CDFW jurisdiction. Surveys for TERACOR were performed by Samuel Reed, Principal, assisted by T. Searl, F. Perez, J. Reed, N. Bruennel, N. Albers, and C. Perez.

TERACOR biologists S. Reed, T. Searl, J. Reed, and F. Perez conducted protocol surveys for the federally Endangered least Bell's vireo (*Vireo bellii pusillus*) and other riparian nesters (avifauna) at eight locations throughout the golf course and surrounding areas in compliance with the *Least Bell's Vireo Survey Guidelines* issued by the USFWS, dated January 19, 2001. Surveys were conducted on May 13, May 23, June 5, June 15, June 25, and July 5, July 15, and July 26, 2006 between the hours of 6:00 a.m. and 11:00 a.m. No least Bell's vireos were detected during the surveys.

Regional Setting

The Project site is located at mid to upper elevations on the southern flank of the Santa Monica Mountains. The Santa Monica Mountains are the southernmost range of the east/west trending Transverse Ranges geomorphic province. The Santa Monica Mountains have undergone fairly rapid uplift, as evidenced by generally rugged terrain and deeply incised stream canyons. The climate at mid to upper elevations of the Santa Monica Mountains is moderate year round, with a frost-free period that ranges from 290 to 350 days and mean annual temperatures of 60 to 64 degrees Fahrenheit (F) (Wasner, A. 2006). Precipitation averages 18 to 23 inches annually, and fog occurs primarily in

spring (Evens, J. and Keeler-Wolf, T., 2006). Vegetation typical of the southern flank of the Santa Monica Mountains is coastal sage scrub transitioning to chaparral at higher elevations. The undeveloped portions of the site that extend northerly to Mulholland Highway and the southern half of the site extending south of Encinal Canyon Road are covered with intact stands of chaparral. Riparian scrub and woodlands are also a major component of habitats in the surrounding area. A sequence of andesitic outcrops lies immediately north of the Project site along the crest of the range. These outcrops are among the highest elevations in the vicinity and they generally tower above the surrounding terrain, including most of the Project site.

Privately-owned property borders the western, northern and northeastern sides of the Project site, and much of it exhibits a trend toward rural and equestrian residential development. Some large properties north of Mulholland Highway have undergone agricultural development with removal of native chaparral and scrub vegetation to make way for vineyards and avocado groves. Many of the residential properties developed in the Project vicinity are situated in rugged terrain, and often contain relatively undisturbed native habitats beyond the required fire-clearance zones around structures. State of California-owned property and Camps Miller and Kilpatrick abut the southeastern corner of the Project site. Both State- and Federally-owned open space front along nearly the entire southern boundary of the Project site. To the south of the Project site, the Backbone Trail stretches east/west along the crests of ridges that are mostly on public land. County of Los Angeles Fire Camp #13 occupies a site on State-owned property that is situated on Encinal Canyon Road approximately 3,000 feet southwest of the entry road to the golf course on the Project site.

Project Site Conditions

The Project site is situated in a bowl created by the crest of the Upper Trancas Canyon drainage basin. It is situated almost entirely within the upper watershed area of Trancas Canyon, with the exception of a small, northerly extension that extends into the upper watershed of an unnamed tributary of Carlisle Canyon. The on-site topography ranges in elevation from peaks that reach 1,900 feet to 2,300 feet above mean sea level (MSL) in the northeast and northwest, to valley bottom elevations that fall to approximately 1,300 feet above MSL.

The Project site consists of relatively narrow ridgelines and crests of ridge-spur slopes and narrow V-shaped canyons that are rugged and youthful in appearance as is often typical of areas experiencing tectonic uplift. The widest valley landform feature on-site contains the developed golf course, which is located in the southern interior portion of the Project site. The undeveloped portions of the Project site that extend from Mulholland Highway to Encinal Canyon Road are covered with intact stands of chaparral and scrub vegetation, which are contiguous with equivalent undisturbed vegetation on adjacent private and publicly-owned properties. Locations with rock outcrop and shallow bedrock features occur along the sides and crests of the higher-elevated slopes that surround the developed golf course.

Several steep drainages leading from the crest of the range pass through rockland and chaparral covered slopes and converge onto the artificial fill that constitutes the developed golf course. A number of detention basins are located around the periphery of the existing development and golf course that serve to dissipate the high energy of runoff from the steepest headwater slopes. These detention basins are designed to intercept and collect the fluvial sediments, and then to direct natural runoff via underground culverts into four artificially created ponds on the golf course. The headwaters of the mainstem of Trancas Creek traverse and are located, to large extent, on the Project site. Two natural segments of the Trancas Creek “blue-line stream” indicated on the Point Dume, California USGS topographic map (1950 edition) no longer exist on the Project site, as these

segments were culverted when the golf course was developed in the 1970s and now flow beneath the golf course grounds. Near the entrance to the Project site from Encinal Canyon Road any excess water flow from the golf course ponds is discharged into the mainstem of the creek, which subsequently passes under Encinal Canyon Road and continues downstream via Trancas Creek to the Pacific Ocean.

Existing Biological Resources

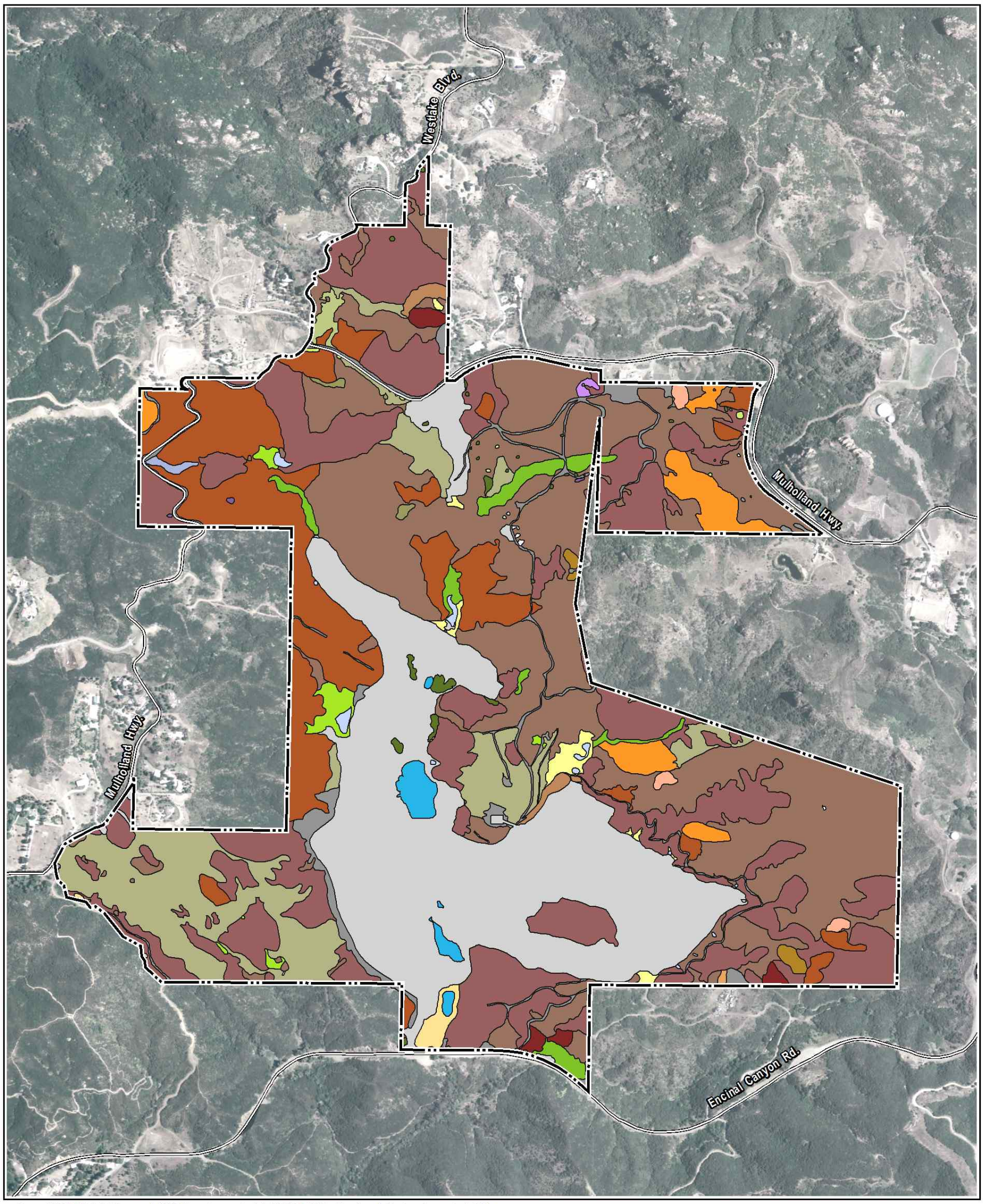
Vegetation and CDFW Sensitive Plant Communities

There are twenty-seven plant communities on the Project site, based on the system of classification presented on the *List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database* (CDFW 2003), as shown on **Figure 5.3-1**, Plant Communities. The majority of these plant communities fit within four broader natural categories, namely chaparral, coastal scrub, woodland, and grassland. Using these broader categories, the dominant plant community on the Project site is chaparral, which through various disturbances contains or is locally dominated by plant species that are typically classified as coastal scrub. Isolated oak trees or concentrations of oak trees among the chaparral are mapped on Figure 5.3-1 as woodlands. Riparian woodland and patches of riparian scrub surround Trancas Creek as well as some of the other intermittent and ephemeral drainages on the Project site. At some locations, openings among the brush and scrub are dominated by herbaceous cover, which is classified as grassland. Other mapped units do not fit into any of these four broad natural categories, such as rocklands, freshwater marsh, and aquatic habitats. Rocklands are so sparsely covered that only a few species of vascular plants, including spike-moss, ferns, bryophytes, and lichens are the dominant cover. Freshwater marsh and aquatic communities are found at the golf course ponds and along the section of Trancas Creek to the east of the access road to the golf club (Clubhouse Drive). Still other mapped areas are developed, non-natural, or highly disturbed.

In **Table 5.3-1,** the units of vegetation presented on Figure 5.3-1 have been cross-referenced with the most up-to-date plant community classification recognized by the State of California, as provided in the *Manual of California Vegetation, 2nd edition* (Sawyer, J.O., et al. 2009) and the *List of Alliances and Associations* (*Natural Communities List*) (CDFW, September 2010). Also provided are the most recent Global and State rarity rankings for these communities, which are analogous to rankings provided for species reported in the California Natural Diversity Database (CNDDB). Thus, an alliance marked with an S1 through S3 code is considered to be a rare or sensitive plant community, or a CDFW Natural Community of Special Concern. Rare and sensitive plant communities are protected pursuant to CEQA, and impacts to these resources must therefore be avoided or mitigated.

The CDFW sensitive plant communities on the Project site include California Sycamore Woodland (G3S3), California Walnut Groves (G3S3.2), California Bay Forest (G4S3), Blue Elderberry Stands (G3S3), Red Willow Thickets (G3S3), Purple Needlegrass Grassland (G4S3?), Creeping Ryegrass Grassland (G4S3), Foothill Needlegrass Grassland (G3?S3?), Giant Wildrye Grassland (G3S3), and Spike-Moss Mats (G4S3).[2]

[2] A "?" denotes an inexact numeric rank due to insufficient samples over the full, expected range of the vegetation type, but existing information points to the rank given.



Source: USDA-FSA Aerial Photograph, 2005. Vegetation mapping by TERACOR, 2007, with updates by Envicom Corporation in 2012.

Legend

- Project Boundary
- California Bay Woodland
- Ceaonothus Chaparral
- Chamise Chaparral
- Coast Live Oak Woodland
- Coastal Sage Scrub
- Coastal Sage Scrub/Non-Native Grassland
- Coastal Sage-Chaparral Scrub/Non-Native Grassland
- Coastal Sage/Chaparral Scrub
- Developed/Ornamental
- Disturbed/Ruderal
- Freshwater Marsh/Aquatic
- Marsh/Emergent Annual Wet
- Mulefat Scrub
- Native Grassland
- Native Grassland/Non-native Grasslands
- Native Grasslands/Coastal Sage Scrub
- Non-native Grasslands
- Ornamental/Willow/Sycamore/Coast Live Oak Woodland
- Red Shank Chaparral
- Red Shank Chaparral/Ceanothus Chaparral
- Red Shank Chaparral/Undifferentiated Chaparral Scrub
- Rock Outcrops
- Southern Willow Scrub
- Undifferentiated Chaparral Scrub
- Walnut Woodland
- Walnut Woodland/California Bay Woodland
- Willow/Sycamore/Coast Live Oak Woodland

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Plant Communities

0 450 900 Feet

FIGURE 5.3-1

Table 5.3-1
Classification of Vegetation and CDFW Sensitive Plant Communities
(* Denotes a Rare or Sensitive Plant Community)

Mapped Units (CDFW 2003) (Figure 5.3-1)	Plant Community Alliances (CDFW 2010; Sawyer et al. 2009)	Area (acres)
Coastal Sage /Chaparral Scrub 32300	Chamise – Black sage Chaparral (G5S5) Bigpod Ceanothus Chaparral (G4S4) Greenbark Ceanothus Chaparral (G4S4) California Sagebrush Scrub (G5S5) California Buckwheat Scrub (G5S5) Toyon Chaparral (G4S4?)	175.77
Coastal Sage /Chaparral Scrub/Non-Native Grassland 32300/42000	all above, plus: California Annual Grassland [G5S5] *Brassica* (*nigra*) and Other Mustards (not ranked)	0.19
Coastal Sage Scrub 32000	Laurel Sumac Scrub (G4S4) Black Sage Scrub (G4S4) California Sagebrush Scrub (G5S5) California Buckwheat Scrub (G5S5)	54.36
Coastal Sage/Non-Native Grassland 32000/42000	all above plus: California Annual Grassland (G5S5) *Brassica* (*nigra*) and Other Mustards (not ranked)	2.26
Mulefat Scrub 63510	Mulefat Thickets (G5S4) Sandbar Willow Thickets (G5S4.2) Arroyo Willow Thickets (G4S4)	3.52
Chamise Chaparral 37101	Chamise Chaparral (G5S5)	2.88
Red Shank Chaparral 37501	Red Shank Chaparral (G4S4) Red Shank – Birchleaf Mountain-Mahogany Chaparral (G4S4) Red Shank – Chamise Chaparral (G4S4)	1.51
Ceanothus Chaparral 37200	Bigpod Ceanothus Chaparral (G4S4) Hoaryleaf Ceanothus Chaparral (G4S4)	70.55
Red Shank/Ceanothus Chaparral 37501/37200	Red Shank Chaparral (G4S4) Bigpod Ceanothus Chaparral (G4S4) Hoaryleaf Ceanothus Chaparral (G4S4)	12.68
Undifferentiated Chaparral 37000	Laurel Sumac Scrub (G4S4) Black Sage Scrub (G4S4) Chamise Chaparral (G5S5)	141.60
Undifferentiated Chaparral Scrub/Red Shank Chaparral 37000/37501	Laurel Sumac Scrub (G4S4) Black Sage Scrub (G4S4) Chamise Chaparral (G5S5) Red Shank Chaparral (G4S4) Toyon Chaparral (G4S4?)	1.39
Native Grassland 41000	*Purple Needlegrass Grassland (G4S3?) *Creeping Ryegrass Grassland (G4S3) *Foothill Needlegrass Grassland (G3?S3?) *Giant Wildrye Grassland (G3S3)	0.67
Native Grassland/Coastal Sage Scrub 41000/32000	All above plus: Laurel Sumac Scrub (G4S4) Black Sage Scrub (G4S4)	1.59

Mapped Units (CDFW 2003) (Figure 5.3-1)	Plant Community Alliances (CDFW 2010; Sawyer et al. 2009)	Area (acres)
	California Sagebrush Scrub (G5S5) California Buckwheat Scrub (G5S5)	
Non-Native Grassland 42000	California Annual Grassland (G5S5)	3.41
Native Grassland/Non-Native Grassland 41000/42000	*Purple Needlegrass Grassland (G4S3?) *Foothill Needlegrass Grassland (G3?S3?) *Giant Wildrye Grassland (G3S3) California Annual Grassland (G5S5)	0.46
Willow/Sycamore/Coast Live Oak Woodland 61000	Arroyo Willow Thickets (G4S4) *Red Willow Thickets (G3S3) *California Sycamore Woodland (G3S3) Coast Live Oak Woodland (G5S4)	7.65
Coast Live Oak Woodland 71060	Coast Live Oak Woodland (G5S4) *California Bay Forest (G4S3)	1.92
California Walnut Woodland 72100.01	*California Walnut Groves (G3S3.2) *Blue Elderberry Stands (G3S3) Coast Live Oak Woodland (G5S4) Toyon Chaparral (G4S4)	3.04
California Bay Woodland 74100	*California Bay Forest (G4S3) *California Walnut Groves (G3S3) Bigpod Ceanothus Chaparral (G4S4) Greenbark Ceanothus Chaparral (G4S4)	0.14
California Walnut/California Bay Woodland 72100.01/74100	*California Walnut Groves (G3S3.2) *California Bay Forest (G4S3)	0.65
Ornamental/Willow/Sycamore/Coast Live Oak Woodland 61000	Ornamental Stands [unranked] Arroyo Willow Thickets (G4S4) *Red Willow Thickets (G3S3) *California Sycamore Woodland (G3S3) Coast Live Oak Woodland (G5S4)	2.20
Southern Willow Scrub 63130	Arroyo Willow Thickets (G4S4)	1.29
Marsh/Emergent Annual Wetland 52000	Pale spike rush marsh (G4S4)	1.39
Freshwater Marsh/Aquatic 52000	Bulrush Marsh (G5S4) Duckweed Blooms (G5S4?)	4.38
Disturbed/Ruderal Areas	*Brassica* (*nigra*) and Other Mustards (not ranked)	19.05
Developed/Ornamental Areas	Ornamental Stands (not ranked) Eucalyptus Groves (not ranked)	135.28
Rock Outcrops	*Spike-Moss Mats (G4S3)	0.17

A "?" denotes an inexact numeric rank due to insufficient samples over the full, expected range of the vegetation type, but existing information points to the rank given.

The five-digit numbers corresponding to the mapped units are codes used to identify each plant community type, as provided in CDFW (2003). The mapped units in the table for which no corresponding five–digit numbers are provided, such as "Rock Outcrops" or "Disturbed/Ruderal areas," are landcover classes or habitat types, as opposed to classified vegetation communities.

Observed Plant Species

During the course of field observations made from 2006 through 2012 by biologists from TERACOR and Envicom Corporation, a combined total of 375 taxa of vascular plants were observed on the Project site, including 10 native ferns and fern allies, two introduced conifers, 294 dicotyledonous flowering plants (194 native, 100 introduced), and 69 monocotyledonous flowering plants (35 native, 34 introduced). A list of these species is provided in the *Malibu Institute Project Biota Report* (Envicom Corporation, 2013) in Appendix D.1 of this Draft EIR. In all, approximately 36 percent of all plant taxa on the Project site are introduced. These observations generally do not include introduced species used in managed landscapes and turf areas, unless these have been observed to escape into unmanaged, disturbed or natural areas. An estimate of the population sizes of the flora observed on the Project site is also included in the *Biota Report* in Appendix D.1 of this Draft EIR, based on the categories "rare, uncommon, common, and abundant."

Special-Status Plant Species

Special-status plant species either have unique biological significance, limited distribution, restricted habitat requirements, particular susceptibility to human disturbance, or a combination of these factors. Herein, the term "special-status" is used to denote those species that meet the criteria of CEQA Guidelines Section 15380 as an endangered, threatened, or rare species, whether or not officially listed. Special-status plant species include either of the following:

- Plant species that are listed, proposed for listing, or meet the criteria for listing as Endangered, Threatened, or Rare by under the Federal Endangered Species Act (FESA) or California Endangered Species Act (CESA); or
- Plant species that are listed on the CDFW Special Vascular Plants, Bryophytes and Lichens List, which includes the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants. Plants on the CNPS Inventory with a California Rare Plant Rank (CRPR) 1A (plants presumed extirpated in California and either rare or extinct elsewhere), 1B (which includes plants considered to be rare, threatened, or endangered species in California and elsewhere), 2A (plants presumed extirpated in California, but more common elsewhere), and 2B (plants rare, threatened, or endangered in California, but more common elsewhere) are considered sensitive.

CEQA Guidelines Section 15125(a) also requires special emphasis to be placed on resources that are rare or unique to the region. The term "special-status" is also used herein to denote species that are considered locally sensitive by the County, and those plants on the CNPS Inventory with a CRPR 4 that meet criteria to be considered locally significant.

Table 5.3-2
Status Codes for Special-Status Plants

FEDERALLY PROTECTED SPECIES	
FE (Federal Endangered)	A species that is in danger of extinction throughout all or a significant portion of its range.
FT (Federal Threatened)	A species that is likely to become Endangered in the foreseeable future.
FC (Federal Candidate)	A species for which USFWS has sufficient information on its biological status and threats to propose it as Endangered or Threatened under the Endangered Species Act (ESA), but for which development of a proposed listing regulation is precluded by other higher priority listing activities.
STATE PROTECTED SPECIES	
CE (California Endangered)	A native species or subspecies which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.
CT (California Threatened)	A native species or subspecies that, although not presently threatened with extinction, is likely to become an Endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as "Rare" on or before January 1, 1985, is a "Threatened species."
CR (California Rare)	A species, subspecies, or variety of plant is rare under the Native Plant Protection Act when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become Endangered if its present environment worsens. Animals are no longer listed as Rare; all animals listed as Rare before 1985 have been listed as Threatened.
CALIFORNIA RARE PLANT RANK (CRPR) (formerly CNPS Lists)	
CRPR 1A	Plants presumed extirpated in California and either rare or extinct elsewhere.
CRPR 1B	Plants rare, threatened, or endangered in California and elsewhere.
CRPR 2A	Plants presumed extirpated in California, but more common elsewhere.
CRPR 2B	Plants rare, threatened, or endangered in California, but more common elsewhere.
CRPR 3	A review list for plants for which there is inadequate information to assign them to one of the other lists or to reject them.
CRPR 4	A watch list for plants that are of limited distribution in California.
CALIFORNIA NATIVE PLANT SOCIETY (CNPS) THREAT RANK	
The CNPS Threat Rank is an extension added onto the California Rare Plant Rank and designates the level of endangerment, as follows: • 0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat) • 0.2-Fairly threatened in California (20 – 80% occurrences threatened / moderate degree and immediacy of threat) • 0.3-Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)	
LOCALLY IMPORTANT SPECIES	
L.A. County	Los Angeles County Locally Sensitive Species

Rare, Threatened, and Endangered Plant Species

Several occurrences of the state- and federally-Endangered Lyon's pentachaeta (*Pentachaeta lyonii*) [FE, CE] occur on the Project site and in the surrounding area. Patches of Lyon's pentachaeta were discovered during surveys conducted between 2007 and 2012 on and adjacent to unpaved roads in the north-central portion of the Project site and on a broad ridgeline and firebreak to the north of Mulholland Highway. Additionally, a single, isolated Lyon's pentachaeta was found growing on an unpaved roadbed, approximately 300 feet to the south of the nearest patch in 2012. Populations of this species are remote from areas on the Project site proposed for development. The locations of known observations of Lyon's pentachaeta from surveys conducted in preparation of this Draft EIR and from CNDDB records are shown on **Figure 5.3-2**, Known Locations of Special-Status Species.

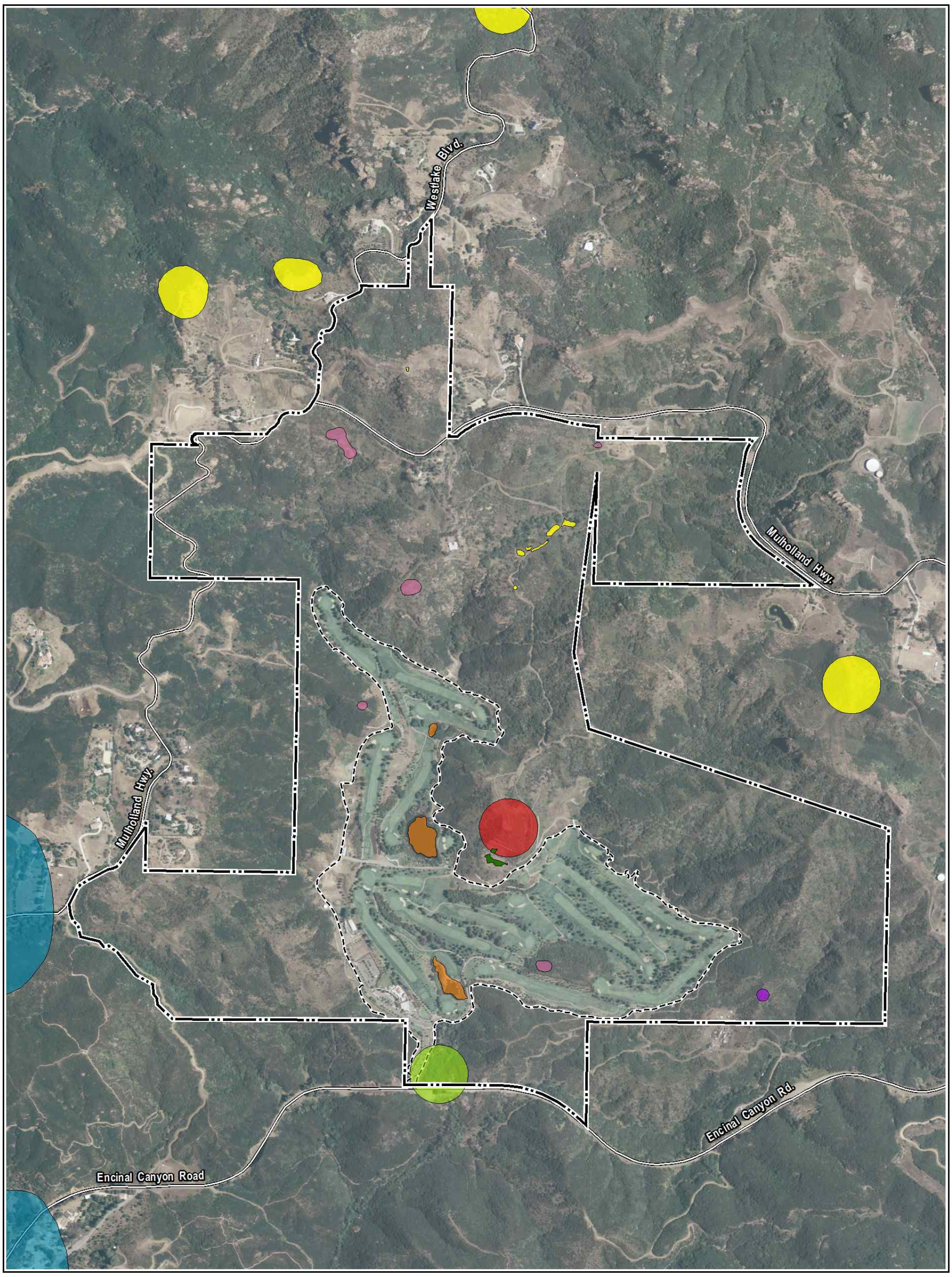
California Rare Plant Rank (CRPR) 4 Species

Plants with a CRPR of 4 are not rare, but rather are included on a "watch list" of species with limited distribution. However, while plants in this category cannot be called "rare" from a statewide perspective, and very few, if any, are eligible for state listing, many of them are significant locally. For this reason, CNPS strongly recommends that CRPR 4 plants be evaluated for consideration during preparation of environmental documents, which may be particularly appropriate for the type locality of a CRPR 4 plant; populations at the periphery of a species' range; areas where the taxon is especially uncommon; areas where the taxon has sustained heavy losses; or populations exhibiting unusual morphology or occurring on unusual substrates. Impacts to CRPR 4 plants do not require a mandatory finding of significance pursuant to CEQA Guidelines Section 15380.

The following CRPR 4 plants were identified on the property during botanical surveys conducted between May 2006 and April 2013: Catalina mariposa lily (*Calochortus catalinae*) [CRPR 4.2], Plummer's mariposa lily (*C. plummerae*) [CRPR 4.2], Fish's milkwort (*Polygala cornuta* var. *fishiae*) [CRPR 4.3], and southern California black walnut (*Juglans californica*) [CRPR 4.2]. Plummer's mariposa lily has been recently down-listed from CRPR 1B.2 (fairly threatened in California with 20 – 80% occurrences threatened and a moderate degree/immediacy of threat) to CRPR 4.2 (watch list). Of these species, Plummer's mariposa lily and Catalina mariposa lily occur within the proposed limits of disturbance. The Catalina mariposa lily is not locally rare, is not uncommon in suitable habitats within the Santa Monica Mountains region, and is not otherwise locally significant based on the CNPS criteria outlined above. Although less common than the Catalina mariposa lily, the Plummer's mariposa lily is also not locally significant based on the CNPS criteria. It is not locally rare and often occurs in significant numbers where it is found in the Santa Monica Mountains.

Los Angeles County Locally Sensitive Plant Species

The County maintains a list of plant species the County considers locally sensitive within the Santa Monica Mountains. The list is based on a list of uncommon plant species of the Santa Monica Mountains maintained by the National Park Service with some additions, as determined by the County biologist. The County considers locally sensitive plant species to be significant biological resources, and requires potential impacts to these species be evaluated during environmental review of proposed projects. The following County locally sensitive plant species were identified on the Project site during botanical surveys conducted between May 2006 and April 2013: California hedge parsley (*Yabea microcarpa*), slender combseed (*Pectocarya linearis* spp. *ferocula*), smooth western morning-glory (*Calystegia purpurata* ssp. *purpurata*), leather root (*Hoita macrostachya*), Downy mimetanthe (*Mimulus pilosus*), Fish's milkwort (*Polygala cornuta* ssp. *fishiae*), deergrass (*Muhlenbergia rigens*), six-weeks fescue (*Festuca octoflora*), and creeping wildrye (*Elymus triticoides*). Of these species, slender combseed occurs within the proposed limits of disturbance. On April 9, 2013, there were an estimated 300 individuals within and in the vicinity of the proposed helicopter pad site. This occurrence is mapped



Source: USDA-FSA Aerial Photograph, 2005. Envicom Corporation, 2007, 2008, 2009, 2010, 2011, and 2012. CNDDB Database, December 2012.

Legend

- Property Boundary
- Existing Golf Course

Special-Status Plant Species

- **Lyon's Pentachaeta** (*Pentachaeta lyonii*) [FE, CE] *
- **Plummer's Mariposa Lily** (*Calochortus plummerae*) [L.A. County]
- **Slender Combseed** (*Pectocarya linearis ssp. ferocula*) [L.A. County]

Special-Status Animal Species

- **Coastal Western Whiptail** (*Aspidoscelis tigris stejnegeri*) [SA]
- **Cooper's Hawk** (*Accipiter cooperii*) [SA]
- **Santa Monica Grasshopper** (*Trimerotropis occidentaloides*) [SA]
- **Coast Horned Lizard** (*Phrynosoma blainvillii*) [SSC]
- **Western Pond Turtle** (*Emys marmorata*) [SSC]

* Lyon's Pentachaeta within property boundary surveyed by Envicom Corporation during field surveys in 2007, 2008, 2009, 2010, 2011, and 2012.

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Known Locations of Special-Status Species

0 450 900 Feet

FIGURE 5.3-2

on Figure 5.3-2. All of the remaining L.A. County locally sensitive species, which were not mapped, were found outside of the proposed disturbance limits.

Potential for Occurrence of Special-Status Plants

An assessment of the potential for special-status plant species to occur on the Project site is provided in Appendix D.1 of the Draft EIR. Included in the assessment were those species known to occur in the region based on a review of the California Natural Diversity Database (CDFW 2012) using the Rarefind 3 application for sensitive "elements" on the Point Dume quadrangle, and five others that surround it, namely Triunfo Pass, Newbury Park, Calabasas, Thousand Oaks, and Malibu Beach. Also, a number of elements not reported on these quadrangles from the *List of Special Vascular Plants, Bryophytes and Lichens* (CDFW 2012) that are anticipated to occur in the region and in the vicinity of the Project site were evaluated. The special-status plant species that are known to occur or have potential to occur on the Project site are listed below.

<u>Special-Status Lichens</u>

Potentially present:

Woven-spored lichen (*Texosporium sancti-jacobi*) [Status: S1.1]

<u>Special-Status Bryophytes</u>

Potentially present:

California screw moss (*Tortula californica*) [CRPR 1B.2]
Coastal triquetrella (*Triquetrella californica*) [CRPR 1B.2]

<u>Special-Status Vascular Plants</u>

Present:

Lyon's Pentachaeta (*Pentachaeta lyonii*) [FE/CE, CRPR 1B.1]
Plummer's mariposa-lily (*Calochortus plummerae*) [CRPR 4.2, L.A. County]
Catalina mariposa lily (*Calochortus catalinae*) [CRPR 4.2]
Southern California black walnut (*Juglans californica*) [CRPR 4.2]
Fish's milkwort (*Polygala cornuta* var. *fishiae*) [CRPR 4.3, L.A. County]
Leatherroot (*Hoita macrostachya*) [L.A. County]
Downy mimetanthe (*Mimulus pilosus*) [L.A. County]
Deergrass (*Muhlenbergia rigens*) [L.A. County]
California hedge parsley (*Yabea microcarpa*) [L.A. County]
Slender combseed (*Pectocarya linearis* spp. *ferocula*) [L.A. County]
Smooth western morning-glory (*Calystegia purpurata* ssp. *purpurata*) [L.A. County]
Six-weeks fescue (*Festuca octoflora*) [L.A. County]
Creeping wildrye (*Elymus triticoides*) [L.A. County]

Potentially present:

- Malibu baccharis (*Baccharis malibuensis*) [CRPR 1B.1]
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*) [CRPR 1B.1, L.A. County]
- Slender mariposa-lily (*Calochortus clavatus* var. *gracilis*) [CRPR 1B.2]
- Rayless ragwort (*Senecio aphanactis*) [CRPR 2B.2]
- Plummer's baccharis (*Baccharis plummerae* ssp. *plummerae*) [CRPR 4.2, L.A. County]

- Southern mountain misery (*Chamaebatia australis*) [CRPR 4.2]
- Fragrant pitcher sage (*Lepechinia fragrans*) [CRPR 4.2]
- Brewer's calandrinia (*Calandrinia breweri*) [CRPR 4.2]
- Island mountain-mahogany (*Cercocarpus betuloides* var. *blancheae*) [CRPR 4.3]
- Santa Barbara bedstraw (*Galium cliftonsmithii*) [CRPR 4.3]

Protected Oak Trees

The Los Angeles County Oak Tree Ordinance (Part 16 of Chapter 22.56 in Title 22 of the Los Angeles County Code) protects oak trees of 8" or larger diameter at 4.5 ft above ground level on lots or parcels of land within the unincorporated area of Los Angeles County. Oak trees with more than one trunk are also protected if the two largest trunks have a combined diameter of 12" or larger. The County Code does not provide protections for native or non-native trees that are not within the genus *Quercus.*

Trees, Etc. inventoried native oak trees meeting the necessary criteria defined in the County's oak tree ordinance within the entire Project development area and within 200 feet of the proposed grading footprint. The oak tree inventory was conducted on March 17 – 18, 2009, June 16, 2009, September 12, 2011, October 11, 2011, and May 23, 2012. A total of 111 ordinance-sized oak trees, including 105 coast live oaks (*Quercus agrifolia*), one valley oak (*Quercus lobata*), and five scrub oaks (*Quercus berberidifolia*), were identified. One coast live oak also meets size requirements as a "heritage oak." A "heritage oak" in Los Angeles County is any oak tree that has at least one trunk that is at least 36" in diameter, or any oak tree having a significant historical or cultural importance to the community, notwithstanding the tree's diameter. **Figures 5.3-3 and 5.3-4** provide maps showing the surveyed oak trees at the site. The *Oak Tree Report* (Trees, Etc., July 20, 2012) is provided in Appendix D.4. Surveyed oak trees lacking canopy data in the *Oak Tree Report* were mapped on Figures 5.3-3 and 5.3-4 based on an assumed 25-foot canopy radius.

Oak Woodlands

Public Resource Code Section 21083.4 requires a county to determine whether a project within its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment. The California legislature has defined "oak woodlands" in the Oak Woodlands Conservation Act of 2001 as lands that contain at least 10% oak canopy cover. This definition is widely accepted and is used herein, in part, for the purpose of defining oak woodlands under PRC Section 21083.4. PRC Section 21083.4 defines an "oak" as a native tree species in the genus *Quercus*, which is not designated as a commercial species, and that is 5 inches or more in diameter at breast height (dbh).

For the purposes of this analysis, oak woodlands are oak tree stands with a minimum of two trees that attain at least 10% canopy cover. The oak woodlands within the Project development limits or within 200 feet of the proposed grading footprint are shown on Figures 5.3-3 and 5.3-4. The understory of some of these oak woodlands is modified and disturbed, and contains paved or unpaved cart paths or golf course turf or landscaping. The largest and most significant of these woodlands, which still contains some native vegetation in its understory, is located along the northeastern boundary of the golf course between the northernmost pond on the golf course to its west and native chaparral to its east. Additional oak woodlands occur along drainages along with willows and sycamores in undeveloped portions of the Project site (See Figure 5.3-1).

Source: Trees Inc., July 2012.

THE MALIBU INSTITUTE PROJECT EIR

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Oak Tree Map (South)

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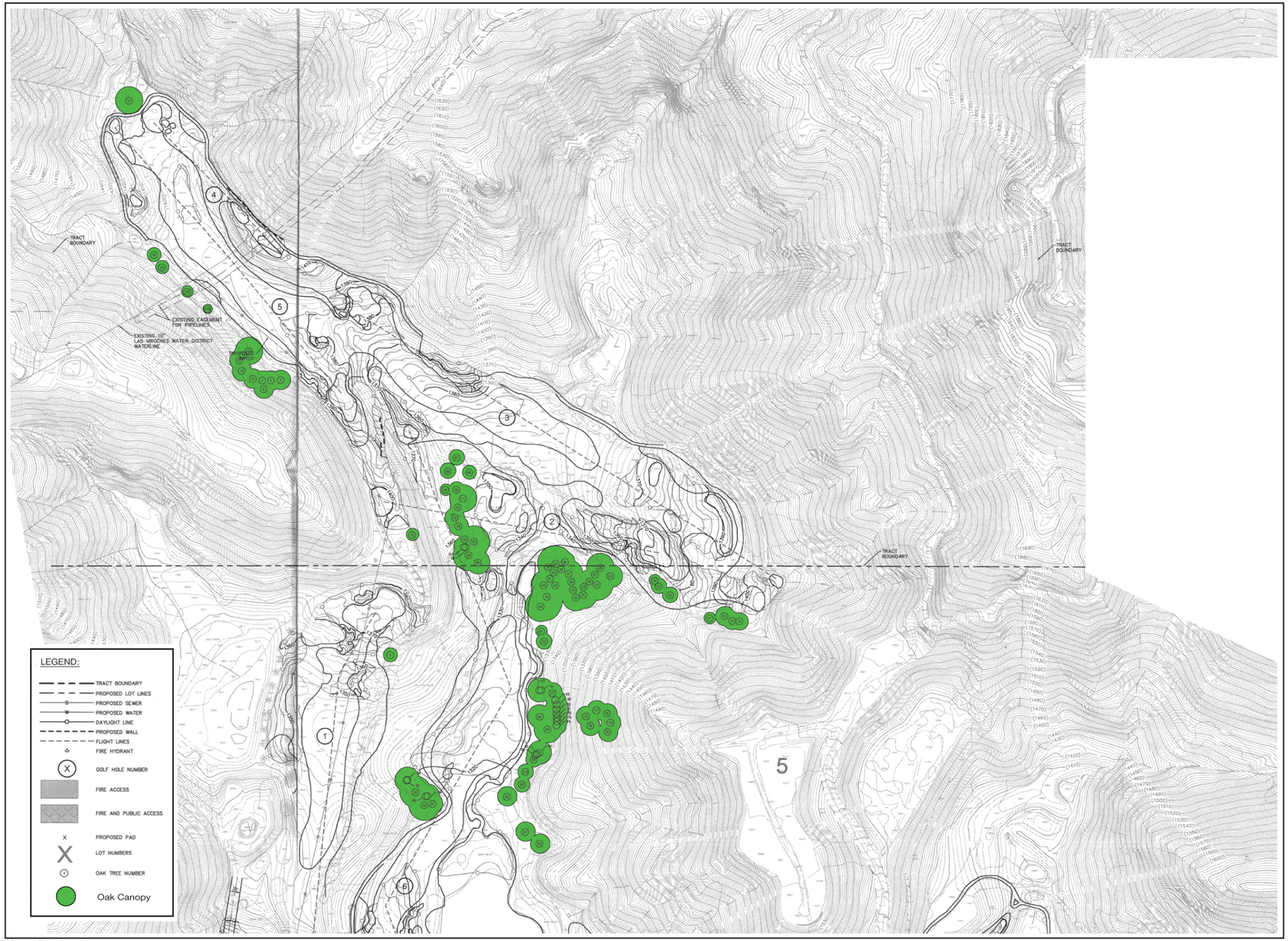
FIGURE 5.3-3



Source: Trees Inc., July 2012.

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Oak Tree Map (North)

FEET 0 125 250

FIGURE 5.3-4

Environmentally Sensitive Habitat Areas (ESHA)

The California Coastal Act of 1976 (Section 30107.5) defines "environmentally sensitive areas" 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." The Coastal Act further requires that these areas be identified and protected from any loss or degradation of habitat value. Designated Environmentally Sensitive Habitat Areas (ESHAs) are delineated in the Malibu Local Coastal Plan (Malibu LCP). The Malibu LCP also states that any undesignated areas that meet ESHA criteria that are identified through a biotic review process or other means are also ESHA.

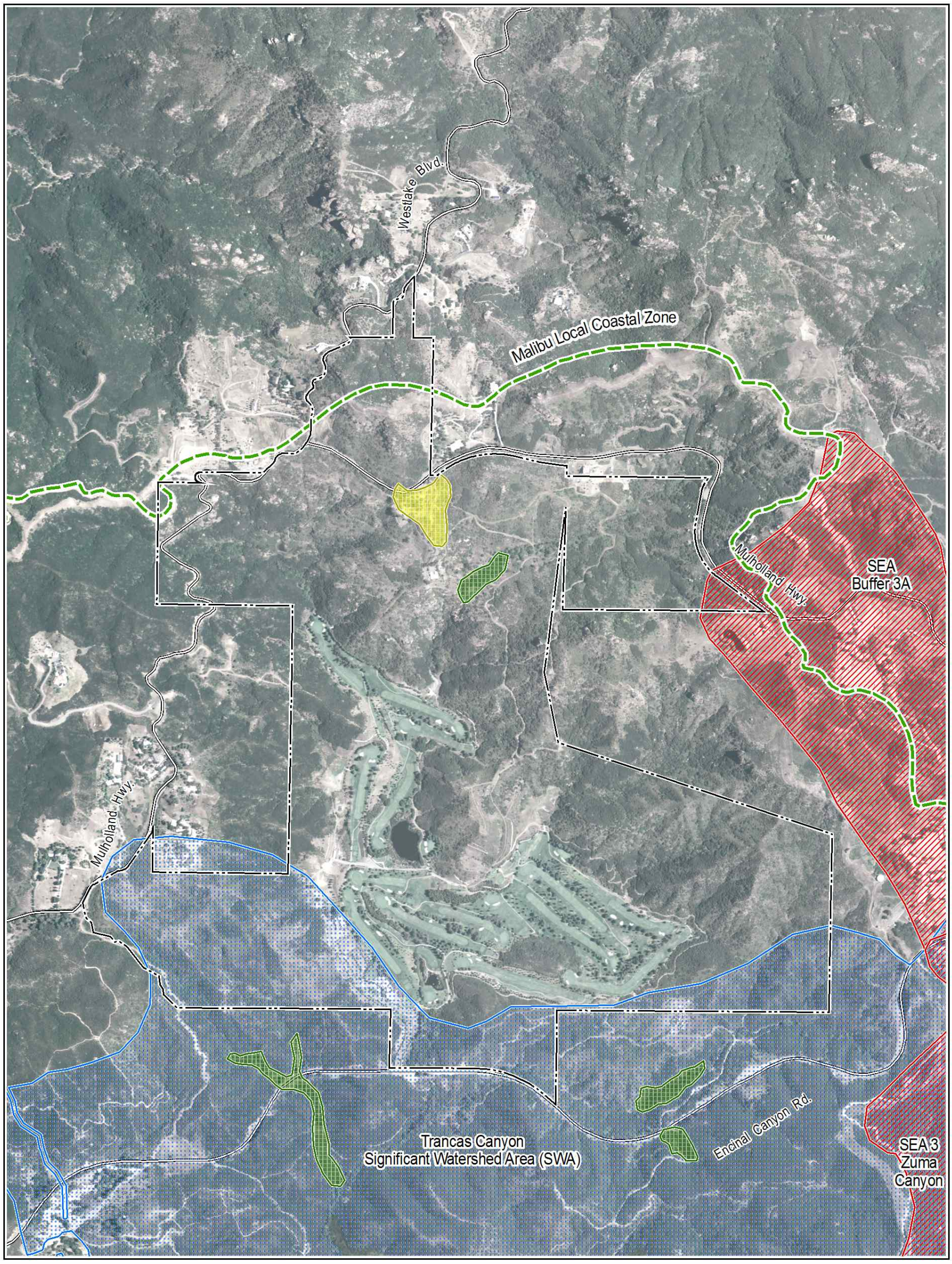
There are two areas mapped by the County as ESHA on the Project site, identified on **Figure 5.3-5**, Sensitive Environmental Resource Areas (SERAs) and Significant Ecological Areas (SEAs). One ESHA is classified and mapped on Figure 5.3-1 as a Willow/Sycamore/Coast Live Oak Woodland community, and is located along upper Trancas Creek several hundred feet to the northeast of the existing golf course. The other ESHA designated by the Malibu LCP that would be located immediately adjacent to residences in the northern portion of the Project site appears to have been erroneously mapped, as indicated on Figure 5.3-5. This area was observed during surveys of the site to consist predominately of non-native tree plantings and disturbed areas associated with a residence and the former hunting lodge, and does not contain notable or sensitive native habitat.

The California Coastal Commission (CCC) recognized the Mediterranean Ecosystem of the Santa Monica Mountains to be rare and especially valuable because of the mountains' relatively pristine character, physical complexity, and resultant biological diversity in a memorandum referred to as the "Dixon Memo" (Dixon, J., March 25, 2003). In addition to those areas that have been designated and mapped as ESHA in the Malibu LCP, according to the Dixon Memo, native habitats within the Coastal Zone of the Santa Monica Mountains, including chaparral, coastal sage scrub, California perennial grasslands, oak woodlands, and riparian woodlands are also ESHA, provided the habitat is largely undeveloped and part of a large, contiguous block of relatively pristine native vegetation. This determination is made on a case-by-case basis.

With the exception of areas within and adjacent to the proposed limits of disturbance, the ESHA status of the native habitats on the Project site was not evaluated during preparation of this Draft EIR. However, the coastal sage scrub, chaparral, native herbaceous, and riparian communities on the slopes surrounding the existing golf club are in general largely undeveloped and part of large, contiguous tracts of native vegetation. The undeveloped native habitats on the Project site have many important roles in the ecosystem, such as maintenance of watershed health and provision of essential habitat for species requiring several habitat types during their life histories. These natural habitats very likely would qualify as ESHA under the thresholds discussed in the Dixon Memo. An evaluation of the ESHA status of the native habitats within the proposed limits of disturbance is provided under the 5.3.4 Project Impacts heading later in this section.

Significant Watershed Areas (SWAs)

According to the Malibu LCP, Significant Watersheds are relatively undisturbed watershed areas containing exceptional undisturbed riparian and oak woodlands (or savannas), and are recognized as important in contributing to the integrity of these woodlands. Significant Watersheds contain significant vegetation and wildlife resources, and require special protection to maintain their health and diversity. The upper portion of the Zuma/Trancas Canyon Significant Watershed Area encompasses approximately 113 acres of the southern portion of the existing golf club, as shown on Figure 5.3-5. The Malibu LCP contains policies regulating development within and adjacent to



Source: USDA-FSA Aerial Photograph, 2005. L.A. County GIS Data Portal data downloaded, March 2013.

Legend

- Project Boundary
- Designated Environmental Sensitive Habitat Area ESHA (Malibu Local Coastal Plan)
- Designated "ESHA" (Erroneously Mapped as ESHA by Malibu Local Coastal Plan)
- Malibu Local Coastal Zone
- Sensitive Ecological Area (SEA)
- Trancas Canyon Significant Watershed Area (SWA)

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Sensitive Environmental Resource Areas (SERAs) and Significant Ecological Areas (SEAs)

0 450 900 Feet

FIGURE 5.3-5

Significant Watersheds, including permitted uses and development standards and policies protecting watershed functions and the quality of sensitive habitats in the watershed.

As stated, the Project site is situated almost entirely within the upper watershed area of Trancas Canyon, with the exception of a small, northerly extension that extends into the upper watershed of an unnamed tributary of Carlisle Canyon. Trancas Canyon is one of the larger and least disturbed canyons in the Malibu Coastal Zone (approximately 4% developed in 2004). The upper half of the canyon contains scattered homes, ranches, and recreational facilities, while the lower half remains relatively undisturbed. Much of the upper portion of the watershed is owned by the National Park Service. The Trancas Canyon Watershed is drained by Trancas Creek, which flows to the Trancas Lagoon. The lowermost portion of the watershed and the canyon mouth are largely developed and suburbanized, and consist of a small commercial center and three distinct neighborhoods: Malibu West; upper Trancas Canyon Road and the Trancas Highlands; and the Bailard/Lunita area. When Malibu West was built, a portion of Trancas Creek was lined with concrete and channelized for flood control.

Significant Ecological Areas (SEAs) and SEA Buffers

The Significant Ecological Area (SEA) Program is a component of the County General Plan Conservation/Open Space Element. SEAs are ecologically important land and water systems that support valuable habitat for plants and animals, often integral to the preservation of rare, threatened or endangered species and the conservation of biological diversity in the County. While SEAs are not preserves, they are areas where the County deems it important to facilitate a balance between development and resource conservation. Development activities within SEAs outside of the Coastal Zone are reviewed by the Significant Ecological Area Technical Advisory Committee (SEATAC), and require a SEA conditional use permit (SEA CUP); development activities within SEAs inside of the Coastal Zone are reviewed by the Environmental Review Board, and require approval in concept by Los Angeles County and a Coastal Development Permit from the California Coastal Commission.

The Project site borders the Los Angeles County designated Zuma Canyon Significant Ecological Area Buffer (SEA Buffer 3A) to the north and east. A small portion of SEA Buffer 3A covers a far northern area of the Project site far outside of the proposed disturbance limits. Also, the Zuma Canyon Significant Ecological Area (SEA 3) is outside of the Malibu Golf Club property to the south and east. SEA 3 and SEA Buffer 3A are shown with respect to the location of the Project site on Figure 5.3-5.[3]

Jurisdictional Wetlands, Waters, and Habitat

As stated, the Project site is located in the upper Trancas Canyon watershed and the headwaters of the main stem of Trancas Creek are located to large extent onsite. Trancas Creek and several tributary drainages pass through chaparral and scrub-covered slopes on the Project site to detention basins of various sizes around the perimeter of the existing golf course. After being detained in the basins, flows pass into a network of underground drains beneath the golf course. The underground drains converge, and flows are directed downstream through four ponds of varying sizes located on the golf course, which are presumably in-line with the historical alignment of Trancas Creek. The two largest ponds were created in the late 1960s when the site was apparently used for hunting and were incorporated into the golf course when it was constructed in the mid-1970s. In the current condition, flows migrate downstream through the sub-surface drains and through the inlet and outlet structures

[3] The 2012 Draft General Plan includes changes to the policies, boundaries, and technical descriptions of the County's SEAs. As proposed, the 2012 Draft General Plan would remove the SEAs that are currently on the Project site and the entire Project site within the Coastal Zone would become part of the Santa Monica Mountains Coastal Resource Area.

of the four ponds before discharging via a large culvert to the natural Trancas Creek channel at the southern end of the golf course just northeast of Clubhouse Drive, and then through a large culvert under Encinal Canyon Road. Trancas Creek then descends through Trancas Canyon to the Pacific Ocean. All subsurface drains, drainages, ponds, and detention basins within the proposed limits of disturbance are ultimately tributary to Trancas Creek and the Pacific Ocean.

Jurisdictional Delineation

A field investigation to delineate the amount and type of jurisdictional waters, wetlands, and habitat was performed by Envicom Corporation in October 2012 and December 2012, using the methods described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (September 2008) and definitions and protocols described by the CDFW for identifying and classifying jurisdictional habitat. A delineation of areas meeting the "single-parameter" wetland definition used by the California Coastal Commission (CCC) also was performed. The field investigation focused on areas within the proposed limits of disturbance as well as several detention basins located along the perimeter of the existing golf course. The limits of the jurisdictional delineation are shown on **Figures 5.3-6A, 5.3-6B, and 5.3-6C.** USACE and CDFW jurisdictional boundaries were geo-referenced using a Trimble GeoXT GPS unit to sub-meter accuracy. For a detailed discussion of the regulatory background and methods and results of the jurisdictional delineation, refer to the *Malibu Institute Project Jurisdictional Delineation* report by Envicom Corporation (March 2013) in Appendix D.2 of this Draft EIR.

USACE "Wetland" "Waters of the United States"

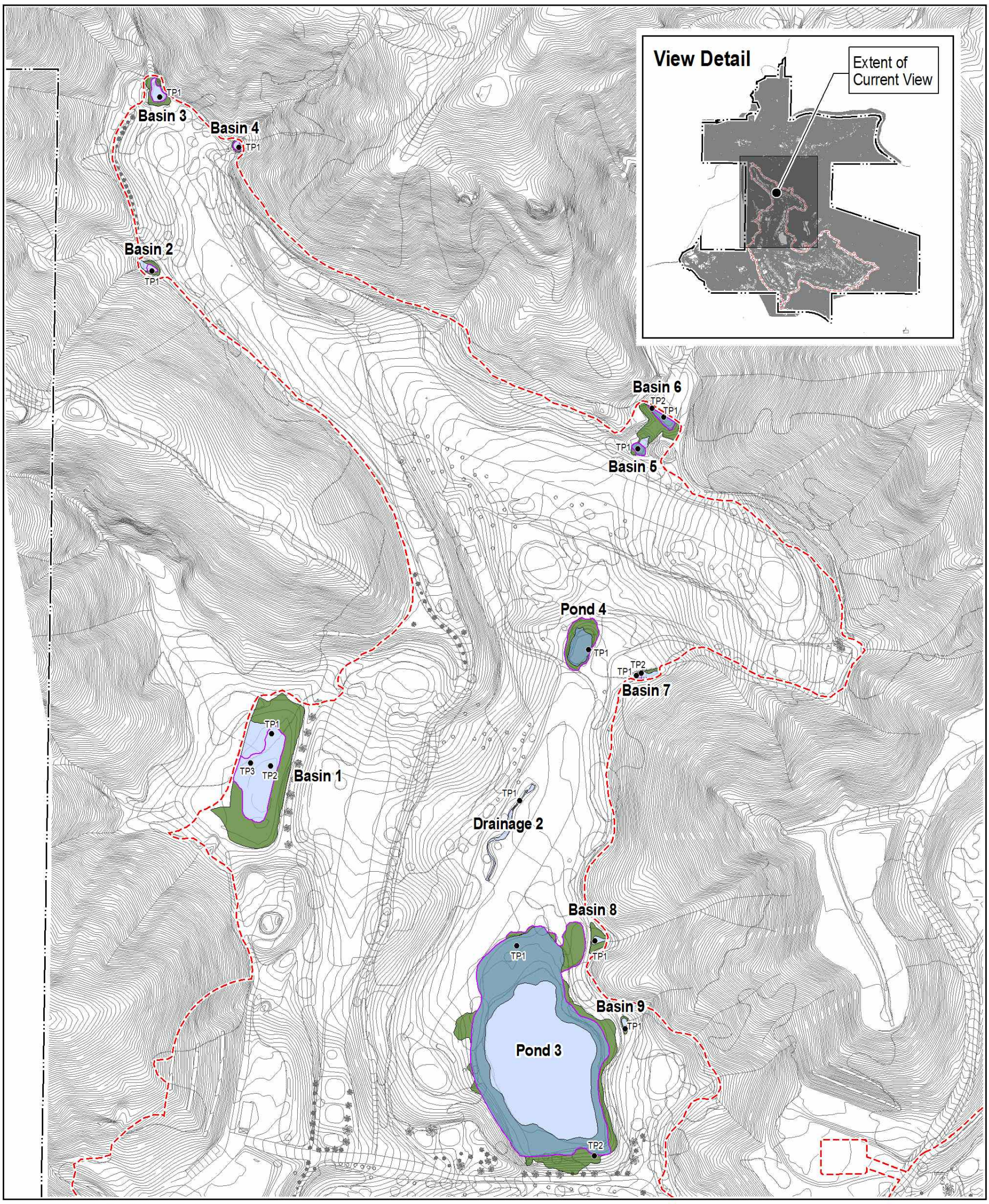
For an area to be classified as "wetland" "waters of the United States" under the jurisdictional authority of the USACE, it must exhibit the three criteria of hydrophytic vegetation, hydric soils, and wetland hydrology, or must present an atypical or naturally problematic situation where one (or more) of the criteria is not met. Atypical situations are wetlands in which vegetation, soil, or hydrology indicators are absent due to recent human activities or natural events. Naturally problematic wetlands are naturally occurring wetland types that lack indicators of hydrophytic vegetation, hydric soil, or wetland hydrology periodically due to normal seasonal or annual variability, or permanently due to the nature of the soils or plant species on the site.

USACE "Non-wetland" "Waters of the United States"

Streams that do not exhibit hydrophytic vegetation, hydric soils, and wetland hydrology may still be subject to USACE jurisdiction as "non-wetland" "waters of the United States", based on criteria outlined in the memorandum "Revised Guidance on Clean Water Act Jurisdiction Following the Supreme Court Decision in Rapanos v. U.S. and Carabell v. U.S." (Environmental Protection Agency (EPA)/USACE, December 2, 2008). The extent of USACE jurisdiction of "non-wetland" "waters of the U.S." is based upon the Ordinary High Water Mark (OHWM), which is defined as the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, or the presence of litter and debris.

CDFW Jurisdictional Habitat

The extent of CDFW jurisdiction is defined as from the top of bank to the opposite top of bank and, if applicable, outside the stream banks and to the canopy edge of riparian vegetation. Measurements from the top of the banks or to the canopy edge of riparian vegetation are typically wider than the Ordinary High Water Mark (OHWM) measurement, often substantially so.



Topographic Source: D. Iacobellis & Associates, Inc., 2006.

Legend

- Project Boundary
- Limits of Jurisdictional Delineation

CDFW Jurisdiction:
- ACOE Non-wetland Waters of the U.S.
- ACOE Wetland Waters of the U.S.
- CDFW Streambed and Riparian Habitat

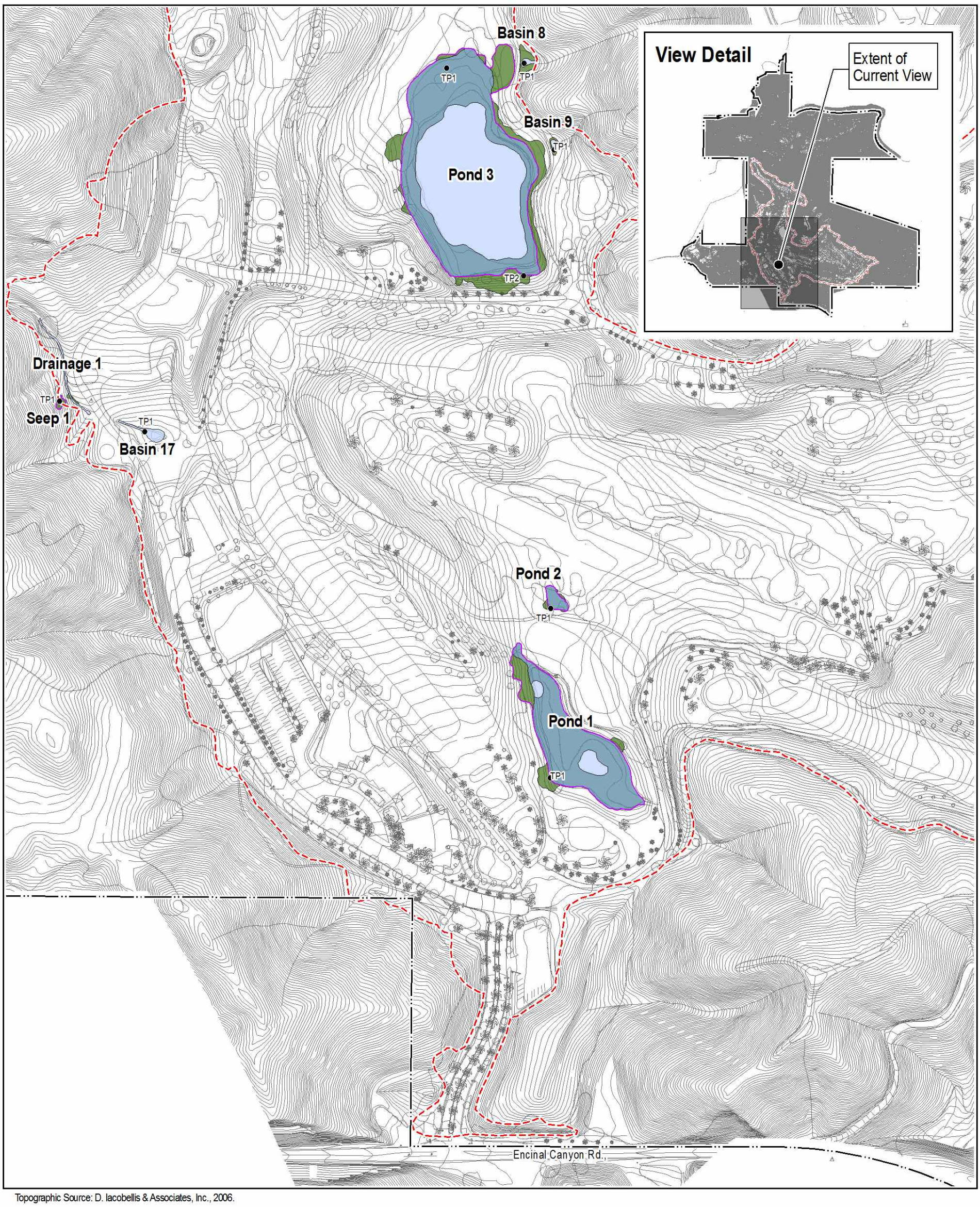
- Single-Parameter Wetlands (California Coastal Commission Wetland Definition)
- TP# Sample Plots/Test Pits

ENVICOM CORPORATION

Jurisdictional Areas

0 225 Feet

FIGURE 5.3-6A



Topographic Source: D. Iacobellis & Associates, Inc., 2006.

Legend

- Project Boundary
- Limits of Jurisdictional Delineation

CDFW Jurisdiction
- ACOE Non-wetland Waters of the U.S.
- ACOE Wetland Waters of the U.S.
- CDFW Streambed and Riparian Habitat

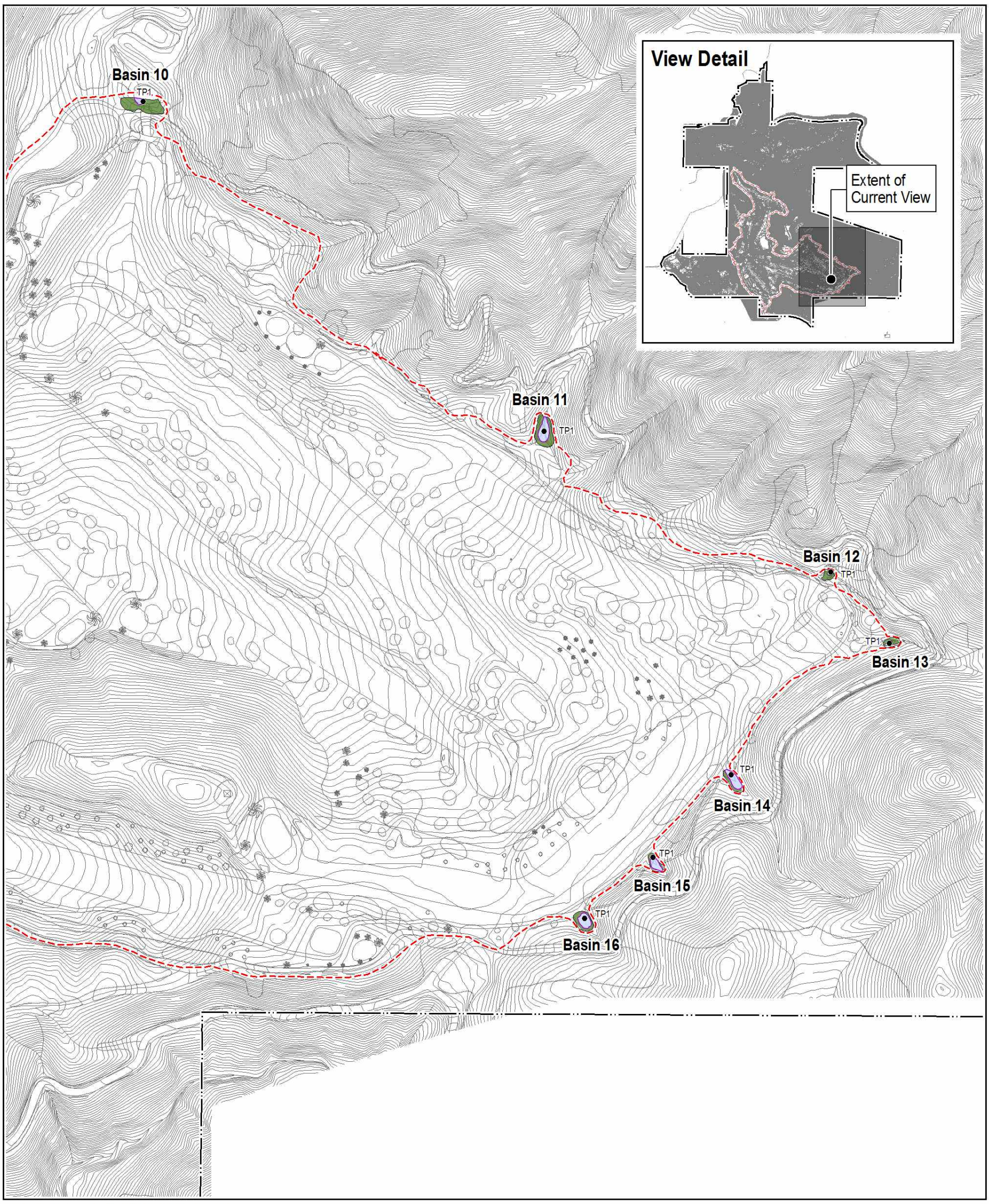
- Single-Parameter Wetlands (California Coastal Commission Wetland Definition)
- ●TP# Sample Plots/Test Pits

ENVICOM CORPORATION

Jurisdictional Areas

0 225 Feet

FIGURE 5.3-6B



Topographic Source: D. Iacobellis & Associates, Inc., 2006.

Legend

- Project Boundary
- Limits of Jurisdictional Delineation

CDFW Jurisdiction:
- ACOE Non-wetland Waters of the U.S.
- ACOE Wetland Waters of the U.S.
- CDFW Streambed and Riparian Habitat

- Single-Parameter Wetlands (California Coastal Commission Wetland Definition)
- ●TP# Sample Plots/Test Pits

ENVICOM CORPORATION

Jurisdictional Areas

0 225 Feet

FIGURE 5.3-6C

California Coastal Commission Regulated Wetlands

In *Procedural Guidance for the Review of Wetland Projects within California's Coastal Zone* (1994), the CCC provides the following statement regarding the recognition of wetlands subject to regulation under the California Coastal Act: "In the California coastal zone, the California Coastal Commission (CCC), with the assistance of the [Department of Fish and Wildlife (CDFW)] is responsible for determining the presence of wetlands subject to regulation under the California Coastal Act. As the primary wetland consultant to the CCC, the [CDFW] essentially relies on the FWS [United States Fish and Wildlife Service] wetland definition and classification system, with some minor changes in classification terminology, as the methodology for wetland determinations. However, one important difference in the [CDFW] delineation process, compared to the FWS process, is that the [CDFW] only requires the presence of one attribute (e.g., wetland hydrology, hydric soils, or hydrophytic vegetation) for an area to qualify as a wetland." The CCC typically considers USACE methods for delineating wetland hydrology, hydric soils, or hydrophytic vegetation, as described in *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (September 2008) to be acceptable for delineating "single-parameter wetlands".

Jurisdictional Areas

Jurisdictional waters, wetlands, and habitat under the regulatory authority of the USACE, CDFW, Regional Water Quality Control Board (RWQCB), and/or CCC are shown on Figures 5.3-6A, 6B, and 6C. The jurisdictional features are also listed on **Table 5.3-3,** along with their jurisdictional status and acreage, and in the case of drainages their length. The jurisdictional areas within the proposed limits of disturbance include four ponds; a man-made drainage on the golf course; an ephemeral drainage in the vicinity of an existing water tank near the western boundary of the Project site; and a small seep on a slope in an existing fuel modification zone, also in the vicinity of the same water tank. Seventeen detention basins around the perimeter of the golf course were also delineated, although only two of these basins fall within the limits of disturbance. These jurisdictional features are described in detail in the *Malibu Institute Project Jurisdictional Delineation* report in Appendix D.2 of this Draft EIR.

Table 5.3-3
Existing USACE, CDFW, and "Single-Parameter" Jurisdictional Wetlands, Waters, and Habitat

	USACE Waters of U.S.		CDFW Jurisdictional Habitat (Acres)	"Single-Parameter" Wetlands (Acres)
	Wetlands (Acres)	Non-wetlands (Acres)		
Pond 1	0.81	0.08	1.02	0.97
Pond 2	0.04	--	0.05	0.04
Pond 3	1.26	1.56	3.26	2.94
Pond 4	0.08	--	0.15	0.15
Basin 1	--	0.40	0.94	0.32
Basin 2	--	0.01	0.02	0.01
Basin 3	--	0.03	0.06	0.03
Basin 4	--	0.01	0.02	0.01
Basin 5	0.01	--	0.10	0.01
Basin 6	0.02	0.01	0.12	0.02
Basin 7	--	0.01	0.02	0.002
Basin 8	--	0.01	0.04	--
Basin 9	--	0.006	0.01	--
Basin 10	--	0.004	0.05	0.004
Basin 11	--	0.02	0.05	0.02
Basin 12	--	0.003	0.01	--
Basin 13	--	0.004	0.01	--
Basin 14	--	0.01	0.02	0.01
Basin 15	--	0.01	0.02	0.01
Basin 16	--	0.01	0.02	0.01
Basin 17	--	0.03	0.03	--
Drainage 1	--	0.02 (261 linear feet)	0.03 (261 linear feet)	--
Drainage 2	0.002 (36 linear feet)	0.03 (277 linear feet)	0.03 (313 linear feet)	--
Seep 1	--	--	0.01	0.01
Total Jurisdictional Acreage	**2.22**	**2.27**	**6.09**	**4.57**

The following jurisdictional features contain a total of 2.22 acres of "wetland" "waters of the U.S.": the four ponds and the man-made stream channel on the golf course grounds (i.e., Pond 1, Pond 2, Pond 3, Pond 4, and Drainage 2) and two detention basins in line with the main stem of Trancas Creek at the northern boundary of the golf course (Basin 5 and Basin 6).

The following jurisdictional features contain a total of 2.27 acres of "non-wetland" "waters of the U.S.": the two largest ponds and the man-made stream channel on the golf course grounds (i.e., Pond 1, Pond 3, and Drainage 2); sixteen of the detention basins around the perimeter of the golf course (Basins 1 – 4, Basins 6 – 17); and an ephemeral drainage near the western boundary of the proposed limits of disturbance (Drainage 1).

The following jurisdictional features contain a total of 6.09 acres of CDFW jurisdictional habitat: the four ponds and the man-made stream channel on the golf course grounds (i.e., Pond 1, Pond 2, Pond 3, Pond 4, and Drainage 2); the detention basins around the perimeter of the golf course (Basins 1 – 17); the ephemeral drainage near the western boundary of the proposed limits of disturbance (Drainage 1); and a small seep on a slope in an existing fuel modification zone, also located near the western boundary of the limits of disturbance (Seep 1).

The following jurisdictional features contain a total of 4.57 acres of "single-parameter" wetlands: the four ponds and the man-made stream channel on the golf course grounds (i.e., Pond 1, Pond 2, Pond 3, Pond 4, and Drainage 2); twelve of the detention basins around the perimeter of the golf course (Basins 1 – 7, Basins 10 – 11, Basins 14 – 16); the ephemeral drainage near the western boundary of the proposed limits of disturbance (Drainage 1); and a small seep on a slope in an existing fuel modification zone also near the western boundary of the limits of disturbance (Seep 1).

Expected and Observed Wildlife

A broad spectrum of vertebrate wildlife species can reasonably be anticipated to occur at the Project site and in the surrounding area. In some cases, the species are common residents. In other cases, species may be anticipated to occur only rarely, occasionally, sporadically, irregularly, seasonally, or infrequently. Nonetheless, their presence and use of the Project site and surrounding area still can be anticipated. This range of wildlife species is presented in the *Biota Report* and has been compiled from a variety of literature, including local lists, popular references, field guides, and personal experience. By this method, approximately eight species of amphibians (one newt, three salamanders, three frogs, and one toad), 22 reptiles (two turtles, seven lizards and 13 snakes), 222 species of birds, and 58 species of mammals can be reasonably expected to inhabit or pass through the Project site and surrounding area. Almost all of these are native species. An estimate of the population sizes of potentially occurring vertebrate wildlife is also included, based on the categories "rare, uncommon, common, and abundant."

During the course of combined field visits made from 2006 through 2013 by biologists from TERACOR, Envicom Corporation, and Dr. L. Kats of Pepperdine University, four species of fish, one species of amphibian, eight species of reptiles, 82 species of birds, 13 species of mammals, and 19 species of butterflies were identified. A list of the wildlife species observed on the Project site is provided in the *Biota Report* in Appendix D.1 of this Draft EIR.

Special-Status Wildlife

For the purposes of this analysis, the term "special-status" includes those species that are:

- Listed, proposed for listing, or meeting the criteria for listing as Endangered, Threatened, or Rare under FESA or CESA; and,
- Listed on the CDFW's *Special Animals List*.

CEQA Guidelines Section 15125(a) also requires special emphasis be placed on resources that are rare or unique to the region. The term "special-status" is also used herein to denote species that are considered locally sensitive by the County.

Table 5.3-4
Status Codes for Special-Status Wildlife

FEDERALLY PROTECTED SPECIES	
FE (Federal Endangered)	A species that is in danger of extinction throughout all or a significant portion of its range.
FT (Federal Threatened)	A species that is likely to become endangered in the foreseeable future.
FC (Federal Candidate)	A species for which USFWS has sufficient information on its biological status and threats to propose it as endangered or threatened under the Endangered Species Act (ESA), but for which development of a proposed listing regulation is precluded by other higher priority listing activities.
FSC (Federal Species of Concern)	A species under consideration for listing, for which there is insufficient information to support listing at this time. These species may or may not be listed in the future, and many of these species were formerly recognized as "Category-2 Candidate" species.
STATE PROTECTED SPECIES	
CE (California Endangered)	A native species or subspecies which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.
CT (California Threatened)	A native species or subspecies that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as "rare" on or before January 1, 1985, is a "threatened species."
SSC (California Species of Special Concern)	Animals that are not listed under the California Endangered Species Act, but which nonetheless 1) are declining at a rate that could result in listing, or 2) historically occurred in low numbers and known threats to their persistence currently exist.
CFP (California Fully Protected)	This designation originated from the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians, reptiles, and birds. Most fully protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations. California Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.
SA (Special Animal)	"SA" is used herein if the animal is included on the CDFW's *Special Animals List* but does not fall under any of the categories listed above. "Special Animals" is a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status. The CDFW considers these taxa on the *Special Animals List* to be those of greatest conservation need.

During surveys of the Project site between 2006 and 2013 by biologists from TERACOR, Envicom Corporation, and Pepperdine University, sixteen special-status wildlife species were observed, including the coast horned lizard (*Phrynosoma blainvillii*) [SSC], western pond turtle (*Emys marmorata*) [SSC], coastal whiptail (*Aspidoscelis tigris stejnegeri*) [SA], olive-sided flycatcher (*Contopus cooperi*) [SSC], golden eagle (*Aguila chrysaetos*) [CFP], northern harrier (*Circus cyaneus*) [SSC], white-tailed kite (*Elanus leucurus*) [CFP], yellow warbler (*Dendroica petechia brewsteri*) [SSC], Cooper's hawk (*Accipiter cooperi*) [SA], sharp-shinned hawk (*Accipiter striatus*) [SA], southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) [SA], lark sparrow (*Chondestes grammacus*) [SA], oak titmouse (*Baeolophus inornatus*) [SA], Nuttall's woodpecker (*Picoides nuttallii*) [SA], red-breasted sapsucker (*Sphyrapicus ruber*) [SA], and Allen's hummingbird (*Selasphorus rufus*) [SA]. The locations of these observations, if known, as well as observations of other special-status wildlife from California Natural Diversity Database (CNDDB) records are shown on Figure 5.3-2.

In addition to the sixteen special-status species that were directly observed, a considerable number of additional special-status wildlife species are anticipated to occur at the Project site, even if in some cases only infrequently, in transit, or on a temporary basis. An analysis of the potential for occurrence of special-status wildlife for the Project site is presented in the *Biota Report* in Appendix D.1 of this Draft EIR. The analysis provides an assessment of the occurrence of special-status wildlife species on the basis of the species' known distribution and habitat requirements. Special-status wildlife species considered include those known to occur in the Santa Monica Mountains region, based on California Natural Diversity Database (CDFW 2012) records for the USGS 7.5' Point Dume, Triunfo Pass, Newbury Park, Calabasas, Thousand Oaks and Malibu Beach quadrangles, and other sources.

The following species that are listed, proposed for listing, or that meet criteria for listing as Endangered, Threatened, or Rare under the FESA or CESA, or that are listed as a California Species of Special Concern (SSC) or as California Fully Protected (CFP) are confirmed present on the Project site or are considered potentially occurring, with varying probabilities ranging from high to very low, depending on the species. These species meet the criteria of CEQA Guidelines Section 15380 as an endangered, threatened, or rare species, whether or not official listed, as provided in Section 15380(d). For those species that may potentially occur within the Project limits of disturbance, the possible location(s) where they may occur is provided. For a discussion of all other special-status wildlife species (i.e., those species referred to herein as "special animals," abbreviated "SA") that are confirmed present on the Project site or that are considered potentially occurring, see the Biota Report in Appendix D.1. "Special animals" do not require a mandatory finding of significance pursuant to CEQA Guidelines Section 15380. However, the County of Los Angeles requires that the potential for significant impacts to all "special animals" be evaluated during environmental review on a case-by-case basis.

<u>Special-Status Gastropods</u>

Potentially Present:

Trask or Peninsular Range Shoulderband (*Helminthoglypta traskii traskii*) [L.A. County]

The Trask shoulderband snail is a southern California endemic, known from Ventura, Los Angeles, Orange, and San Diego Counties. Its range also extends into northern Baja California. NatureServe has given this species a G1G2T1 rank (Critically Imperiled globally and nationally), and the California Natural Diversity Database has assigned it a S1 rank (Critically imperiled statewide). This snail has been observed in the Santa Monica Mountains in the Point Mugu area and at Malibu Lagoon State Park. Its preferred habitat is coastal sage scrub and chaparral. It is potentially occurring within

coastal sage scrub and chaparral habitats at the Project site. It is potentially occurring within the proposed limits of disturbance at the following locations: the proposed helipad site and the chaparral "island" within the golf course where a tee box and pathway to the tee box would be constructed.

Special-Status Fishes

No special-status fishes have potential to occur at the Project site. The southern steelhead and tidewater goby are potentially occurring in aquatic habitats several miles downstream from the Project site at the Trancas Lagoon:

Southern steelhead (*Oncorhynchus mykiss irideus*) (southern California Distinct Population Segment (DPS)) [FE, SSC]

The Southern steelhead (southern California DPS), which includes all naturally spawned anadromous steelhead populations below natural and manmade impassable barriers in streams from the Santa Maria River (north of Point Sal) south to the Tijuana River at the U.S.-Mexico border, is listed as Endangered under the Federal Endangered Species Act. The National Marine Fisheries Service (NMFS) estimates the southern steelhead population to be less than 1% of its historic population size. The southern steelhead is absent from the Project site, but is potentially present in aquatic habitats downstream from the Project site at the Trancas Lagoon.

Although the southern steelhead is considered absent currently from Trancas Creek, it was probably present historically. *Historical Distribution of Southern Steelhead Trout in the Santa Monica Bay Region* (Dagit, R., S. Drill, PhD., and B. Meyer, 2005), a report prepared for the CDFW and NOAA Fisheries by the Resource Conservation District of the Santa Monica Mountains, includes the following chronological records documenting steelhead presence in Trancas Creek: "1930's Giles Manwaring reported that Bernie Neumann (deceased) who was raised in Trancas Canyon described catching silver salmon, most likely steelhead. Also Manwaring spoke with Leo Bourget who caught steelhead up to 6 pounds in the area of the housing track in his youth, circa 1938. (interviewed for this report)" and "1980's John Steckwald caught several 8 inch trout and observed good steelhead habitat. (interviewed for this report)." According to NMFS Southern Steelhead ESU Current Stream Habitat Distribution Table (website) for Trancas Canyon creek, there are "[a]necdotal reports of silver salmon and steelhead catches pre World War II." In the Santa Monica Mountains, recent records for steelhead exist for Arroyo Sequit, Big Sycamore, Malibu, and Topanga Canyons (Swift, et al. 1993, CDFW 2013).

The *Santa Monica Mountains Steelhead Habitat Assessment Final Project Report* (California Trout, Inc., 2006) identifies and prioritizes streams for steelhead restoration actions within the Santa Monica Mountains, based in part on an assessment of habitat type and quality and natural and anthropogenic barriers to fish passage in 13 focal watersheds, including the Trancas Canyon Watershed. The following excerpt on steelhead life history is reproduced from this report:

> Steelhead, which are members of the Salmonid family, are rainbow trout with a life cycle similar to that of a salmon. It is an anadromous species: steelhead are born and reared in freshwater streams, as juveniles they migrate to estuaries where they adjust to saltwater, and then migrate to the ocean to mature into adults. After spending one to three years foraging on the food sources of the Pacific, large adult steelhead, some reaching 20 pounds, generally return to their home streams – some to the very pools of their birth – to reproduce. Unlike salmon, steelhead do not necessarily die after spawning and may make the spawning journey more than once. Unlike juvenile Chinook salmon that typically migrate to the ocean after just a few months of freshwater rearing, juvenile steelhead reside in coastal streams from one to

> three years before migrating to the ocean. As such, steelhead use all segments of a stream system to complete the freshwater phase of their life cycle. They use estuaries to acclimate to salinity changes, the middle reaches of the mainstem stream to reach headwaters and tributaries, and headwaters and tributaries to spawn and rear. Steelhead require cool, clean water year-round to sustain themselves (McEwan and Jackson 1996; CalTrout 1996). In addition, they need cool, clean well-oxygenated water flowing over clean gravel to spawn and develop. Under natural conditions, these habitat requirements—especially suitable water temperatures—occur primarily in the headwater tributaries, which is why adult steelhead migrate higher into a river system to spawn than do other anadromous fish species.

The following excerpts on steelhead life history are reproduced from the *Southern California Steelhead Recovery Plan* (NMFS, January 2012):

> This species may also display a non-anadromous life history pattern (i.e., a "freshwater-resident" strategy). It has been common practice to refer to non-anadromous individuals that complete their entire life history cycle (incubating, hatching, rearing, maturing, reproducing, and dying) in freshwater as rainbow trout, while referring to those emigrating to and maturing in the ocean as steelhead. However, this terminology does not capture the complexity of the life history cycles exhibited by native *O. mykiss*. Individuals can complete their life history cycle completely in freshwater, or they can migrate to the ocean after one to three years, and spend two to four years in the marine environment before returning to freshwater rivers and streams to spawn.
>
> Additionally, "rainbow trout" which have completed their life history cycle entirely in freshwater sometimes produce progeny which become anadromous and emigrate to the ocean and return as adults to spawn in freshwater. Conversely, it has also been shown that steelhead may produce progeny which complete their entire life cycle in freshwater. The cues that trigger this phenomenon are unknown, but may be linked to environmental variation. For example, juvenile residency can be strongly influenced by the hydrologic cycle in southern California, where extended droughts can cause juveniles to become land-locked and therefore unable to reach the ocean.

Anadromous southern steelhead are precluded from occurring in the upper Trancas Canyon Watershed at or in the vicinity of the Project site by a nearly three meter high natural waterfall within Trancas Creek, which is located above a bedrock cascade. The waterfall, which is roughly one mile downstream from the Project site, is considered the absolute natural limit to upstream steelhead migration in the watershed (California Trout, Inc., 2006). Also according to the CalTrout study, the large artificial flood control channel in the lower reaches of Trancas Creek near the Malibu West development is likely impassable to steelhead at all times.

The "steelhead" that were reportedly caught by John Steckwald in Trancas Creek in the 1980s would therefore have been a non-anadromous form of rainbow trout (which is not listed as Endangered) given the presence of a barrier (the large artificial flood control channel) to upstream fish migration in the lower reaches of Trancas Creek that was constructed in the 1950s, or earlier. If non-anadromous rainbow trout are still present in the Trancas Canyon Watershed, the trout could potentially be found in Trancas Creek or its tributaries wherever there is year-round water and suitable habitat, including upstream from the aforementioned natural limit to steelhead migration. Non-anadromous rainbow trout are not expected at the golf course ponds due to the presence of large, predatory fish, including largemouth bass. Also, the ponds do not provide suitable habitat for *O. mykiss* reproduction.

If non-anadromous rainbow trout are present in Trancas Creek, they could potentially be naturally occurring or introduced. According to *The Status and Distribution of the Freshwater Fishes of Southern California* (Swift, C., et al., December 1993): "Beginning in the 1890s and extending through the late 1930s fingerling rainbow trout were planted into almost all possible waters in southern California," although whether or not rainbow trout were introduced to Trancas Creek historically was not determined during preparation of this document. Non-anadromous rainbow trout could potentially begin to migrate (i.e., both return to the ocean and migrate back upstream to spawn); however, if downstream barriers were removed only the naturally occurring and not introduced trout would then have protected Endangered status.

The CalTrout study selected Trancas Creek as a "middle-priority" stream that should undergo habitat restoration actions, receiving an overall ranking of fifth out of 13 focal watersheds. According to the CalTrout study, in general, habitat quality for adult steelhead ranges between poor and very good, while juvenile habitat ranges between poor and excellent. Based on both stormflow and baseflow hydrology, the stream was identified as one of the watersheds where future restoration efforts should be focused.

The principle anthropogenic threats contributing to extinction risk of steelhead are impassable barriers and water storage and withdrawal that alter the pattern and magnitude of streamflow, which affect basic life history phases including egg-to-smolt survival and smolt-to-spawner survival. Therefore, the federal recovery strategy (*Southern California Steelhead Recovery Plan* (NMFS, January 2012) places a high priority on actions that alleviate these threats. Also of high priority are the protection and the restoration of mainstem and estuarine rearing habitats. Additional actions important to the recovery strategy are:

1) curb unnatural inputs of fine sediments to waterways;
2) promote the establishment and maintenance of streamside vegetation and flood-plain connectivity and function; and
3) encourage the formation and preservation of complex instream habitat.

The *Southern California Steelhead Recovery Plan* (NMFS, January 2012) identifies certain watersheds and the steelhead populations within those watersheds that constitute the foundation of recovery of the Southern California Steelhead DPS. The objective of the Recovery Plan is the removal of the Southern California Steelhead DPS from the Federal List of Endangered and Threatened Wildlife. The focus of the NMFS southern California steelhead biological recovery strategy is the core steelhead populations in larger watersheds that exhibit the physical and hydrological characteristics (e.g., large spatial area, perennial and reliable winter streamflow, stream network extending inland) that are most likely to sustain independently viable populations, which are critical for ensuring viability of the DPS as a whole. The Trancas Canyon Watershed does not currently support an anadromous population of steelhead although, as discussed above, John Steckwald reportedly caught "steelhead" in Trancas Creek in the 1980s, which due to the presence of barriers to fish migration in the lower reaches of Trancas Creek would have been the non-anadromous form of rainbow trout. Also, the Trancas Canyon Watershed is not part of the recovery strategy outlined in the federal Recovery Plan, nor has Trancas Creek been designated as Critical Habitat for steelhead by the NMFS. However, the restoration of unoccupied steelhead habitat in watersheds such as Trancas Canyon is recommended by CalTrout and would reduce extinction risk.

Tidewater Goby (*Eucyclogobius newberryi*) [FE, SSC]

This small, estuarine fish occurs in shallow coastal lagoons and the lower portions of coastal rivers and streams. Tidewater gobies prefer slow-moving and almost still brackish water for building and maintenance of burrows. Tidewater gobies may at times be found several miles upstream of estuaries. The CNDDB does not indicate that Trancas Lagoon or the lower reaches of Trancas Creek are inhabited by tidewater goby. Currently, the only water bodies within the Santa Monica Mountains region where tidewater gobies are known to exist are Malibu Lagoon, Malibu Creek, and Topanga Creek (Federal Register, v. 78, No. 25, February 6, 2013). No other creek or estuary in the Santa Monica Mountains region is currently occupied by the tidewater goby. Although there are no records of this species at the Trancas Lagoon, its presence or future presence at the Trancas Lagoon cannot be discounted.

Special-Status Amphibians

Special-status amphibians that are known to occur in the Santa Monica Mountains are limited to California red-legged frog (*Rana draytonii*) [FT, SSC] and the California newt (*Taricha torosa*) [SSC]. The California newt is considered absent from the Project site based on a habitat assessment and a focused survey that was conducted on March 26 and June 3, 2013 (See Kats, L. B., *Malibu Institute Project: A Plan toward Restoring Trancas Creek, a Significant Stream in the Santa Monica Mountains National Recreation Area – A Report on California Newt and Western Pond Turtle Surveys --- 2013* in Appendix D.3). The survey was conducted within areas at the Project site that would most likely constitute breeding habitat, including 160 meters of Trancas Creek to the east of the entrance to the Malibu Golf Club, the reach of Trancas Creek where the stream exists the property under Encinal Road, and 76 meters of the open channel stream on the golf course grounds, which is shown as "Drainage 2" on Figure 5.3-9A. In addition, upland habitats near the headwaters of Trancas Creek were searched for newts by turning over logs, rocks, and other debris. To be thorough, the golf course ponds were also surveyed, although the ponds do not provide suitable breeding habitat. No California newts were found during the survey and, due to the presence of numerous invasive aquatic animals, including crayfish and mosquitofish, the stream habitats that were surveyed are considered to be currently unsuitable for newt breeding. With the removal of invasive animals, the reach of Trancas Creek at the Project site to the east of the entrance to the Malibu Golf Club could potentially support breeding newts. As part of the Project, invasive crayfish would be captured and removed from this section of the creek (as well as from all aquatic habitats at the Project site), as discussed in *Malibu Institute Project: A Plan toward Restoring Trancas Creek, a Significant Stream in the Santa Monica Mountains National Recreation Area* (See Appendix D.3).

The California red-legged frog is likely extirpated from the Santa Monica Mountains and is considered absent from the Project site. The golf course ponds could potentially provide suitable breeding habitat for the California red-legged frog, although the ponds are currently unsuitable habitat for all life stages of the species due to the presence of numerous invasive animals, including predatory fish, mosquito fish, and crayfish. With removal of the invasive animals, the ponds could potentially support a breeding population of the California red-legged frog. As stated, as part of the Project, invasive predatory fish and crayfish would be removed from the ponds, as discussed under the Invasive Animals heading and in *Malibu Institute Project: A Plan toward Restoring Trancas Creek, a Significant Stream in the Santa Monica Mountains National Recreation Area* (See Appendix D.3).

Special-Status Reptiles

Confirmed Present:

Western pond turtle (*Emys marmorata*) [SSC]

This turtle inhabits permanent or nearly permanent bodies of water in many habitat types, below 6,000 feet in elevation. It requires basking sites, such as partially submerged logs, vegetation mats, or open mud banks. It needs suitable nesting sites with a proper thermal and hydric environment for incubation of the eggs. Nests sites are typically located on relatively dry, exposed slopes within 200 meters of the aquatic site, and usually much closer. The man-made ponds and associated banks on the golf course and Trancas Creek to the east of the entrance road to the Malibu Golf Club are suitable habitats for nesting and basking.

The western pond turtle has been confirmed present at the three largest golf course ponds. Several adult turtles (estimated at 10 individuals) were captured as incidental by-catch in mesh crayfish traps early in 2013 as a part of the ongoing effort to eradicate crayfish from the Project site. Also, focused trapping and visual surveys for the western pond turtle were conducted at the three largest golf course ponds between June 13 and June 22, 2013 and from mid-July to mid-August, 2013. Thirteen adult turtles were captured in collapsible mesh traps and five adult turtles were directly observed. The size of the pond turtles suggests that minimal reproduction is occurring as no smaller turtles were observed, presumably due to the presence of large predatory fish. All captured turtles were released back into the ponds. Western pond turtles may also be present at the smallest golf course pond or within Trancas Creek to the east of the entrance road, although none were observed in these areas during any of the surveys conducted in preparation of this DEIR. For additional information on the survey methods and results see Kats, L. B., *Malibu Institute Project: A Plan toward Restoring Trancas Creek, a Significant Stream in the Santa Monica Mountains National Recreation Area – A Report on California Newt and Western Pond Turtle Surveys --- 2013,* in Appendix D.3.

Coast horned lizard (*Phrynosoma blainvillii*) [SSC]

This lizard is reported from numerous locations in the Santa Monica Mountains (Jennings and Hayes 1994), and at Point Dume (on the point) (CDFW 2010). It prefers friable, rocky, or shallow soils, and open areas in chaparral, coastal sage, and oak woodland. It has been reported in Triunfo Canyon (De Lisle et al. 1986) and in the hills surrounding Pepperdine University, Malibu (Envicom Corporation 1999). It requires open areas for sunning, bushes for cover, patches of loose soil for burial, and an abundant supply of ants (CDFW 2010). It is potentially occurring within the proposed limits of disturbance at the following locations: the proposed helipad site and the chaparral "island" within the golf course where a tee box and pathway to the tee box would be constructed.

Potentially Present:

California legless lizard (*Anniella pulchra*) [SSC]

This lizard is reported from Malibu Canyon, Point Dume, Triunfo Canyon (De Lisle et al. 1986), and other locations in the Santa Monica Mountains (Jennings and Hayes 1994). It is potentially present on the Project site in sandy, friable soils with sufficient soil moisture and areas where leaf litter accumulates, such as under the canopies of oak trees. It is potentially occurring within the proposed limits of disturbance at riparian habitats surrounding the golf course ponds.

Two-striped garter snake (*Thamnophis hammondii*) [SSC]

This snake is found in coastal California from the vicinity of Salinas to northwest Baja California from sea level to about 7,000 ft. elevation. A highly aquatic species, it is found in or near permanent freshwater often along streams with rocky beds and riparian growth. The nearest locations reported by the CNDDB are 1.6 miles northwest of the intersection of Potrero Road and north Potrero Road, southeast of Conejo Mountain; and Triunfo Creek, northwest of the intersection of Kanan Road and Triunfo Road, 2 miles northwest of Malibou Lake (CDFW 2010). It also has been reported at numerous locations in the Santa Monica Mountains, including Trancas Canyon and Zuma Canyon.

(De Lisle, et al. 1986). This species may occur in aquatic and riparian habitats on the Project site, including the golf course ponds and Trancas Creek. It is potentially occurring within the proposed limits of disturbance at the golf course ponds and adjacent riparian habitats.

Coast patch-nosed snake (*Salvadora hexalepis virgultea*) [SSC]

This snake is found along rocky canyons and the edges of chaparral. It has been reported from Malibu Canyon and Westlake Village. (De Lisle, et al. 1986). Suitable habitat is available throughout most of the undeveloped portions of the Project site. It is potentially occurring within the proposed limits of disturbance at the following locations: the proposed helipad site and the chaparral "island" within the golf course where a tee box and pathway to the tee box would be constructed.

San Diego mountain king snake (*Lampropeltis zonata pulchra*) [SSC]

This snake prefers canyon bottoms, but wanders to adjacent coastal sage, valley oak savanna, or southern oak woodland. It has been reported from Lower Malibu Canyon and Triunfo Canyon. (De Lisle, et al. 1986), and other locations in the Santa Monica Mountains (Jennings and Hayes 1994). Suitable mesic, riparian, and woodland habitat is available on the Project site. Although unlikely, it is potentially occurring temporarily within the proposed limits of disturbance at riparian and woodland habitats surrounding the golf course ponds.

Special-Status Birds

Confirmed Present:

White-tailed kite (*Elanus leucurus*) [CFP]

This bird is an uncommon to locally fairly common resident in the coastal regions of southern California (Garrett and Dunn 1981). This species has been observed at the Project site and is a possible resident or occasional visitant. There is potential nesting habitat for this species at the Project site. It is potentially occurring as an occasional visitant in all habitats within the proposed limits of disturbance.

Northern harrier (*Circus cyaneus*) [SSC]

This bird is a fairly common winter visitant to open grasslands, agricultural fields, freshwater and coastal salt marshes, estuaries, open desert and brushlands in southern California (Garrett and Dunn 1981). This species has been observed at the Project site. It is potentially occurring as an occasional visitant, but would not nest at the Project site or within the limits of disturbance.

Olive-sided flycatcher (*Contopus cooperi*) [SSC]

This bird is an uncommon spring and fall transient in lowlands. It breeds primarily in open coniferous forests, but also descends from wooded canyons well into the foothill portions of the coastal district of southern California. Plantings of tall trees of conifers and eucalyptus form a marginally acceptable breeding habitat locally (Garrett and Dunn 1981). This species has been observed at the Project site. It is potentially occurring at the Project site as a visitant or transient. It is potentially occurring as a visitant or transient within the proposed limits of disturbance, and particularly within large trees especially conifers and eucalyptus on the golf course grounds.

Golden eagle (*Aquila chrysaetos*) [CFP]

The eagle is an uncommon resident, favoring grasslands, brushlands, deserts, oak savannas, open coniferous forest, and mountain valleys. It nests in rugged, mountainous country (Garrett and Dunn 1981). The nearest reported location is in Lobo Canyon, with the following observations:

1980 and 1981: 1 young in nest

1982: 2 young in nest
1983 – 86: 1 young in nest
1987: nest failed
1988: 1 young in nest
1989: nest failed

The golden eagle has been observed flying over the Project site. The golden eagle may forage over all habitats within the limits of disturbance, but would probably not nest at the Project site.

Yellow warbler (*Dendroica petechia brewsteri*) [SSC]
This bird is a common transient throughout the region, and uncommon to locally common summer resident in lowland and foothill riparian woodlands, remaining rarely but regularly in lowlands in the winter. It breeds in tall riparian growth of cottonwoods, alders, and willows. (Garrett and Dunn 1981). This species has been observed at the Project site. It is potentially occurring on the Project site as a visitant or transient within the limits of disturbance at riparian woodland habitats surrounding the golf course ponds.

Potentially Present:

Least Bell's vireo (*Vireo bellii pusillus*) [FE, CE]

The federally listed Endangered and California Endangered Least Bell's vireo is a rare and local summer resident in lowland riparian woodlands, breeding in willow thickets and other dense, low riparian growth in lowlands and the lower portions of the canyons, generally along permanent or semi-permanent streams. TERACOR conducted a protocol-level survey for least Bell's vireo between May 13 and July 26, 2006, based on the *Least Bell's Vireo Survey Guidelines* issued by the USFWS, dated January 19, 2001. No least Bell's vireos were detected on the Project site during the survey (TERACOR Resource Management, February 16, 2007). This species is a potential transient, but it is not expected to nest at the Project site. It is potentially occurring as a transient within the proposed limits of disturbance at riparian habitats surrounding the golf course ponds.

Willow flycatcher (*Empidonax traillii extimus*) [FE, CE]

This bird is an uncommon spring transient and fairly common fall transient along the coast. It formerly bred in riparian woodlands, but is virtually extirpated from the southern California region (Garrett and Dunn 1981), although was observed successfully nesting in 2000 for the first time in several decades on the Santa Clara River. It is a rare to locally uncommon, summer resident in wet meadow and mountain riparian habitats at 2000 – 8000 ft. in the Sierra Nevada and Cascade Range. It most often occurs in broad, open river valleys, or large mountain meadows with lush growth of shrubby willows (Zeiner et al. 1990b). It is potentially occurring at the Project site as a rare visitant or transient. It is potentially occurring as a rare visitant or transient within the proposed limits of disturbance at riparian habitats surrounding the golf course ponds.

Bank swallow (*Riparia riparia*) [CT]
This bird is a very uncommon spring transient and rare fall transient, and casual winter transient along the coast of southern California, formerly a fairly common summer resident, and now virtually extirpated as a breeder in the southern California region (Garrett and Dunn 1981). Nesting habitat for this species is absent on the Project site. It is potentially occurring at the Project site as a rare transient, but would not nest on the Project site due to a lack of appropriate steep muddy bank habitat. It may potentially forage as a rare transient within the proposed limits of disturbance.

Western least bittern (*Ixobrychus exilis hesperis*) [SSC]

This bird is an uncommon and local resident in freshwater ponds and lakes with extensive margins of reeds (bulrushes, cattails) (Garrett, K.L., et al., 2006). It is rather rare throughout the year in the coastal district of southern California (Garrett and Dunn 1981). It is potentially occurring at the Project site as a rare visitant within the proposed limits of disturbance at the golf course ponds.

Burrowing owl (*Athene cunicularia*) [SSC]

This owl is a resident in open areas of the lowlands throughout much of the southern California region. It is greatly reduced in numbers and now quite local in the coastal district of southern California (Garrett and Dunn 1981). The nearest reported locations are in the Simi Hills (Laskey Mesa) and Santa Susana Mountains (Dry Canyon). It is potentially occurring at the Project site as a rare visitant or transient, and is potentially occurring within all habitats within the limits of disturbance.

Long-eared owl (*Asio otus*) [SSC]

This owl is a very rare transient and winter visitant along the coast (Garrett and Dunn 1981). It requires riparian habitat and uses live oak thickets and other dense stands of trees (Zeiner et al. 1990b). It is potentially occurring on the Project site as a rare visitant or transient. It is potentially roosting as a rare visitant or transient within the limits of disturbance at riparian and woodland habitats surrounding the golf course ponds, and potentially foraging in all habitats within the limits of disturbance.

Short-eared owl (*Asio flammeus*) [SSC]

This owl is an uncommon and local winter visitant along the coast, where it formerly nested. Its wintering locations include Point Mugu and Sepulveda Basin (Garrett and Dunn 1981). It is usually found in open areas with few trees, such as annual and perennial grasslands, prairies, dunes, meadows, irrigated lands, and saline and fresh emergent wetlands (Zeiner, et al. 1990b). It is potentially occurring at the Project site as a visitant or transient, potentially roosting as a visitant or transient within the limits of disturbance at riparian and woodland habitats surrounding the golf course ponds, and potentially foraging in all habitats within the limits of disturbance.

Black swift (*Cypseloides niger*) [SSC]

This bird is a rare and irregular transient through the coastal district, nesting at a few steep waterfall locations in the San Gabriel, San Bernardino, and San Jacinto mountains (Garrett and Dunn 1981). It breeds very locally in the Sierra Nevada and Cascade Range, the San Gabriel, San Bernardino, and San Jacinto Mountains, and in coastal bluffs and mountains from San Mateo County south probably to San Luis Obispo County. It nests in moist crevice or caves on sea cliffs above the surf, or on cliffs behind, or adjacent to, waterfalls in deep canyons. It forages widely over many habitats (Zeiner et al. 1990b). It is potentially occurring at the Project site as a rare visitant or transient, potentially foraging over all areas within limits of disturbance.

Vaux's swift (*Chaetura vauxi*) [SSC]

This bird is a fairly common spring and fall transient in southern California, and rare and irregular winter visitant, primarily along the coast (Garrett and Dunn 1981). It is a summer resident of northern California. It breeds fairly commonly in the Coast Ranges from Sonoma County north, and very locally south to Santa Cruz County, in the Sierra Nevada, and possibly in the Cascade Range. It prefers redwood and Douglas-fir habitats with nest-sites in large hollow trees and snags, especially tall, burned-out stubs. It is a fairly common migrant throughout most of the state in April and May,

and August and September. A few winter irregularly in southern coastal lowlands (Zeiner, et al. 1990b). It is potentially occurring at the Project site as a visitor or transient, potentially foraging over all areas within limits of disturbance.

Loggerhead shrike (*Lanius ludovicianus*) [SSC]

Only a few pairs of this once-abundant predator are still found in our coastal lowlands; small numbers of migrants augment this population from July to March. Shrikes still breed uncommonly in the rural inland areas of the Los Angeles region (Garrett, K.L., et al. 2006). It prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. It reaches its highest densities in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats. It occurs only rarely in heavily urbanized areas, but is often found in open cropland. It sometimes uses edges of denser habitats (Zeiner, et al. 1990b). It may potentially occur as either a breeder or migrant at all areas within limits of disturbance.

Purple martin (*Progne subis*) [SSC]

This bird is a rather rare and very local summer resident in woodlands of the foothill portions of coastal district and also a rare spring transient. For nesting, it uses old, tall sycamores, pines, etc., often within oak woodland or open conifer forest (Garrett and Dunn 1981). It is potentially occurring at the Project site as a visitant or transient, potentially foraging over all areas within limits of disturbance.

Yellow-breasted chat (*Icteria virens*) [SSC]

This bird is an uncommon and local summer resident in riparian thickets and brushy tangles of the lowlands and lower portions of foothill canyons (Garrett and Dunn 1981). It is potentially occurring on the Project site as a rare visitant or transient within the limits of disturbance at riparian scrub habitats surrounding the golf course ponds.

Summer tanager (*Piranga rubra*) [SSC]

This bird is rare, but regular in fall, winter, and late spring along the coast, mostly from Los Angeles County southward (Garrett and Dunn 1981). It frequents cottonwood-willow associations of riparian habitats for breeding, feeding, cover, and other activities (Zeiner, et al. 1990b). It is potentially occurring on the Project site as a visitant or transient within the limits of disturbance at riparian habitats surrounding the golf course ponds.

American peregrine falcon (*Falco peregrinus anatum*) [CFP]

This species is an uncommon but widespread resident in the Los Angeles region, with some influx of birds during migration (Garrett, K. L., et al, 2006). It occurs near wetlands, lakes, rivers, or other water and on cliffs, banks, dunes, mounds, and human-made structures (CDFW 2013). The nest consists of a scrape or a depression or ledge at an open site. This species may potentially forage and, although unlikely, may nest at the Project site, but would not nest within the limits of disturbance.

<u>Special-Status Mammals</u>

Potentially Present:

San Diego desert woodrat (*Neotoma lepida intermedia*) [SSC]

This woodrat occurs in a variety of habitats from sea level to 8,500 feet (Zeiner, et al. 1990a). It is found in coastal scrub of southern California from San Diego County to San Luis Obispo County. It prefers

moderate to dense canopies and areas with rock outcrops and rocky cliffs and slopes. It is potentially occurring in rocky areas of Project site, but not expected within limits of disturbance.

Ringtail (*Bassariscus astutus octavus*) [CFP]

This species occurs in various riparian habitats, and in brush stands of most forest and shrub habitats (Zeiner, et al. 1990a). Although unlikely, it is potentially occurring temporarily within the proposed limits of disturbance at riparian and woodland habitats surrounding the golf course ponds.

American badger (*Taxidea taxus neglecta*) [SSC]

This species occurs in a diversity of habitats throughout California, except the extreme northern coast (Williams 1986; Zeiner, et al. 1990a). It probably does not occur within limits of disturbance.

All of the bat species discussed below are considered potentially present on the Project site and within the limits of disturbance, primarily foraging above ground, and potentially roosting in trees and buildings.

Mexican long-tongued bat (*Choeronycteris mexicana*) [SSC]

The range of the species extends along coastal southern California from western Ventura County southward (Constantine 1998). It is primarily a nectar-feeding species that migrates to follow flowering food plants, especially *Agave* and *Yucca*. It winters in Mexico and northern Central America. It uses caves, mines and buildings as day roosts and nursery sites.

Cave myotis (*Myotis velifer velifer*) [SSC]

Cave myotis is typically found during warm months in California near the Colorado River. Three specimens from Los Angeles County (Valencia, Florence, and Lancaster) extend the range of the species to coastal southern California (Constantine 1998).

Western red bat (*Lasiurus blossevillii frantzii*) [SSC]

Western red bat roosts in forests and woodlands, and feeds over a wide variety of habitats, including grasslands, shrublands, open woodlands and forests, and croplands. Its range in California includes the Santa Monica Mountains (Zeiner, et al. 1990a). This foliage-dwelling, migratory bat occurs in California's Central Valley, foothills, and in similar areas of tree growth in southern California (Constantine 1998). It roosts primarily in trees, 2 to 40 ft above ground, from sea level up through mixed conifer forests. It prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging. The nearest reported locations are Paramount Ranch, 2 miles east of Cornell; Peter Strauss Ranch; about 4.5 air miles north-northeast of Malibu Beach, south and west of Cold Creek, Stunt Ranch (CDFW 2010).

California leaf-nosed bat (*Macrotis californicus*) [SSC]

This bat is found in desert riparian, desert wash, desert scrub, desert succulent scrub, alkali scrub and palm oasis habitats. It needs rocky, rugged terrain with mines or caves for roosting. Its reported range does not include the Santa Monica Mountains (Zeiner, et al. 1990a). The nearest reported location is Owensmouth (now Canoga Park), east of Cheeseboro/Palo Comado Canyons, on Los Angeles/Ventura Co. line, just off Vanowen St. The observations were in a cave (CDFW 2010).

Spotted bat (*Euderma maculatum*) [SSC]

This bat occurs mostly in foothills and mountains and desert regions of southern California, in a range of habitats from desert and grasslands through mixed conifer forest. Its range in California includes the Santa Monica Mountains (Zeiner, et al. 1990a). It occupies a wide variety of habitats from arid deserts

and grasslands through mixed conifer forests. It feeds over water and along washes almost entirely on moths. It needs rock crevices in cliffs or caves for roosting. The nearest reported location is Malibu Creek State Park, near rocky pool and Century Lake area with rocky cliffs which would provide preferred roosting habitat. Individuals were recorded from this area four times in June and August 2003. Three of the calls were recorded at dusk and the other within one hour after sunset, indicating a roost in the vicinity (CDFW 2010).

Pale big-eared bat (*Corynorhinus townsendii pallescens*) [SSC]

This bat is found in a wide variety of habitats except subalpine and alpine. Its range in California includes the Santa Monica Mountains (Zeiner, et al. 1990a).

Pallid bat (*Antrozous pallidus pacificus*) [SSC]

This bat occurs in a wide variety of habitats, including deserts, grasslands, shrublands, woodlands and forests from sea level to mixed conifer forests. Its range in California includes the Santa Monica Mountains (Zeiner, et al. 1990a). It is most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. It is very sensitive to disturbance of roosting sites. The nearest reported location is China Flat, Simi Hills, where individuals were detected acoustically during a survey between April 2002 and July 2004 (CNDDB 2013). The majority of the detections in the Santa Monica Mountains National Recreation Area (SMMNRA) were at this site.

Western mastiff bat (*Eumops perotis californicus*) [SSC]

This bat occurs in many open habitats, including woodlands, coastal scrub, grasslands, chaparral, desert, and urban. Its range in California includes the Santa Monica Mountains (Zeiner, et al. 1990a). It occupies many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. It roosts in crevices in cliff faces, high buildings, trees and tunnels. The nearest reported locations are 2 miles east of Cornell, Paramount Ranch (one to three animals were detected on May 31, 1995); Malibu Creek State Park, Century Lake (Century Reservoir); Peter Strauss Ranch; and China Flat in the Simi Hills.

Big free-tailed bat (*Nyctinomops macrotis*) [SSC]

This bat's range (scattered records) extends from San Francisco Bay to Morro Bay, Santa Barbara, and coastal southern California from Los Angeles (Azusa, Burbank, Pomona) and San Bernardino counties southward (Constantine 1998).

Wildlife Movement and Habitat Linkages

Wildlife must to be able to access essential habitat for water, foraging, breeding, and cover. Examples of barriers or impediments to movement (access) include housing and other urban development, roads, fencing, unsuitable habitat, or open areas with little vegetative cover.

The term wildlife movement corridor is used to describe physical connections that allow wildlife to move between patches of suitable habitat in both undisturbed landscapes, as well as environments fragmented by urban development. Large areas of suitable habitat and habitat linkages between these areas are necessary to maintain healthy ecological and evolutionary processes. Habitat linkages and wildlife movement corridors are necessary for dispersal and migration, to ensure the mixing of genes between populations, and so wildlife can respond and adapt to environmental stress.

Wildlife crossings are generally small, narrow areas allowing wildlife to pass through an obstacle or barrier, such as a roadway to reach another patch of habitat. These can be critical at both the local

and regional level. Wildlife crossings include culverts, drainage pipes, underpasses, tunnels, and, more recently, crossings created specifically for wildlife movement over highways.

Research trends in conservation biology indicate that one of the best ways to protect biological diversity is to protect large areas of protected core habitat and linkages between these areas. The accelerating rate of development in the Santa Monica Mountains, as well as in and around other nearby mountain ranges in the region has led to fragmentation and separation of habitats. The viability of linkages between areas of core habitat within the Santa Monica Mountains may become increasingly tenuous as privately owned properties within and adjacent to recognized habitat linkages between areas of core habitat are developed. Continuing development and consequent habitat fragmentation and loss of connectivity could ultimately lead to de-stabilization of existing populations, physical and genetic isolation, and the loss of natural diversity.

The *SMMNRA Land Protection Plan* (March 1998) indicates the undeveloped southwestern, southern, and southeastern portions of the Project site are of "high" to "highest" resource value, based on proximity to protected core habitat or their being part of an important "linkage area" connecting large protected core habitats located generally west and south and southeast of the Project site. The largest of the assembled protected contiguous core habitat areas in the Santa Monica Mountains (approximately 22,300 acres) lies approximately 1.9 miles to the west of the Project site and is inclusive of Point Mugu State Park, Leo Carrillo State Park, Rancho Sierra Vista/Satwiwa, the Circle X Ranch, and the Malibu Springs area. A second, smaller area of protected contiguous core habitat, consisting of approximately 6,500 acres, lies south and southeast of the Project site within the Zuma/Trancas Canyon Significant Watershed.

Much of the Project site contains natural communities that are relatively intact and undisturbed. Similarly, undeveloped private properties and portions of developed properties that abut the Project site are still characterized by contiguous tracts of native vegetation. The native habitats on the Project site are expected to facilitate the movement of a diversity of wildlife species, including the largest animals that range over extensive areas such as bobcat, badger, mountain lion, and golden eagle, in the surrounding area as well as between the large areas of core habitat to the west, south, and southeast.

5.3.2 Regulatory Setting

Federal

Endangered Species Act of 1973

The Federal Endangered Species Act (FESA) and implementing regulations, Title 16 United States Code (USC) Section 1531, et seq. (16 U.S.C. Section 1531, et seq.), Title 50 Code of Federal Regulations (CFR) Section 17.1, et seq. (50 C.F.R. Section17.1, et seq.), include provisions for the protection and management of federally listed Threatened or Endangered plants and animals and their designated critical habitats. FESA defines an "Endangered species" as "any species which is in danger of extinction throughout all or a significant portion of its range" and a "Threatened species" as "any species which is likely to become an Endangered species within the foreseeable future throughout all or a significant portion of its range." FESA also provides the framework for protection of "Candidate species", species for which there is sufficient supporting scientific information for listing. There are two classes of candidate species. The first class is composed of species that have been proposed for listing. The second class is composed of species for which there is sufficient information on biological vulnerability and threat(s) to list, but the listing process has not begun or is in some preliminary stage.

Under Section 9(a)(1)(B) of FESA, it is unlawful to "take" any listed species. "Take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Further, the USFWS, through regulations, has interpreted the terms "harm" and "harass" to include certain types of habitat modification as forms of "take." A "take" is determined on a case-by-case basis and often varies from species to species. If a project requires a permit from a federal agency and the project could affect a federally listed plant or animal species, the property owner and the federal agency must consult with the USFWS.

Section 7 of FESA requires a permit to take Threatened or Endangered species during lawful project activities on federal land or involving a federal action; FESA Section 10 provides a method for permitting incidental take resulting from state or private action. The administering agency is the USFWS for terrestrial, avian, and most aquatic species; marine and anadromous species (e.g. steelhead) are administered by the NMFS. Section 9(a)(2)(b) of FESA also addresses the protections afforded to listed plants. FESA also discusses recovery plans and the designation of critical habitat for listed species.

Fish and Wildlife Coordination Act

Section 7 of the Fish and Wildlife Coordination Act, 16 U.S.C. 742, *et seq*., 16 USC Section 1531, *et seq*., and 50 C.F.R. Section 17 require consultation if any project facilities could jeopardize the continued existence of an Endangered species. Applicability depends on Federal jurisdiction over some aspect of the project (e.g., dredge or fill activities in "waters of the U.S."). If consultation under Section 7 were required for the Project, the administering agency would be the USACE in coordination with the NMFS.

Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (16 U.S.C. Sections 703 – 711) includes provisions for protection of migratory birds, including the non-permitted take of migratory birds, under the authority of the USFWS and CDFW. The Migratory Bird Treaty Act defines "take" as "to pursue, hunt, capture, collect, kill or attempt to pursue, hunt, shoot, capture, collect or kill, unless the context otherwise requires." Most birds are considered migratory under the Migratory Bird Treaty Act.

Clean Water Act of 1977, Section 404 and Section 401

The USACE and the U.S. Environmental Protection Agency (USEPA) regulate the discharge of dredged or fill material into "waters of the U.S.," including wetlands, under Section 404 of the Clean Water Act (CWA), 33 U.S.C. Section 1344. "Waters of the U.S." are defined as "rivers, creeks, streams, and lakes extending to their headwaters and any associated wetlands." Wetlands are defined as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions." Activities in "waters of the U.S." regulated under Section 404 include fill for development, water resource projects (such as dams and levees), infrastructure developments (such as highways and airports) and mining projects. Section 404 of the CWA requires a permit before dredged or fill material may be discharged into "waters of the U.S.," unless the activity is exempt from Section 404 regulation (e.g., certain farming and forestry activities).

Section 401 of the CWA, 33 U.S.C. Section 1341, requires an applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into "waters of the U.S." to obtain a certification from the state in which the discharge originates or would originate that the discharge will comply with the applicable effluent limitations and water quality standards. In California, before the USACE will issue a Clean Water Act Section 404 permit, an applicant must obtain a "water

quality certification" under Section 401 from the State Water Resources Control Board (SWRCB) or one of the nine RWQCBs.

Over the years, the USACE has modified its regulations, typically due to evolving policy or judicial decisions, through the issuance of Regulatory Guidance Letters, memoranda, or more expansive instructional guidebooks. These guidance documents help to update and define how jurisdiction is claimed, and how "waters of the U.S." will be regulated. The most recent significant modification occurred on June 5, 2007, subsequently updated in December 2008, when the USACE and the USEPA issued a series of guidance documents outlining the requirements and procedures, effective immediately, to establish jurisdiction under Section 404 of the CWA and the Section 10 of the Rivers and Harbors Act 1899 (USACE and USEPA 2006). These documents are intended to be used for all jurisdictional delineations and provide specific guidance for the jurisdictional Court rulings in Rapanos v. the United States and Carabell v. the United States 547 U.S. 715 (2006) (jointly referred to as "Rapanos").[4]

The Rapanos case outlines the conditions and criteria used by the USACE to assess and claim jurisdiction over non-navigable, ephemeral tributaries. Under a plurality ruling, the Court noted that certain "not relatively permanent" (i.e., ephemeral), non-navigable tributaries must have a "significant nexus" to downstream traditional navigable waters to be jurisdictional. An ephemeral tributary has a significant nexus to downstream navigable "waters" when it has "more than a speculative or an insubstantial effect on the chemical, physical, and/or biological integrity of a TNW [Traditional Navigable Water]." A significant nexus is established through the consideration of a variety of hydrologic, geologic, and ecological factors specific to the particular drainage feature in question.

State

California Endangered Species Act of 1984

The California Endangered Species Act (CESA) and implementing regulations in the California Fish and Game Code Sections 2050 to 2098, include provisions for the protection and management of plant and animals species listed as Endangered or Threatened, or designated as Candidates for such listing. CESA defines an "Endangered species" as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The State defines a "Threatened species" as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an Endangered species in the foreseeable future in the absence of the special protection and management efforts." The State defines a "Candidate species" as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of Endangered species or the list of Threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list."

The Act includes a consultation requirement "to ensure that any action authorized by a State lead agency is not likely to jeopardize the continued existence of any Endangered or Threatened species…or result in the destruction or adverse modification of habitat essential to the continued existence of the species" (Fish and Game Code Section 2090). Plants of California declared to be

[4] In April 2011, the USACE and the USEPA issued new "Draft Guidance on Identifying Waters Protected by the Clean Water Act." The draft guidance is intended to clarify how the agencies will identify protected waters and implement the Rapanos decision.

Endangered, Threatened, or Rare are listed within the California Code of Regulations (CCR) Title 14 Section 670.2.[5] Animals of California declared to be Endangered or Threatened are listed at 14 CCR Section 670.5. 14 CCR Section 15000, *et seq*. describes the types and extent of information required to evaluate the effects of a project on biological resources of a project site.

California Fish and Game Code

Fish and Game Code provides specific protection and listing for several types of biological resources, including:

- Fully Protected species:
- Streams, rivers, sloughs, and channels;
- Significant Natural Areas; and
- Designated Ecological Reserves.

Fully Protected Species are listed in Section 3511 (Fully Protected Birds), Section 4700 (Fully Protected Mammals), Section 5050 (Fully Protected Reptiles and Amphibians), and Section 5515 (Fully Protected Fishes). The Fish and Game Code of California prohibits the taking of species designated as Fully Protected. Under the Fish and Game Code, Fully Protected species "may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any Fully Protected species," although take may be authorized for necessary scientific research. This language makes the "Fully Protected" designation the strongest and most restrictive regarding the "take" of these species.

The Fish and Game Code Section 1602 requires a Streambed Alteration Agreement for any activity that may "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, wastes or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake". Typical activities that require a Streambed Alteration Agreement include excavation or fill placed within a channel, vegetation clearing, structures for diversion of water, installation of culverts and bridge supports, cofferdams for construction dewatering, and bank reinforcement. A Streambed Alteration Agreement includes measures to protect the affected resource.

The term "stream," which includes creeks and rivers, is defined in the California Code of Regulations as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 Cal. Code of Regulations, § 1.72). In addition, the term "stream" can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. "Riparian" is defined as "on, or pertaining to, the banks of a stream;" therefore, riparian vegetation is defined as "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself."

The Fish and Game Code Sections 1930 to 1940 designate Significant Natural Areas. These areas include refuges, natural sloughs, riparian areas, and vernal pools and significant wildlife habitats. An inventory of Significant Natural Areas is maintained by the CDFW Natural Heritage Division and is

[5] The "Rare" designation is discussed under the Native Plant Protection Act (NPPA) of 1977 heading.

part of the NDDB. Fish and Game Code Section 1580 lists Designated Ecological Reserves. Designated Ecological Reserves are significant wildlife habitats to be preserved in natural condition for the general public to observe and study.

The Fish and Game Code Sections 2081(b) and (c) allow CDFW to issue an incidental take permit for a State listed Threatened and Endangered species only if specific criteria are met. These criteria can be found in Title 14 CCR, Sections 783.4(a) and (b). No Section 2081(b) permit may authorize the take of "fully protected" species and "specified birds." If a project is planned in area where a species or specified bird occurs, an applicant must design the project to avoid all take; the CDFW cannot provide take authorization under this act.

The Fish and Game Code Section 3503 specifies it is unlawful to take, possess, or needlessly destroy the nest of any bird, except as otherwise provided by this code. Section 3503.5 specifies it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey), to take, possess, or needlessly destroy the nest of any such bird, except as otherwise provided by this code.

Porter-Cologne Water Quality Control Act

In 1969, the California Legislature enacted the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) to preserve, enhance and restore the quality of the State's water resources. The Act established the SWRCB and nine RWQCBs as the principal state agencies with the responsibility for controlling water quality in California. "Waters of the State" are defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The RWQCB protects all waters in its regulatory scope, but has special responsibility for isolated wetlands and headwaters. These water bodies have high resource value, are vulnerable to filling, and may not be regulated by other programs, such as Section 404 of the CWA. "Waters of the State" are regulated by the RWQCB under the State Water Quality Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Act. Projects that require an USACE permit, or fall under other federal jurisdiction, and have the potential to impact waters of the State are required to comply with the terms of the Water Quality Certification Program. If a project does not require a federal license or permit, but does involve activities that may result in a discharge of harmful substances to waters of the State, the RWQCB has the option to regulate such activities under its State authority in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements. Additional information regarding the Porter-Cologne Act is provided in Section V.D, Water Quality, of this Draft EIR.

CEQA

CEQA requires public agencies to analyze and publically disclose the environmental impacts to biological resources from projects they approve, and adopt feasible alternatives and mitigation measures to mitigate for the significant impacts they identify. The administering agency for CEQA in this case is the County of Los Angeles. The Los Angeles County CEQA Guidelines provide a framework for the analysis of impacts to biological resources.

Native Plant Protection Act (NPPA) of 1977

The Native Plant Protection Act of 1977 and implementing regulations in Fish and Game Code Section 1900, *et seq*., designates rare and endangered native plants and provides specific protection measures for identified populations. The NPPA directs the CDFW to "preserve, protect, and enhance rare and endangered plants in this State." The NPPA gave the California Fish and Game Commission the power to designate native plants as Endangered or Rare, and to require permits for collecting,

transporting, or selling such plants. In 1984 the California Endangered Species Act (CESA) expanded on the original NPPA and enhanced legal protection for plants by creating the categories of "Threatened" and "Endangered" species. Plants that were listed as "Endangered" under the NPPA are protected as "Endangered" species under the CESA, but the CESA does not provide protection for species listed as "Rare" under the NPPA. There are currently 64 species, subspecies, and varieties of plants that are protected and designated as "Rare" under the NPPA. A native plant is "Rare" when "although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens." The NPPA prohibits take of plants that are protected as Endangered or Rare, but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

CDFW Special Animals List

"Special Animals" is a general term that refers to all of the taxa the CNDDB tracks, regardless of their legal or protection status. The CDFW considers the taxa on this list to be those of greatest conservation need. The species on this list generally fall into one or more of the following categories: (1) officially listed or proposed for listing under CESA or FESA; (2) State or Federal candidate for possible listing; (3) taxa which meet the criteria for listing, even if not currently included on any list, as described in CEQA Guidelines Section 15380; (4) taxa considered by the CDFW to be a Species of Special Concern; (5) taxa that are biologically rare, very restricted in distribution, declining throughout their range, or have a critical, vulnerable stage in their life cycle that warrants monitoring; (6) populations in California that may be on the periphery of a taxon's range, but are threatened with extirpation in California; (7) taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands, vernal pools, etc.); and (8) taxa designated as a special status, sensitive, or declining species by other state or federal agencies, or a non-governmental organization (NGO).

California Native Plant Society (CNPS)

CNPS publishes and maintains an Inventory of Rare and Endangered Vascular Plants of California, which is currently in its 8th edition. The inventory assigns plants to the following Rare Plant Ranks:

- 1A—Presumed extirpated in California and either rare or extinct elsewhere.
- 1B—Rare, threatened, or endangered in California and elsewhere.
- 2A—Presumed extirpated in California, but more common elsewhere.
- 2B— Rare, threatened, or endangered in California, but more common elsewhere.
- 3—Plants for which more information is needed – a review list.
- 4—Plants of limited distribution – a watch list.

Additional endangerment codes are assigned to each taxon as follows:

- 1—Seriously endangered in California (over 80 percent of occurrences threatened/high degree of immediacy of threat)
- 2—Fairly endangered in California (20–80 percent occurrences threatened).
- 3—Not very endangered in California (<20 percent of occurrences threatened or no current threats known).

Plants assigned to Rare Plant Ranks 1A, 1B, 2A and 2B of the CNPS Inventory consist of plants that may qualify for listing and are given special consideration under CEQA during project review.

Although plants assigned to Rare Plant Ranks 3 and 4 have little or no protection under CEQA, they are usually included in the project review process.

Species of Special Concern

"Species of Special Concern" are broadly defined as animals not listed under FESA or CESA, but which are nonetheless of concern to the CDFW because they are declining at a rate that could result in listing or historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by the CDFW, land managers, consulting biologists, and others, and is intended to focus attention on the species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation is also intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although these species generally have no special legal status, they are given special consideration under CEQA during project review.

Sensitive Vegetation Communities

Sensitive vegetation communities are natural communities and habitats that are either unique, of relatively limited distribution in the region, or of particularly high value to wildlife. These resources have been defined by federal, state, and local conservation plans, policies or regulations. The CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its CNDDB. Sensitive vegetation communities are also identified by the CDFW on its List of Vegetation Alliances and Associations (Natural Communities List). Impacts to sensitive natural communities and habitats identified in local or regional plans, policies, regulations, or by federal or state agencies must be considered and evaluated. (CEQA Guidelines Appendix G.)

Public Resources Code Section 21083.4

In 2004, CEQA was amended with the passage of SB 1334, adding Section 21083.4 to the Public Resource Code, which requires a county to determine whether a project within its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment. Public Resources Code (PRC) Section 21083.4 requires a county to mitigate for significant environmental effects resulting from the conversion of oak woodlands.

To meet the requirements of PRC Section 21083.4, a county may prepare an oak conservation element for a general plan, an oak protection ordinance, or an oak woodlands management plan, or amendments thereto, using funds awarded pursuant to the Oak Woodlands Conservation Act (California Fish and Game Code Section 1360, et seq.). At the direction of the County Board of Supervisors, the Los Angeles County Oak Woodlands Habitat Conservation Strategic Alliance prepared a Draft Los Angeles County Oak Woodland Conservation Management Plan, which was completed in May 2011. The Plan is divided into two parts. Part 1 of the Plan contains a voluntary oak woodlands conservation strategy that allows the County to qualify for funds distributed through the State of California's Oak Woodlands Conservation Fund. Part II of the Plan contains a comprehensive set of recommendations designed to assist the County in revising, expanding, and implementing policies and regulations to preserve and mitigate for the loss of oak woodlands.

On August 23, 2011, the County Board of Supervisors adopted Part I of the Plan. Part II is currently being reviewed and has not been approved by the County. Therefore, although pending, the County has not yet incorporated the requirements of PRC Section 21083.4 into new or existing Los Angeles County policy. In the absence of adopted local policy, the *Oak Woodland Impact Decision Matrix*

(2008) developed by the University of California Integrated Hardwood Range Management Program is an accepted tool for assessing impacts to oak woodlands pursuant to PRC Section 21083.4. The Matrix includes a methodology for determining what constitutes a significant impact to oak woodlands based on site condition and degree of impact at three different spatial scales: individual tree, site, and landscape.

The California legislature has defined "oak woodlands" in the Oak Woodlands Conservation Act of 2001 as lands that contain at least 10% oak canopy cover. This definition is widely accepted and is used herein, in part, for the purpose of defining oak woodlands under PRC Section 21083.4. PRC Section 21083.4 defines an "oak" as a native tree species in the genus *Quercus*, which is not designated as a commercial species, and that is 5 inches or more in diameter at breast height (dbh).

Local

County of Los Angeles General Plan Conservation and Open Space Element

The existing General Plan Conservation and Open Space Element, adopted November 25, 1980, sets policy direction for the open space related resources of Los Angeles County. These resources include land and water areas devoted to recreation, scenic beauty, conservation and use of natural resources, agriculture, and mineral production. The conservation emphasis of this Element consists of measures for the conservation, management and use of natural and man-made resources, including biological resources. To protect areas of significant natural resources, the Element recommends the retention of these areas in non-urban or open space use. Special emphasis is placed on protection of hillside character and significant ecological areas.

The County is currently in the process of completing an update in compliance with Government Code sections 65300.7, 65301, and 65302. As currently drafted, the Draft General Plan allows complete project applications filed prior to the effective date of the revised General Plan to be reviewed for consistency under the current adopted General Plan. The County determined that the entitlement applications for the Project were complete on January 22, 2013. Accordingly, the Project has been reviewed for consistency with the current General Plan.

Malibu Local Coastal Program Land Use Plan

The Malibu Local Coastal Program is a comprehensive planning and regulatory program for the management of conservation and development in the Malibu Coastal Zone. The Malibu Local Coastal Program Land Use Plan was certified by the California Coastal Commission in December of 1986, and therefore meets the requirements of and implements the provisions and policies of the Coastal Act. However, the Coastal Commission has not certified the Local Implementation Plan of the Local Coastal Program. Accordingly, Los Angeles County has not assumed responsibility for administering coastal development permits for the Malibu Coastal Zone, and projects within this area of the Coastal Zone require coastal development permits issued by the Coastal Commission.

The Malibu Local Coastal Program Land Use Plan is part of the Los Angeles County Local Coastal Program. It is an extension or refinement of the Los Angeles County General Plan that focuses on local issues and concerns within the Malibu Coastal Zone. The Malibu Local Coastal Program Land Use Plan provides a framework for future development and, in regards to biological resources, designates sensitive environmental resources and establishes policies for their protection. Development within the Malibu Coastal Zone must be in conformity with the Malibu Local Coastal Program Land Use Plan.

The County is currently preparing an updated County Land Use Plan and complete Local Coastal Program for this area (the Santa Monica Mountains Local Coastal Program), which will replace the Malibu Land Use Plan. The updated plan as proposed would include some of the policies of the 1986 Land Use Plan, new policies, and many policies from the Santa Monica Mountains North Area Plan. Until the proposed Local Coastal Plan is adopted by the County and certified by the Coastal Commission, the 1986 Malibu Local Coastal Program Land Use Plan is the governing document for the Project.

County of Los Angeles Oak Tree Ordinance

The Los Angeles County Oak Tree Ordinance (Part 16 of Chapter 22.56 in Title 22 of the Los Angeles County Code) was established to recognize oak trees as significant historical, aesthetic, and ecological resources. The goal of the ordinance is to create favorable conditions for the preservation and propagation this unique and threatened plant heritage. The Los Angeles County Oak Tree Ordinance protects oak trees in the genus (*Quercus*) on lots or parcels of land within the unincorporated area of Los Angeles County. Under the oak tree ordinance, a person shall not cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone of any oak tree, which is 25 inches or more in circumference (8" in diameter) as measured four and one-half feet above mean natural grade, or in the case of an oak with more than one trunk, whose combined circumference of any two trunks is at least 38 inches (12 inches in diameter) as measured four and one half feet above mean natural grade, unless an oak tree permit is first obtained from the County (County Code Section 22.56.2060). The County Code does not provide protections for native or non-native trees that are not within the genus *Quercus*.

5.3.3 Thresholds of Significance

Based on the County's Environmental Checklist Form (Initial Study) and Appendix G of the CEQA Guidelines, the Project would result in a significant adverse impact with respect to biological resources if the Project would:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
b. Have a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
c. Have a substantial adverse effect on federally or state protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, and drainages) or waters of the United States, as defined by Section 404 of the Clean Water Act or California Fish and Game Section 1600, et seq. through direct removal, filling, hydrological interruption, or other means;
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
e. Convert oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10% canopy cover with oaks at least 5 inches in diameter measured at 4.5 feet above mean natural grade) or otherwise contain oak or other unique native trees (junipers, Joshua trees, southern California black walnut, etc.);

f. Conflict with any local policies or ordinances protecting biological resources, including Wildflower Reserve Areas (L.A. County Code, Title 12, Ch. 12.36), the Los Angeles County Oak Tree Ordinance (L.A. County Code, Title 22, Ch. 22.56, Part 16), the Significant Ecological Areas (SEAs) (L.A. County Code, Title 22, Section 22.56.215), and Sensitive Environmental Resources Areas (SERAs) (L.A. County Code, Title 22, Ch. 22.44, Part 6); or
g. Conflict with the provisions of an adopted state, regional, or local habitat conservation plan.

The Project would also result in a significant adverse impact with respect to biological resources if the Project would meet any of the following conditions that require a mandatory finding of significance, as set forth in CEQA Guidelines Section 15065:

h. Substantially reduce the habitat of a fish or wildlife species;
i. Cause a fish or wildlife population to drop below self-sustaining levels;
j. Threaten to eliminate a plant or animal community; or,
k. Substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

5.3.4 Project Impacts

The Project limits of disturbance are shown overlaid on the proposed site plan on **Figure 5.3-7**. The limits of disturbance are inclusive of all proposed ground and vegetation disturbance, including but not limited to grading, landscaping, and tree removals. All areas within the limits of disturbance would be developed or potentially disturbed by the Project. The Project would be sited almost entirely within existing developed/disturbed areas of the Project site. The construction of two tee boxes and pathway to the tee boxes would occur within undisturbed native habitat. Fuel modification would only be required in areas that are currently subject to fuel modification in the existing condition. As part of the Project, over 450 acres of native habitat surrounding the golf course would be left undisturbed and would become permanently dedicated open space.

The Project would incorporate native, drought-tolerant landscaping, replacing most of the existing ornamental non-native landscaping on the Malibu Golf Club, and would remove 1,590 non-native trees and palms, relocate some non-native pine trees, and plant native oak and sycamore trees at the Project site. Over 50% of the non-native trees at the Project site would be removed. All new trees planted at the site would be native California trees. The Tree Removal Plan in Appendix D.4 shows the locations of the non-native trees that would be removed.

The ponds on the golf course would be temporarily dewatered to eradicate invasive animals, including predatory fish and crayfish. The dewatering process would take place during construction of the proposed remodeled golf course. The plan to eradicate invasive animals from the aquatic habitats at the site is provided in Appendix D.3. Vegetation and sediment would be removed from the ponds to improve functional capacity and to remove potentially occurring toxins such as pesticides and herbicides that may have accumulated in bottom sediments.

The Project would install pumps at the two largest ponds on the golf course to circulate the water in the ponds by conveying it up-gradient from each pond approximately 700 feet, then releasing the water within man-made channels that would be created to direct the flows back to each respective pond. As discussed in Appendix D.3, the re-circulation of water in the ponds would improve water

Source: Jackson Kahn Golf Course Design, 2012.

Legend

- Project Boundary
- Limit of Ground Disturbance
- Limit of Fuel Modification (Not Shown - Pending)
- Helipad

Project Limits of Disturbance

0 250 500 Feet

FIGURE 5.3-7

quality and control mosquito populations by eliminating standing water areas, which allow for breeding of mosquitoes.

Threshold(s): Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
Would the Project substantially reduce the habitat of a fish or wildlife species?

Would the Project cause a fish or wildlife population to drop below self-sustaining levels?

Would the Project threaten to eliminate an animal community?

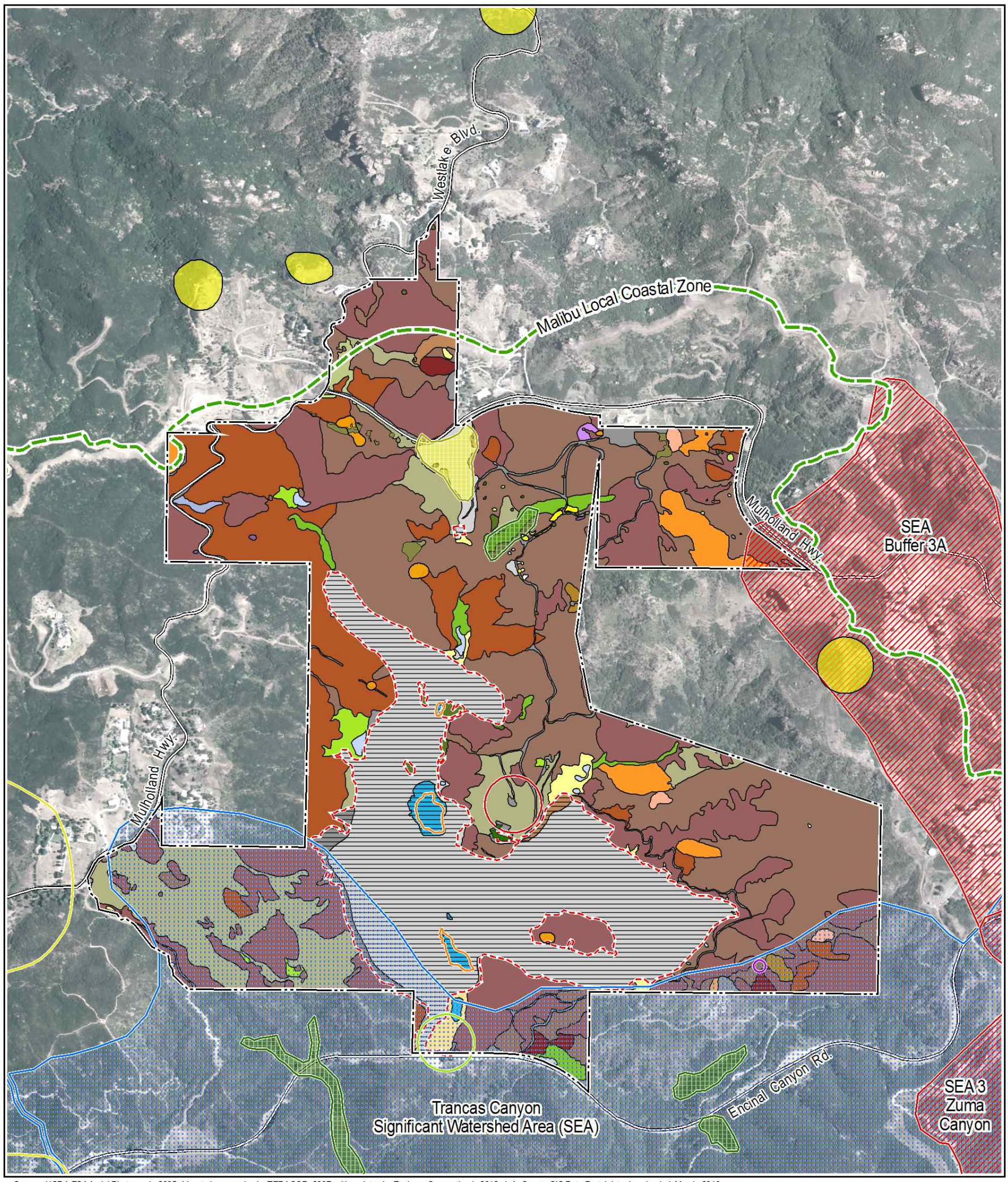
Would the Project substantially reduce the number or restrict the range of an endangered, rare, or threatened species?

Special-Status Plant Species

The federal and state-listed Endangered Lyon's pentachaeta (*Pentachaeta lyonii*) [FE/CE, CRPR 1B.1] occurs on and adjacent to unpaved roads in the north-central portion of the Project site and on a broad ridgeline and firebreak to the north of Mulholland Highway. Populations of this species are more than 1,000 feet from areas on the Project site that are proposed for development, and would not be impacted by the Project (See **Figure 5.3-8**, Impacts to Biological Resources). As a component of the Project, all Lyon's pentachaeta on the Project site would be preserved in permanently dedicated open space.

A proposed tee box and the proposed pathway to the tee box would intersect approximately 0.02 acres of native chaparral habitat containing the Plummer's mariposa lily (*Calochortus plummerae*) [CRPR 4.2, L.A. County] on the lower south-facing slope of an isolated hill surrounded by the developed golf course (See Figure 5.3-8). The Plummer's mariposa lily is a County of Los Angeles locally sensitive plant species. Construction of the tee box and pathway would potentially result in loss or injury to a relatively small but unknown number of individuals of this species, loss of a portion of its seed bank, and loss of suitable Plummer's mariposa lily habitat, which would be a significant, but mitigable impact (**Class II**). Implementation of mitigation measure MM 5.3-2, which would require replacement of individual Plummer's mariposa lilies at a 2:1 ratio, would reduce impacts to the Plummer's mariposa lily to a less than significant level.

The proposed helicopter pad would be sited within a formerly graded area containing disturbed native habitat and a population of native annual slender combseed (*Pectocarya linearis* ssp. *ferocula*) [L.A. County]. The proposed helicopter pad would encompass 79 individuals (based on the number of live plants observed in Spring of 2013) and a seed bank of this plant, as well as 0.11 acres of suitable slender combseed habitat (See Figure 5.3-8). The preparation of the helicopter pad, construction of a proposed waterline to the helicopter pad, and installation of a proposed fire hydrant at the helicopter pad would not involve grading or substantial ground disturbance such that the annual slender combseed population would be significantly and adversely affected. Therefore the impacts to annual slender combseed that would result from preparation of the helicopter pad, construction of a waterline to the helicopter pad, and installation of a fire hydrant at the helicopter pad would be less than significant (**Class III**). The superficial ground disturbance and routine mowing of native and non-native vegetation that would be associated with the use and maintenance of the helicopter pad would be a beneficial impact on the annual slender combseed, as this species typically occurs in disturbed



Source: USDA-FSAAerial Photograph, 2005. Vegetation mapping by TERACOR, 2007, with updates by Envicom Corporation in 2012. L.A. County GIS Data Portal data downloaded, March, 2013.

Legend

- Project Boundary
- Limit of Ground Disturbance
- Limit of Fuel Modification (Not Shown - Pending)
- Impacted Areas
- Designated Environmental Sensitive Habitat Area ESHA (Malibu Local Coastal Plan)
- Designated "ESHA" (Erroneously Mapped as ESHA by Malibu Local Coastal Plan)
- Malibu Local Coastal Zone
- Sensitive Ecological Area (SEA)
- Trancas Canyon Significant Watershed Area (SWA)

Special-Status Plant Species

- Lyon's Pentachaeta (*Pentachaeta lyonii*) [FE, CE] *
- Plummer's Mariposa Lily (*Calochortus plummerae*) [L.A. County]
- Slender Combseed (*Pectocarya linearis* ssp. ferocula) [L.A. County]

Special-Status Animal Species

- **Coastal Western Whiptail** (*Aspidoscelis tigris stejnegeri*) [SA]
- **Cooper's Hawk** (*Accipiter cooperii*) [SA]
- **Santa Monica Grasshopper** (*Trimerotropis occidentaloides*) [SA]
- **Coast Horned Lizard** (*Phrynosoma blainvillii*) [SSC]
- **Western Pond Turtle** (*Emys marmorata*) [SSC]

Vegetative Communities

- California Bay Woodland
- Ceaonothus Chaparral
- Chamise Chaparral
- Coast Live Oak Woodland
- Coastal Sage Scrub
- Coastal Sage Scrub/Non-Native Grassland
- Coastal Sage-Chaparral Scrub/Non-Native Grassland
- Coastal Sage/Chaparral Scrub
- Developed/Ornamental
- Disturbed/Ruderal
- Freshwater Marsh/Aquatic
- Marsh/Emergent Annual Wet
- Mulefat Scrub
- Native Grassland
- Native Grassland/Non-native Grasslands
- Native Grasslands/Coastal Sage Scrub
- Non-native Grasslands
- Ornamental/Willow/Sycamore/Coast Live Oak Woodland
- Red Shank Chaparral
- Red Shank Chaparral/Ceanothus Chaparral
- Red Shank Chaparral/Undifferentiated Chaparral Scrub
- Rock Outcrops
- Southern Willow Scrub
- Undifferentiated Chaparral Scrub
- Walnut Woodland
- Walnut Woodland/California Bay Woodland
- Willow/Sycamore/Coast Live Oak Woodland

* Lyon's Pentachaeta within property boundary surveyed by Envicom Corporation during field surveys in 2007, 2008, 2009, 2010, 2011, and 2012.

Impacts to Biological Resources

0 450 900 Feet

FIGURE 5.3-8

habitats and is expected to respond favorably to minor ground disturbance and the removal of taller shading vegetation (**Class IV**).

No other special-status plant species were found at the Project site during several surveys of the site conducted between May 2006 and April 2013. As discussed in the potential for occurrence analysis for special-status plant species in the *Biota Report* in Appendix D.1, many of the special-status species known to occur in the region are presumed to be absent from the Project site due to lack of suitable habitat or because the Project site is outside of the species known range or distribution.

Several botanical surveys of the Project site were conducted primarily in the spring between May 2007 and April 2013. Given the correct timing, intensity, and negative results of these surveys, all potentially occurring special-status plant species are considered absent from within the proposed limits of disturbance.

Special-Status Wildlife Species

Ground and Vegetation Disturbance in Native Chaparral, Disturbed Coastal Scrub, and Landscaped Habitats

Ground and vegetation disturbing activities necessary to construct the tee box, construct the pathway to the tee box, and maintain the helipad would impact chaparral and disturbed coastal sage scrub, which could result in potentially significant but mitigable impacts caused by direct mortality or injury to the following potentially occurring special-status species (with varying probabilities ranging from high to very low depending on the species): Trask shoulderband snail, coast horned lizard, western pond turtle, and coast patch nosed snake (**Class II**). Also, ground and vegetation disturbing activities necessary to construct the modified golf course, including the removal and installation of turf and landscaping could result in potentially significant but mitigable impacts caused by direct mortality or injury to the western pond turtle (**Class II**). These species are relatively slow moving or could be present in burrows, cavities, or nest structures, or could be otherwise concealed or incapable of escaping harm. All potentially occurring adult special-status birds would be reasonably capable of escaping direct mortality or injury, although nesting birds would be susceptible to mortality, injury, and disturbance during vegetation disturbing activities, which is addressed under the Nesting Birds heading, below. Implementation of mitigation measures MM 5.3-1, MM 5.3-3, and MM 5.3-4, which would require pre-construction biological surveys and monitoring of ground or vegetation disturbing activities affecting native chaparral, coastal sage scrub, and landscaped areas, would reduce potential impacts that could result in direct mortality or injury to the Trask shoulderband snail, western pond turtle, coast horned lizard, and coast patch nosed snake that could be present in these areas to a less than significant level.

Grading and Maintenance of the Golf Course Ponds

The proposed grading and maintenance, i.e., sediment and vegetation removal, of the golf course ponds would impact aquatic, wetland, and riparian habitats, which would result in potentially significant but mitigable impacts caused by direct mortality or injury to resident western pond turtles (**Class II**). Also, the proposed grading and maintenance of the golf course ponds could result in potentially significant but mitigable impacts caused by direct mortality or injury to the following potentially occurring special-status species (with varying probabilities ranging from high to very low depending on the species): California legless lizard, two-striped garter snake, California mountain kingsnake, and tree-roosting special-status bats (**Class II**). These species are all relatively slow moving or could be present in burrows or cavities, or could be otherwise concealed or incapable of escaping harm and could be impacted by the Project. All adult special-status birds that may

potentially occur at the golf course ponds would be reasonably capable of escaping direct mortality or injury, although nesting birds would be susceptible to mortality, injury, and disturbance, which is addressed under the Nesting Birds heading, below. Impacts to tree-roosting bats are addressed under the Roosting Special-Status Bats heading, below. Special-status fishes are not present at the golf course ponds or in the vicinity of the Project site, as all special-status fish species known to occur in the region are precluded from occurring within the upper Trancas Canyon watershed by barriers to upstream movement or because the upper Trancas Canyon is outside of their historical range and distribution. Implementation of mitigation measure MM 5.3-1 and MM 5.3-3, which would require pre-project biological surveys and monitoring of ground or vegetation disturbing activities affecting aquatic and riparian habitats, would reduce potential impacts that could result in direct mortality or injury to the California legless lizard, two-striped garter snake, and California mountain kingsnake to a less than significant level. Also, implementation of mitigation measure MM5.3-5, which would require the capture of all western pond turtles prior to grading or maintenance, the temporary containment and management of the captured turtles at a suitable on-site or off-site location, and release of the captured turtles back into the ponds at an appropriate time following completion of the Project, would reduce potential impacts that could result in direct mortality or injury to the western pond turtle to a less than significant level.

Loss and Modification of Habitat

Many of the special-status wildlife species with potential to occur within the proposed limits of disturbance likely would occur only rarely or occasionally and would not be significantly affected by habitat loss and habitat modification that would result from development of the Project, as impacts to suitable habitats would represent an exceedingly small proportion of the available suitable habitat within their ranges. These species include residents, as well as migrants and other rare and uncommon visitors that may rarely or occasionally forage on the site, including the least Bell's vireo, willow flycatcher, bank swallow, golden eagle, northern harrier, American peregrine falcon, burrowing owl, western least bittern, short-eared owl, long-eared owl, black swift, Vaux's swift, olive-sided flycatcher, purple martin, yellow warbler, yellow-breasted chat, summer tanager, as well as several additional potentially occurring species of birds considered "special animals". Impacts to suitable native habitat would not have a substantial adverse effect on these species, due to the small acreage of habitat that would be lost or modified, the relatively low importance of the habitat within the limits of disturbance to their survival, and because these species can be expected to adapt and utilize other available habitat in the surrounding area or in the region. The loss or modification of suitable habitat for these species that would result from development of the Project therefore would be less than significant (**Class III**).

Several other special-status species with potential to occur on the Project site may be resident individuals that have all or part of their home ranges or territories within the disturbance limits and may use all or a portion of habitat within the disturbance limits to meet their life history requirements for refuge, breeding and foraging. These species include the Trask shoulderband snail, Santa Monica grasshopper, coastal whiptail, coast horned lizard, California legless lizard, San Bernardino ringneck snake, coast patch-nosed snake, two-striped garter snake, western pond turtle, white-tailed kite, loggerhead shrike, all potentially occurring bat species, and several additional potentially occurring species of birds considered "special animals" (e.g., Cooper's hawk and southern California rufous crowned sparrow). For example, species with small home ranges or territories such as the Trask shoulderband snail, coastal whiptail, and coast horned lizard may spend all or most of their entire life inside the limits of disturbance while other species such as the white-tailed kite or the bats would use habitats within the limits of disturbance for only a portion of their foraging habitat.

With the exception of the western pond turtle and the possible exception of the two-striped garter snake, which are discussed below, the native habitats within the limits of disturbance are not particularly important or essential for the survival of a population of any of these species. The acreage of suitable habitat for these species that would be impacted would be small, particularly when compared to the amount of remaining suitable habitat on the Project site, which would be protected as permanently dedicated open space as a component of the Project. A small number of individuals of Trask shoulderband snail, Santa Monica grasshopper, coastal whiptail, coast horned lizard, and California legless lizard, if present, would potentially have their entire or a large portion of home range or territory affected, while individuals of the remaining species could continue to use the undeveloped portions of the Project site and adjacent offsite areas as resident and foraging habitat. Habitat loss or habitat modification affecting the Trask shoulderband snail, Santa Monica grasshopper, coastal whiptail, coast horned lizard, or California legless lizard could result in direct impacts or displacement of some individuals, but would not adversely impact a population of any of these species. Impacts to the Trask shoulderband snail, Santa Monica grasshopper, coastal whiptail, coast horned lizard, California legless lizard, San Bernardino ringneck snake, coast patch-nosed snake, white-tailed kite, loggerhead shrike, and all potentially occurring birds considered "special animals" from habitat loss that would result from development of the Project would be less than significant (**Class III**).

The aquatic, wetland, and riparian habitats at the golf course ponds support a resident population of the western pond turtle, and may potentially support a breeding population of the two-striped garter snake. The western pond turtle has been observed at the two largest golf course ponds. The two-striped garter snake may remain well concealed and therefore may not have been observed if present during general biological surveys of the Project site. Since focused surveys for the two-striped garter snake have not been conducted, their presence or absence at the ponds is speculative and the possibility that the ponds provide important habitat for these species cannot be discounted.

As stated, the Project would dewater and dry the ponds over a several month period, which would be necessary to eradicate the invasive animals and improve the ecological condition of the ponds and prevent potential degradation of downstream habitats within the watershed. The Project also would excavate the vegetation and sediment from the ponds to improve functional capacity and to remove potentially occurring toxins that may have accumulated in bottom sediment. The dewatering of the ponds and removal of vegetation from the ponds would result in a temporary loss of aquatic and wetland habitats, as well as the temporary loss of the riparian habitat adjacent to the ponds both by direct removal and possibly indirectly due to changes in water availability. Also, after the ponds were refilled, there would be a period of reduced habitat value as the marsh habitats at the ponds recover over time and riparian habitats are restored.

The temporary loss of the aquatic, marsh, and riparian habitats at the golf course ponds could result in indirect mortality and other adverse effects to the western pond turtle and two-striped garter snake, including displacement and potential extirpation from the ponds. Although these species are capable of dispersal to other suitable habitats, there is very limited aquatic habitat available in the vicinity of the Project site. The section of Trancas Creek at the Project site provides a perennial water source, but this section may also dry when the ponds are dewatered. Furthermore, dispersal to and from the ponds during project development is anticipated to be unsafe and movement could be obstructed by construction barrier fencing or silt fencing, as project development is anticipated to last for two years and would result in substantial disturbance to all areas in the vicinity of the ponds. The entire existing golf course and all associated landscaping would be modified as a part of the Project.

The proposed dewatering and drying of the ponds and the removal of vegetation from the ponds could have a potentially significant adverse effect on the western pond turtle, and may have a significant adverse effect on the two-striped garter snake, if the two-striped garter snake is present at the site. These species are identified as special-status species by the CDFW. The temporary removal and modification of requisite habitat for foraging, cover, and reproduction for these species would be a potentially significant, but mitigable impact (**Class II**). These potential impacts to the western pond turtle may be avoided if the timing and duration of the period that the ponds would be unsuitable for the species (i.e., lacking water, cover, or food supply) coincides with the seasonal period that the turtles may move to upland habitats (western pond turtles typically spend much of the year in upland habitats) *and* if the safe dispersal of the turtles between the ponds and the native habitats in the surrounding area could be ensured. Implementation of mitigation measure MM 5.3-5, which would require the capture of all western pond turtles at the ponds prior to grading or maintenance, the temporary containment and management of the captured turtles at a suitable on-site or off-site location, and release of the captured turtles back into the ponds at an appropriate time following completion of the Project, would reduce potential impacts to the western pond turtle that could result from temporary loss and modification of the golf course pond habitats to a less than significant level. Potential impacts to the two-striped garter snake would be mitigated by implementation of MM5.3-3. Any two-striped garter snakes found should be relocated to permanent aquatic habitats that are downstream and relatively close to the Project site.

Roosting Special-Status Bats

Special-status bats with potential to occur at the Project site could roost, hibernate, or form maternity colonies in trees or man-made structures within the limits of disturbance, such as in culverts, vacant or unoccupied buildings, tree cavities, crevices, exfoliating bark, or by hanging pendant from bark or tree branches. The Project would include demolition of a vacant residence and maintenance sheds, and the removal of 1,590 non-native trees and palms, including many large trees that could potentially contain roosting, hibernating, or breeding bats (see Tree Removal Plan in Appendix D.4). Trees supporting bats may also be removed or disturbed by vegetation removal at the golf course ponds. The demolition of uninhabited structures and the felling of trees, particularly larger trees, could result in direct morality, injury, or disturbance to roosting bats, including hibernating bats or bats raising young. Immature bats and hibernating bats that would be unable to escape harm are particularly susceptible to direct impacts. Project activities conducted in the vicinity of occupied hibernacula or maternity roosts could indirectly disturb hibernating or bats raising young, e.g., due to human presence or excessive noise or artificial night lighting. Arousal of hibernating bats could be adverse as bats do not feed during this period and rely on a limited supply of fat for survival during hibernation. Also, bats raising young may abandon roosts when disturbed, which could result in indirect mortality of immature bats if the adults abandon their young. Direct mortality or injury to special-status bats or disturbance to occupied hibernacula or maternity roosts would have a substantial adverse effect on a wildlife species under CEQA Guidelines section 15380 and would be a significant, but mitigable impact (**Class II**). Implementation of mitigation measure MM 5.3-6 and MM 5.3-7, which would require pre-project surveys and other measures to protect special-status bats, would reduce potential impacts to special-status bats to a less than significant level.

The removal of a substantial number of large trees from the Project site could have an adverse effect on a population of special-status bats, if one or more is present in the area, as removal of these trees could result in the loss of important roosting habitat. The presence of a population of tree-roosting bats and the value of the non-native trees for roosting has not been confirmed or investigated. It is recommended as a precautionary measure that tree removals be conducted in phases and that some of the larger trees and trees with the most suitable roosting habitat be retained to reduce potential adverse effects of habitat loss on potentially occurring special-status bats.

Nesting Birds

The Federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (Sections 3503, 3503.5, 3511, 3513 and 3800) protect most native birds. In addition, the federal and state Endangered Species Acts protect some bird species listed as Threatened or Endangered. Project-related impacts to birds protected by these regulations could occur during the breeding season, because unlike adult birds, eggs and nestlings are unable to escape impacts.

Fish and Game Code Section 3513 upholds the MBTA by prohibiting any take or possession of birds that are designated by the MBTA as migratory nongame birds except as allowed by federal rules and regulations promulgated pursuant to the MBTA. In addition, there are Fish and Game Code Sections 3503, 3503.5, 3511, and 3800, which further protect nesting birds and their parts, including passerine birds, raptors, and state "fully protected" birds.

Birds may nest within the Project impact area in trees, shrubs, dense herbaceous vegetation, and on or within suitable man-made structures. Certain Project activities including but not limited to grading, tree and vegetation removal, maintenance of the golf course ponds, and demolition of structures conducted during the nesting bird season (February 1 through September 15), could potentially impact nesting birds protected under the MBTA and Fish and Game Code. The large number of trees that would be removed or relocated could potentially result in substantial direct mortality or injury to nesting birds. Some special-status bird species and numerous non-special-status bird species may nest within or in the vicinity of the Project site and would be directly impacted if present in vegetation or suitable structures during Project activities. Additionally, birds nesting in the vicinity of Project activities may potentially be disturbed by noise, lighting, dust, and human activities associated with the Project, which could result in nesting failure and the loss of eggs or nestlings. Project impacts to nesting birds are therefore significant, but mitigable (**Class II**). Implementation of MM 5.3-8, which would require surveys for nesting birds, establishment of nest buffers, and avoidance and monitoring of active nests, would reduce potential impacts to nesting birds to a less than significant level.

The removal of a substantial number of large trees and palms from the Project site may have an adverse effect on populations of some species of non-special-status birds, as removal of these trees could result in the loss of important perching, foraging, and nesting habitat. It is recommended as a precautionary measure tree removals be conducted in phases to reduce impacts to non-special-status nesting birds.

Invasive Animals

Invasive animals confirmed present in aquatic habitats on the Project site include crayfish, mosquito fish, and predatory fish, including non-native catfish and largemouth bass. These species have been introduced to the golf course ponds over the course of the last five decades. Their presence may precede development of the golf course, as the ponds were created in the late 1960s when the site was apparently used for hunting. When the golf course was developed in the mid-1970s, the ponds were incorporated into the golf course area.

As discussed earlier, the aquatic habitats on the Project site would be temporarily dewatered to eradicate invasive animals, including predatory fish, crayfish, and mosquito fish. The dewatering process would occur over a period of several months to allow the habitat to completely dry. The dewatering would maximize the probability that invasive species populations would be removed. The pond water would not be discharged to Trancas Creek, as this could result in the release of invasive species to downstream habitats. As there are no habitats upstream of the golf course ponds that are

suitable for predatory fish, crayfish, or mosquito fish, with removal of the invasive animals, there would be no concern of reintroduction of invasive species to the ponds from creeks or tributaries upstream from the Project site. Invasive crayfish would also be removed from the segment of Trancas Creek to the east of Clubhouse Drive and north of Encinal Canyon Road. After the ponds are refilled, the aquatic habitats would be monitored to determine if invasive animals have been successfully eradicated.

The golf course ponds are currently a potential source of invasive animals, particularly crayfish, to aquatic habitats downstream from the Project site. Invasive species are of wide concern to ecologists and conservation biologists, as invasive species are commonly thought to be a major contributor to observed declines in biodiversity. Invasive species are known to negatively impact native species through predation, competition, or even hybridization. Removal of invasive animals from the Project site would be a significant step toward improving the quality of aquatic habitats for native wildlife species in Trancas Canyon, especially due to its position in the upper headwaters area of the watershed. For example, the elimination of invasive crayfish would restore aquatic habitat quality for native amphibians including the California newt, the Pacific treefrog, and the California treefrog, as crayfish eat native aquatic insects, the eggs and larvae of native amphibians, and attack and sometimes kill native adult amphibians. In addition, the two-striped garter snake is dependent on native frogs for prey and also could see recovery. The California newt, the California treefrog, and the two-striped garter snake are either currently species of concern or have been considered so in the past. See *The Malibu Institute Project: A Plan toward Restoring Trancas Creek, a Significant Stream in the Santa Monica Mountains Recreation Area* in Appendix D.3 for additional details on the ecological effects of invasive animals and the plan to eradicate invasive animals from the Project site.

The Project would not facilitate population growth or the spread of invasive animals that currently exist at the site. The temporary dewatering and drying of the golf course ponds is expected to eradicate the invasive animals and would improve habitat conditions for wildlife at the golf course ponds as well as within areas downstream from the Project site in the Trancas Canyon Watershed, which would be a beneficial impact (**Class IV**).

Threshold: Would the Project have a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Threshold: Would the Project threaten to eliminate a plant community?

Vegetation and CDFW Sensitive Plant Communities

The plant communities that would be removed or disturbed by the Project, as well as the acreages that would be affected and the causes of the impacts are shown on **Table 5.3-5.** No plant communities that meet criteria of CDFW sensitive plant communities would be impacted by the Project. Therefore, Project impacts to CDFW sensitive plant communities would be less than significant (**Class III**). Impacts to Environmentally Sensitive Habitat Areas (ESHAs) and riparian habitat are addressed under the Environmental Sensitive Habitat Areas (ESHAs) and Jurisdictional Wetlands, Waters, and Habitats headings later in this section.

Table 5.3-5
Project Impacts to Vegetation and Sensitive Plant Communities
(* Denotes a sensitive plant community)

Plant Communities (CDFW 2003) (Figure 5.3-1)	Plant Community Alliances (CDFW 2010; Sawyer et al. 2009) [potentially occurring within the mapped units]	Total Acreage Impacted	Cause of Impacts
Developed/Ornamental Areas	Eucalyptus Groves (not ranked) Ornamental Stands (not ranked)	127.71	Construction; grading; landscaping; tree removals; structure demolition
Disturbed/Ruderal Areas	*Brassica* (*nigra*) and Other Mustards (not ranked)	3.84	Helicopter pad
Undifferentiated Chaparral 37000	Black Sage Scrub (G4S4) Chamise Chaparral (G5S5)	0.02	Tee box and pathway to tee box.
Southern Willow Scrub 63130	Arroyo Willow Thickets (G4S4)	0.60	Grading; dewatering and maintenance of golf course ponds.
Freshwater Marsh/Aquatic	Bulrush Marsh (G5S4)	3.82	Grading; dewatering and maintenance of golf course ponds.
Total		**135.99**	

Environmentally Sensitive Habitat Area (ESHA)

The Malibu LCP Land Resources Policy P68 requires, in accordance with Section 30240(a) of the Coastal Act, "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."

There are two designated ESHAs on the Project site, including a Willow/Sycamore/Coast Live Oak woodland community and an area of non-native tree plantings and disturbed areas associated with a residence and the former hunting lodge, which lacks notable or sensitive native habitat and therefore appears to have been erroneously mapped. The Willow/Sycamore/Coast Live Oak ESHA is located upstream and approximately 970 feet from the limits of disturbance. The Willow/Sycamore/Coast Live Oak ESHA would not be impacted by the Project. The erroneously mapped "ESHA" is approximately 210 feet from the hunting lodge that would be demolished, and 1,310 feet from the limits of disturbance associated with modification of the golf course. The erroneously mapped "ESHA" would not be impacted by the Project.

In addition to areas that have been designated and mapped as ESHA in the Malibu Local Coastal Program Land Use Plan, according to the California Coastal Commission (CCC) "Dixon Memo," native habitats within the Coastal Zone of the Santa Monica Mountains, including chaparral, coastal sage scrub, California perennial grasslands, oak woodlands, and riparian woodlands are also ESHA, provided that the habitat is largely undeveloped and part of a large, contiguous block of relatively pristine native vegetation.

Vegetated areas within the limits of disturbance were evaluated in the field to determine if habitats meeting the CCC's "Dixon Memo" criteria would be impacted by the Project. The Project, including all proposed grading, landscaping, tree removals, and vacant structure demolition, would be sited within areas that do not qualify as ESHA based on the Malibu LCP policy, the Coastal Act definition, or Dixon Memo criteria. The Project would be sited almost entirely within existing developed and disturbed areas, and the native habitats that would be affected by the Project do not qualify as ESHA based on their being isolated from large, extensive areas of native habitat or due to substantial previous or ongoing disturbance. For example, the aquatic and marsh habitats at the golf course ponds are significant resources, but they are not "relatively pristine" as the ponds have been degraded by invasive, aquatic animals, including non-native predatory fish, mosquito fish, and crayfish.

The Malibu LCP Land Resources Policy P69 requires, in accordance with Section 30240(b) of the Coastal Act, that "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."

The large contiguous tracts of relatively pristine native vegetation on the Project site are ESHA based on Dixon Memo criteria. Development activities along the margins of the golf course would occur in close proximity to ESHA habitats, which could be degraded by inadvertent encroachment of construction activities or by excessive levels of construction noise, dust, or lighting, which could have adverse effects on native flora and fauna within those habitats. Although impacts would be temporary, Project development is anticipated to last for two years and a relatively large area would be subject to ground disturbance to create the remodeled golf course. Impacts to ESHAs adjacent to the limits of disturbance that could result from development of the Project would be potentially significant, but mitigable (**Class II**). Implementation of MM 5.3-9, which would require measures to be implemented during the construction phase to avoid impacts to ESHAs located adjacent to the Project limits of disturbance, as well as the flora and fauna associated with the ESHAs, would reduce potential impacts to ESHAs located adjacent to the limits of disturbance to a less than significant level.

Native habitats located adjacent to the limits of disturbance also could be permanently degraded if subject to excessive noise or artificial night lighting during the Project's operational phase, which could affect the normal behavior of wildlife and cause some species to avoid the area. The Project would conform to the Los Angeles County Artificial Outdoor Lighting District Ordinance, which regulates outdoor lighting to promote and maintain dark skies at night for residents and wildlife. Compliance with the Los Angeles County lighting ordinance, particularly those policies requiring shielding and downward orientation of lights, as well as those policies placing restrictions on lighting height and hours of operation, would minimize potential impacts to sensitive native habitats and ensure light trespass and glare would not encroach into native habitats surrounding the Project site. Given the proposed height of buildings and the locations of areas to be developed relative to surrounding native habitats combined with the restrictions of the L.A. County Ordinance, significant encroachment and glare within ESHAs would not be expected, and operational phase impacts of artificial night lighting would be less than significant (**Class III**).

The Project is not expected to be a noise generator as it primarily consists of passive educational and recreational activities, with the remodeled golf course being a continuation of an existing use. However, the Project would continue to host occasional events, and some of these events could be held outdoors and involve the use of amplified sound. As background levels of noise are low at the Project site, amplified sound could be audible from ESHAs surrounding the Project site, and also

could be audible from the wildlife movement corridor in the southern and western portion of the Project site. With the Project improvements, events currently held outdoors could be held indoors and as such, noise impacts would be lower than existing levels. To reduce the potential for adverse effects on wildlife in these areas, for events held outdoors, the use of amplified sound should be infrequent and the event should end by 10:00 p.m. Under the strict assumption that events held outdoors with amplified sound would be the held at an equivalent or reduced frequency when compared to the existing condition, and with incorporation of a mitigation measure including a time restriction (See MM5.10-4 in Section 5.10, Noise), operational phase noise impacts to ESHAs and associated wildlife would be less than significant (**Class III**).

Invasive Plant Species

Ground disturbance associated with Project development, including grading, landscaping, pond maintenance, tree removals, and construction activities, could facilitate the introduction and/or spread of non-native, invasive plant species. Invasive plant species could be dispersed by stormwater, wind, or wildlife, or by various other means to native habitats in the surrounding area, including sensitive habitats in SEAs, the Trancas Canyon SWA, ESHAs, and significant riparian woodland and oak woodland habitats downstream from the Project site. Invasive species could compete with native plants for resources and disrupt normal ecological processes, reducing biological diversity and potentially threatening the quality of natural habitats and special-status plant species populations, where present. Of concern is the large area that would be subject to ground disturbance, the presence of large tracts of environmentally sensitive habitat on the Project site, and the sensitive riparian and oak woodland habitats downstream from the Project site. Also, if invasive, non-native plant species are used in Project landscaping, or in bio-swales or bio-detention basins at the Project site, invasive species could be dispersed to native habitats in the surrounding area.

The introduction and spread of non-native, invasive plant species could have a substantial adverse effect on riparian habitat and other sensitive natural communities identified in local and regional plans, policies, regulations, and by the CDFW. The current conceptual landscaping plan for the project does not include invasive species; however, the plan does not provide species proposed for bioswales, biodetention basin, or golf course turf areas. Therefore, mitigation is required to ensure that invasive species are not included in final landscaping plans. Prior to mitigation that would reduce Project level impacts of invasive species to native habitats, such as ESHAs and downstream riparian habitats, to less than significant levels, introduction of invasive plant species would be a potentially significant impact (**Class II**). Implementation of mitigation measures MM 5.3-10 and MM 5.3-11, which would require implementation of a Pest and Invasive Species Management Plan and review of the Project's proposed Landscaping Plan to ensure invasive species are not planted at the site, would reduce potential impacts to ESHAs and sensitive habitats downstream from the Project to a less than significant level.

Pollutants Discharged to Habitats within the Trancas Canyon Watershed

Sensitive habitats within the Trancas Canyon Watershed, including designated stream and riparian woodland ESHAs, could be impacted by the Project if pollutants were transported downstream from the Project site by stormwater runoff or other means. Pollutants originating from the Project site also could impact special-status wildlife species in downstream habitats, including the federally Endangered southern steelhead and tidewater goby, and the California newt, western pond turtle, and the two-striped garter snake, which are California Species of Special Concern.

The western pond turtle, California newt, and two-striped garter snake are known to occur downstream of the Project site in Trancas Creek, and the southern steelhead and tidewater goby may potentially occur in aquatic habitats approximately four miles downstream from the Project site at the Trancas Lagoon. Also, naturally occurring non-anadromous rainbow trout, which are not protected, may potentially occur downstream from the Project site within Trancas Creek and, if anthropogenic barriers to their upstream migration are removed, individual rainbow trout could adopt a steelhead migratory life-history pattern, and thus would have protected Endangered status. The Trancas Canyon Watershed has been identified as a "middle-priority" focal watershed for restoration of a population of anadromous steelhead, and therefore could become the site of future recovery actions for the species, which would include the removal of anthropogenic barriers along Trancas Creek and possibly the reintroduction of the species to the watershed. Pollutants, such as fine sediment, heavy metals, petroleum hydrocarbons, herbicides, pesticides, and fertilizers, could degrade the quality of sensitive aquatic, wetland, and riparian habitats upon which these species depend, and could result in adverse effects on existing or reintroduced (natural or assisted) populations of these species and/or the recovery of these species within the watershed.

Pollutants could be discharged to Trancas Creek during grading, landscaping, and construction activities during the construction phase of the Project, or during routine activities such as golf course maintenance during the operational phase of the Project. Pollutants discharged to offsite habitats within the Trancas Canyon Watershed could have substantial adverse effects on riparian habitat identified by the CDFW, conflict with local Malibu LCP policies protecting ESHAs, and have substantial adverse effects directly and through habitat modifications on special-status species identified by the USFWS and CDFW. These impacts are significant, but mitigable (**Class II**). Implementation of MM5.3-11, which would require implementation of a Pest and Invasive Species Management Plan, as well as compliance with existing County codes (as discussed in Section 5.8, Hydrology), which would require implementation of SWPPP and SUSMP best management practices, would reduce potential impacts to a less than significant level.

Pesticides, Herbicides, and Fertilizers and Pest and Rodent Control

Pesticides, herbicides, fungicides, toxic chemicals, fertilizers (nutrients), and poisons used for pest and rodent control used at the Project site could be released to the environment, including aquatic and terrestrial systems. These chemicals could affect aquatic invertebrates that provide the food base for many larger species, such as birds, fishes, and amphibians. There also would be a potential hazard to amphibians, reptiles, birds and mammals that use the aquatic habitats as a water source. Increases in nitrogen and other nutrients into aquatic habitats could alter plant species composition and the quality of habitat for wildlife. Terrestrial plants and animals likewise would be adversely affected by the introduction of chemical pesticides and fertilizers in proximity of their habitat. The overall effect of toxic chemicals being introduced into the environment is the loss or decrease in populations of species and a reduction of biodiversity. Poisons used for rodent control also could cause injury to raptors and other large predators as poisons accumulate through the food chain. If left uncontrolled, chemicals and fertilizers could have substantial adverse effects on riparian habitats and sensitive natural communities identified by the CDFW and special-status species identified by the CDFW and USFWS, either directly or through habitat modifications, and conflict with local policies protecting biological resources (SWA, ESHAs), which would be a significant, but mitigable impact (**Class II**). Implementation of mitigation measure MM 5.3-11, which would require implementation of a Pest and Invasive Species Management Plan that would place restrictions on the use of pesticides, herbicides, fungicides, and fertilizers and on pest and rodent control methods, would reduce potential impacts to a less than significant level.

Threshold: Would the Project have a substantial adverse effect on federally or state protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, and drainages) or waters of the United States, as defined by Section 404 of the Clean Water Act or California Fish and Game Section 1600, et seq. through direct removal, filling, hydrological interruption, or other means?

Jurisdictional Wetlands, Waters, and Habitat

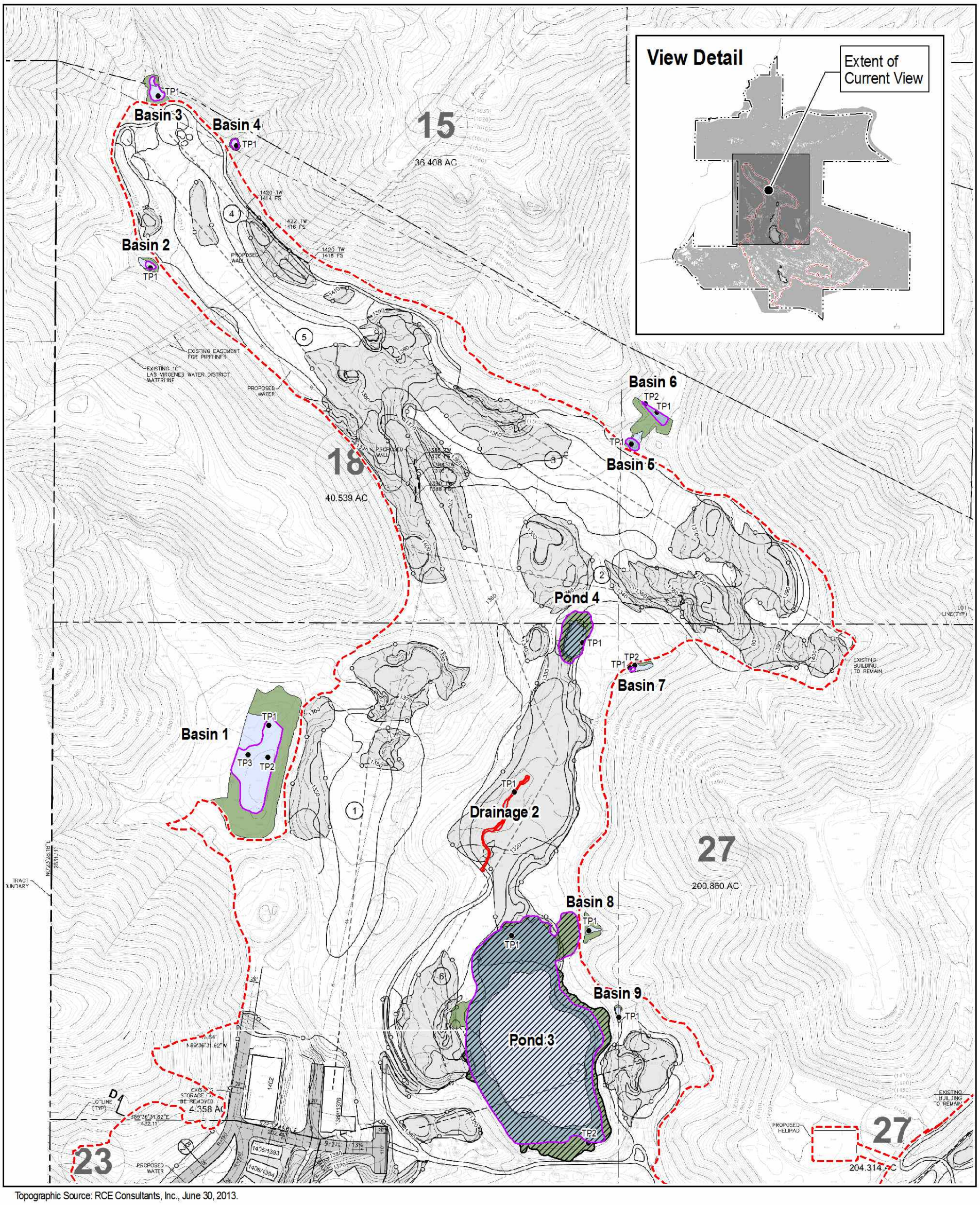
The jurisdictional areas that would be permanently and temporarily impacted by the Project are shown on **Figures 5.3-9A and 5.3-9B**, Impacts to Jurisdictional Areas. The acreages of jurisdictional areas that would be impacted are shown in Table 5.3-6 and Table 5.3-7, below. Impacts to jurisdictional areas are based upon a preliminary golf course design provided by Jackson Kahn Golf Course Designs (see Appendix D.1), a preliminary grading plan provided by RCE Consultants, Inc. (see Appendix D.1) and *The Malibu Institute Project: A Plan toward Restoring Trancas Creek, a Significant Stream in the Santa Monica Mountains Recreation Area* by L. Kats (See Appendix D.3).

Permanent Impacts to USACE "Waters of the United States" and CDFW Jurisdictional Habitat

Grading to construct the redesigned golf course would permanently impact a man-made drainage (Drainage 2) on the golf course grounds. Drainage 2 currently receives flows from a storm drain, which are conveyed through the drainage to a storm drain at its southern end. The Project would install a buried culvert to convey flows through this area in place of the aboveground drainage. The removal of Drainage 2 would permanently impact a total of 0.032 acres of jurisdictional area. Of the 0.032 acres, 0.002 acres are USACE wetland "waters of the United States" [coincident with 0.002 acres of CDFW jurisdictional habitat] and 0.03 acres are USACE non-wetland "waters of the United States" [also coincident with 0.03 acres of CDFW jurisdictional habitat]. Therefore, the Project would have a substantial adverse effect on riparian habitat identified by the CDFW and federally protected wetlands as defined by Section 404 of the Clean Water Act. Permanent impacts to USACE "waters of the United States" and CDFW jurisdictional habitat would be significant, but mitigable (**Class II**). Implementation of mitigation measures MM 5.3-12 and MM 5.3-13, which would require acquisition of resource agency permits and implementation of a final approved Habitat Mitigation and Monitoring Program, would reduce the permanent impacts to USACE "waters of the U.S." and CDFW jurisdictional habitat to a less than significant level.

Temporary Impacts to USACE "Waters of the United States," CDFW Jurisdictional Habitat, and CCC Single-Parameter Wetlands

Grading to construct the redesigned golf course would temporarily impact wetland "waters of the United States," CDFW jurisdictional habitat, and CCC single-parameter wetlands at three of the four ponds (Pond 1, Pond 2, and Pond 3) on the golf course grounds. Also, the temporary de-watering and drying of the golf course ponds, as well as removal of sediment and vegetation from the ponds would temporarily impact wetland "waters of the United States", non-wetland "waters of the United States", CDFW jurisdictional habitat, and CCC single-parameter wetlands at all four of the ponds on the golf course grounds (Pond 1, Pond 2, Pond 3, and Pond 4). The purpose of the de-watering, drying, and removal of sediment and vegetation at the golf course ponds is to restore the habitat and water quality of the ponds by eradicating exotic crayfish and other invasive animals and by removing potentially occurring toxins associated with prior management activities of the golf course that may have accumulated in bottom sediments. The eradication of invasive animals and removal of bottom sediments from the ponds also would prevent degradation of habitats downstream from the Project



Topographic Source: RCE Consultants, Inc., June 30, 2013.

Legend

- Project Boundary
- Limit of Ground Disturbance
- Limit of Fuel Modification (Not Shown - Pending)
- TP# Sample Plots/Test Pits

Jurisdictional Areas

CDFW Jurisdiction:
- ACOE Non-wetland Waters of the U.S.
- ACOE Wetland Waters of the U.S.
- CDFW Streambed and Riparian Habitat

Single-Parameter Wetlands (California Coastal Commission Definition)

Temporary Impacts	Acres
CDFW Jurisdiction: ACOE Non-wetland Waters of the U.S.	1.63
CDFW Jurisdiction: ACOE Wetland Waters of the U.S.	2.19
CDFW Jurisdiction: CDFW Streambed and Riparian Habitat	0.60
Total	4.42
Single-Parameter Wetlands (California Coastal Commission Definition)	4.10

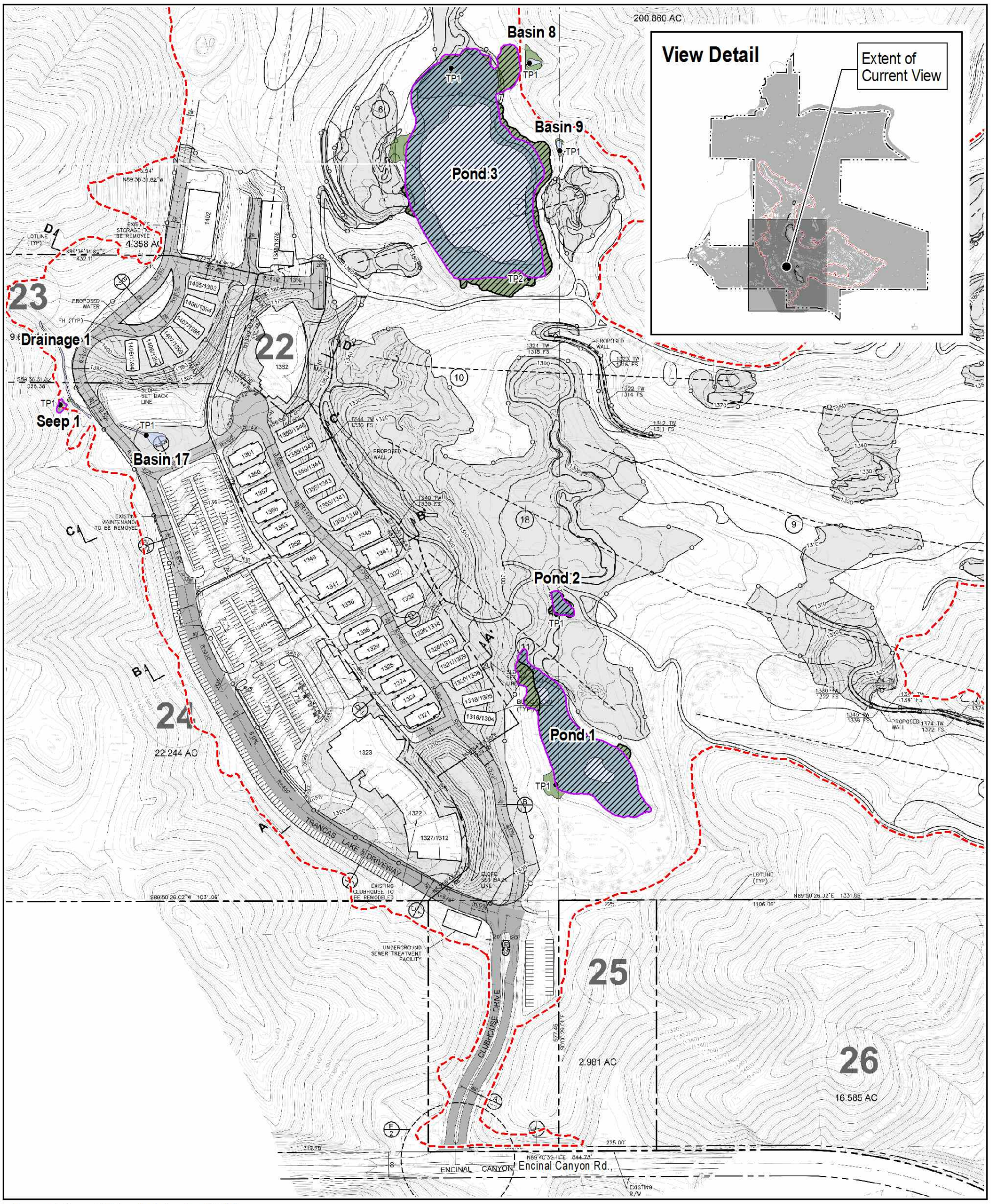
Permanent Impacts	Acres
CDFW Jurisdiction: ACOE Non-wetland Waters of the U.S.	0.030
CDFW Jurisdiction: ACOE Wetland Waters of the U.S.	0.002
Total	0.032

ENVICOM CORPORATION

Impacts to Jurisdictional Areas

0 225 Feet

FIGURE 5.3-9A



Topographic Source: RCE Consultants, Inc., June 30, 2013.

Legend

- Project Boundary
- Limit of Ground Disturbance
- Limit of Fuel Modification (Not Shown - Pending)
- TP# Sample Plots/Test Pits

Jurisdictional Areas

CDFW Jurisdiction:
- ACOE Non-wetland Waters of the U.S.
- ACOE Wetland Waters of the U.S.
- CDFW Streambed and Riparian Habitat

Single-Parameter Wetlands (California Coastal Commission Definition)

Temporary Impacts	Acres
CDFW Jurisdiction: ACOE Non-wetland Waters of the U.S.	1.63
CDFW Jurisdiction: ACOE Wetland Waters of the U.S.	2.19
CDFW Jurisdiction: CDFW Streambed and Riparian Habitat	0.60
Total	**4.42**
Single-Parameter Wetlands (California Coastal Commission Definition)	4.10

Permanent Impacts	Acres
CDFW Jurisdiction: ACOE Non-wetland Waters of the U.S.	0.030
CDFW Jurisdiction: ACOE Wetland Waters of the U.S.	0.002
Total	**0.032**

ENVICOM CORPORATION

Impacts to Jurisdictional Areas

0 225 Feet

FIGURE 5.3-9B

site. These impacts are considered temporary, as all wetland and riparian habitats at the ponds would be restored.

The grading of portions of Pond 1, Pond 2, and Pond 3, as well as the dewatering and removal of vegetation and sediment from Pond 1, Pond 2, Pond 3, and Pond 4 would temporarily impact a total of 4.42 acres of jurisdictional area. Of the 4.42 acres, 2.19 acres are USACE wetland "waters of the United States" [coincident with 2.19 acres of CDFW jurisdictional habitat] and 1.63 acres are USACE non-wetland "waters of the United States" [also coincident with 1.63 acres of CDFW jurisdictional habitat]. Also, of the 4.42 acres, 4.10 acres meet the single-parameter wetlands definition used by the California Coastal Commission (CCC) [coincident with 2.19 acres of wetland "waters of the United States", 1.63 acres of non-wetland "waters of the United States", and 0.28 acres of CDFW riparian habitat], and 0.32 acres are solely under the jurisdiction of the CDFW. Therefore, the Project would have a substantial adverse effect on riparian habitat identified by the CDFW and federally protected wetlands as defined by Section 404 of the Clean Water Act. Temporary impacts to USACE "waters of the U.S.", CDFW jurisdictional habitat, and CCC single-parameter wetlands would be significant, but mitigable (**Class II**). Implementation of mitigation measures MM 5.3-12 and MM 5.3-13, which would require acquisition of resource agency permits and implementation of a final approved Habitat Mitigation and Monitoring Program, would reduce the permanent impacts to USACE "waters of the U.S.", CDFW jurisdictional habitat, and CCC single-parameter wetlands to a less than significant level.

A small cattail seep (Seep 1) on a slope at the western margin of the Project site meets criteria to be considered a single-parameter wetland and CDFW jurisdictional habitat. Seeps supporting cattails on sloped terrain are rare in the Santa Monica Mountains. The vegetation supported by the seep is currently subject to fuel modification in the existing condition and would continue to be affected by fuel modification throughout the Project's construction and operational phases.

Table 5.3-6
Impacts to USACE Jurisdictional Areas at Project Site

	USACE Waters of U.S.				Cause of Impacts
	Wetlands		Non-wetlands		
	Permanent (acres/ linear feet)	Temporary (acres/ linear feet)	Permanent (acres/ linear feet)	Temporary (acres/ linear feet)	
Pond 1	0.00	0.81	0.00	0.08	Grading; dewatering and excavation of sediment and vegetation.
Pond 2	0.00	0.04	0.00	0.00	Grading; dewatering and excavation of sediment and vegetation.
Pond 3	0.00	1.26	0.00	1.55	Grading; dewatering and excavation of sediment and vegetation.
Pond 4	0.00	0.08	0.00	0.00	Dewatering and excavation of sediment and vegetation.
Drainage 2	0.002/36	0.00/0	0.03/277	0.00/0	Grading; conversion of the above ground drainage to a buried culvert.
Total Jurisdictional Acreage	**0.002**	**2.19**	**0.03**	**1.63**	

Table 5.3-7
Impacts to CDFW and CCC Jurisdictional Areas at Project Site

	CDFW Bed and Bank Riparian		"Single-Parameter" Wetlands		Cause of Impacts
	Permanent (acres)	Temporary (acres)	Permanent (acres/ linear feet)	Temporary (acres/ linear feet)	
Pond 1	0.00	1.02	0.00	0.97	Grading; dewatering and excavation of sediment and vegetation.
Pond 2	0.00	0.05	0.00	0.04	Grading; dewatering and excavation of sediment and vegetation.
Pond 3	0.00	3.20	0.00	2.94	Grading; dewatering and excavation of sediment and vegetation.
Pond 4	0.00	0.15	0.00	0.15	Dewatering and excavation of sediment and vegetation.
Drainage 2	0.032 / 277	0.00	n/a	n/a	Grading and conversion of the above ground drainage to a buried culvert.
Total Jurisdictional Acreage	**0.032**	**4.42**	**0.00**	**4.10**	

Threshold: Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Wildlife Movement and Habitat Linkages

To assess impacts on wildlife movement, the *SMMNRA Land Protection Plan* (March 1998) was reviewed for the locations of identified habitat linkages important for wildlife movement and maintaining connectivity between large areas of core habitat. The Project site also was evaluated in the field and by reviewing recent aerial photographs for potential wildlife movement corridors and wildlife crossings. The Project was evaluated for its potential to reduce or fragment habitat within habitat linkages and wildlife movement corridors, and to create impediments or barriers to wildlife movement and regional and local scales.

The Project would be developed almost entirely within the existing development footprint of the Malibu Golf Club. Development outside of the existing footprint would be limited to installation of tee box, a pathway to the tee box, and a helicopter pad. The tee box, pathway, and helicopter pad would not be sited in areas that are important for wildlife movement.

The Land Protection Plan indicates that undeveloped southwestern, southern, and southeastern portions of the Project site are of "high" resource value, based on their being part of an important "linkage area" connecting large protected core habitats. The Project would not encroach upon this corridor. Also, the remaining habitat on the Project site within this corridor would remain undeveloped and, as a component of the Project, would be permanently preserved as open space and would therefore continue to provide habitat for wildlife movement.

The golf course ponds are used as a stopover for resting and foraging by migratory birds. The proposed dewatering and drying of the ponds would result in a temporary loss of aquatic, wetland, and riparian habitat for migratory birds. Although adverse, the loss of habitat would be temporary and would not interfere with movement. Also, migratory birds have reasonable ability to adapt and utilize other similar habitats available in the Santa Monica Mountains region (e.g., Lake Sherwood, Westlake Lake, the ponds at Rocky Oaks NPS park unit, and others).

Artificial night lighting can affect terrestrial wildlife movement by dissuading wildlife from using lit areas thereby decreasing the habitat value of the area for movement. Also, artificial night lighting is known to interfere with movement of birds migrating at night, and to cause disorientation and collisions with tall, lit objects. The Project would conform to the Los Angeles County Rural Lighting District Ordinance, which regulates outdoor lighting to promote and maintain dark skies at night for residents and wildlife. Compliance with the Los Angeles County lighting ordinance, particularly those policies requiring shielding and downward orientation of lights, as well as those policies placing restrictions on lighting height and hours of operation, would minimize potential impacts to migratory birds and ensure that light trespass and glare would not encroach substantially into natural habitats surrounding the Project site, including those areas that are identified in the SMMNRA Land Protection Plan as part of an important habitat linkage and wildlife movement corridor. Given the proposed height of buildings and the locations of areas to be developed relative to the habitat linkage combined with the restrictions of the L.A. County Ordinance, significant encroachment or glare into the linkage is not expected.

Special-status fish are not present at or in the vicinity of the Project site, as all special-status fish species known to occur in the region are precluded from occurring within the upper Trancas Canyon watershed by barriers to upstream movement or because the upper Trancas Canyon is outside of their historical range and distribution. Although Trancas Creek has been identified as a "middle-priority" focal watershed for the restoration of the federally Endangered steelhead, the upstream natural limit to migration of anadromous steelhead is a natural three-meter high waterfall, located approximately one mile downstream from the Project site. Also the large artificial flood control channel in the lower reaches of Trancas Creek near the Malibu West development is likely impassable to steelhead at all times. Therefore, the Project would not impact the movement of steelhead or any other special-status fish species.

The Project would not remove or modify habitat within an important habitat linkage or wildlife movement corridor, and the Project would not isolate habitat or construct or create permanent barriers that would impede wildlife movement, migration, or significantly disrupt the capacity of the habitat linkage on the Project site to provide opportunities for dispersal of fauna (and flora) over the short or long-term. As the Project would not interfere substantially with the movement of wildlife or with established wildlife corridors, impacts to wildlife movement would be less than significant (**Class III**).

Thresholds: Would the Project convert oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10% canopy cover with oaks at least 5 inches in

diameter measured at 4.5 feet above mean natural grade) or otherwise contain oak or other unique native trees (junipers, Joshua trees, southern California black walnut, etc.)?

Oak Woodlands

The Project would avoid all oak trees, including their canopies and root protection zones. The Project would not modify the understory of any of the oak woodlands at the site, including those oak woodlands located within or along the perimeter of the existing golf course, which are typically disturbed and in some cases contain unpaved or paved cart paths or golf course turf or landscaping. Existing paths would not be removed or improved, and the disturbed understory would not be restored. Therefore, the Project would not convert oak woodlands, and impacts to oak woodlands would be less than significant (**Class III**).

Thresholds: Would the Project conflict with any local policies or ordinances protecting biological resources, including Wildflower Reserve Areas (L.A. County Code, Title 12, Ch. 12.36), the Los Angeles County Oak Tree Ordinance (L.A. County Code, Title 22, Ch. 22.56, Part 16), the Significant Ecological Areas (SEAs) (L.A. County Code, Title 22, Section 22.56.215), and Sensitive Environmental Resources Areas (SERAs) (L.A. County Code, Title 22, Ch. 22.44, Part 6); or, conflict with the provisions of an adopted state, regional, or local habitat conservation plan?

Protected Oak Trees

No native oaks in the genus *Quercus* would be removed and/or encroached upon by the Project (See *Oak Tree Report* in Appendix D.4 of this DEIR). Therefore, the Project would not conflict with the County oak tree permit ordinance, and impacts to County protected trees would be less than significant (**Class III**).

Significant Ecological Areas (SEAs) and Buffers

The Project site includes a small portion of the Los Angeles County designated Zuma Canyon Significant Ecological Area Buffer (SEA Buffer 3A) on the far northeastern portion of the Project site. SEA Buffer 3A is approximately 1,850 feet from the limits of disturbance. Also, the Zuma Canyon Significant Ecological Area (SEA 3) is outside of the Project site to the south and east, and approximately 2,265 feet from the limits of disturbance. Because of the distance between the limits of disturbance and SEA 3 and SEA Buffer 3A, and the terrain and drainage network of the area, a significant nexus between the Project area and SEA 3 or SEA Buffer 3A is not expected. Therefore, Project impacts to SEA 3 and SEA Buffer 3A would be less than significant (**Class III**).

Sensitive Environmental Resources Areas (SERAs)

Potential impacts to SERAs are addressed under the headings **Invasive Plant Species**, **Invasive Animals**, **Environmentally Sensitive Habitat Areas (ESHAs), Pollutants Discharged to Habitats within the Trancas Canyon Watershed**, and **Pesticides, Herbicides, and Fertilizers, and Pest and Rodent Control**, which are presented earlier in this document.

5.3.5 Cumulative Impacts

The surrounding area includes fourteen currently planned projects, as shown on the list of Related Projects and Figure 4-1 in Section 4, Environmental Setting. Eight of these projects are in the Coastal Zone. There is only one planned project in the Trancas Canyon Watershed, a remodel and expansion of existing retail totaling 53,423 square feet at 30745 Pacific Coast Highway, which is approximately four miles south of the Project site. Two of the related projects are relatively close to the Project site. The first is a subdivision of a parcel at 557 Westlake Blvd. into two lots and the development of a single-family home on each lot. The second is located adjacent to and to the east of the Project site at 427 S. Encinal Canyon Road, which would remove and replace 44,878 square feet of buildings with 47,000 square feet of new buildings at a juvenile detention facility.

The planned mitigation measures for this Project's impacts to biological resources would reduce all potential Project impacts to biological resources to a less than significant level. The anticipated residual impacts to biological resources that would remain with implementation of these mitigation measures were considered for their potential to be "cumulatively considerable." As demonstrated in the examples provided below, the anticipated residual impacts are of sufficiently low level such that the Project's potential contribution to a cumulative impact would not be cumulatively considerable. Therefore, with implementation of this Project's planned mitigation measures, the Project's would not result in a significant cumulative impact in combination with other past, present, and future projects (**Class II**).

For example, relatively small numbers of the locally sensitive Plummer's mariposa lily would be impacted by the Project. The mitigation for the loss of individual plants requires transplantation of plants prior to impacts and propagation of additional plants, which is expected to result in no net loss in the number of plants of this species. Furthermore, this Project's impact to this species would not be cumulatively considerable, given the small number of plants and associated habitat that would be impacted combined with the total population size and distribution of the species.

Also, ground and vegetation disturbing activities affecting chaparral and disturbed coastal sage scrub could result in direct impacts to special-status wildlife species, including the Trask shoulderband snail, western pond turtle, coast horned lizard, and coast patch nosed snake. The grading and maintenance of aquatic, wetland, and riparian habitats at the golf course ponds could result in impacts to the California legless lizard, two-striped garter snake, California mountain kingsnake, and the western pond turtle. The dewatering and drying of the golf course ponds could impact the resident population of western pond turtles and potentially occurring population of the two-striped garter snake. As the western pond turtles would be captured and returned to the ponds following project development and pre-construction surveys would be conducted as mitigation to avoid or capture and move special-status species out of harm's way, and because only a very small acreage of habitat would be permanently affected, the number of individuals that could be impacted by the Project is expected to be very low, such that any residual impacts to these species after mitigation would not be cumulatively considerable and would not contribute to an adverse affect on a population of these species in the region, and certainly could not contribute to a potential impact along with related projects that would jeopardize the existence of these species.

Project impacts to jurisdictional wetlands, waters, and riparian habitat would be almost entirely temporary, and impacts to these habitats would be mitigated, such that there would be no net loss of acreage of these habitats in the region. The quality of the aquatic and wetland habitats that are impacted would be improved considerably over the existing condition, as invasive animals would be removed. It does not appear that related projects would result in substantial impacts to wetlands or

riparian habitats, and it can be anticipated that any impacts to these habitats would be mitigated. Therefore, any residual impacts to wetlands, waters, or riparian habitat would not be cumulatively considerable.

As another example, the Project has the potential to impact nesting birds. Mitigation would require that pre-construction nesting bird surveys be conducted and that nesting birds found be avoided until nesting is completed. Potential residual impacts for this Project in the worst case include the loss of nests that may not have been detected during pre-construction surveys. Although some special-status or rare bird species have the potential to nest within the limits of disturbance with low probability, the overwhelming majority of birds nesting at the site would be species that are common or relatively common to the region. Therefore in all likelihood any residual Project impact to nesting birds would involve the loss of a small number of nests of bird species that occur in substantial or at least secure numbers. Given the small number of anticipated related projects in the region (overall small potential cumulative impact) and that the largest proportion of any residual impact would be to common species, as well as that other related projects would also be required to conduct pre-construction nesting bird surveys to be in compliance with federal and state law, a cumulative impact to nesting birds is not expected.

5.3.6 Mitigation Measures

Retainer of Biological Monitor

MM5.3-1 Prior to the issuance of a grading permit, a qualified biologist shall be retained by the Applicant as the lead biological monitor subject to the approval of the LACDRP and CDFW. That person shall ensure that impacts to all biological resources are minimized or avoided, and shall conduct (or supervise) pre-grading field surveys for species that may be avoided, affected, or eliminated as a result of grading or any other site preparation activities. The lead biological monitor shall ensure that all surveys are conducted by qualified personnel (e.g. avian biologists for bird surveys, herpetologists for reptile surveys, etc.) and that they possess all necessary permits and memoranda of understanding with the appropriate agencies for the handling of potentially-occurring special-status species. The lead biological monitor shall also ensure that daily monitoring reports (e.g., survey results, protective actions, results of protective actions, adaptive measures, etc) are prepared, and shall make these monitoring reports available to DRP and CDFW at their request.

Special-Status Plant Species

MM5.3-2 To compensate for the loss of the locally sensitive Plummer's mariposa lily, Plummer's mariposa lilies shall be replaced at a minimum 2:1 ratio within suitable habitats on the Project site in an area to be preserved as permanent open space. A Plummer's Mariposa Lily Mitigation and Monitoring Plan that provides for the replacement of the Plummer's mariposa lilies impacted by project construction shall be developed by a qualified biologist and approved by LACDRP prior to issuance of the grading permit for the Project. The Plan shall specify the following:

- a summary of impacts;
- the location of the mitigation site;
- methods for harvesting seeds or salvaging and transplantation of individual bulbs to be impacted;

- measures for propagating plants or transferring living bulbs from the salvage site to the mitigation site;
- site preparation procedures for the mitigation site;
- a schedule and action plan to maintain and monitor the mitigation area;
- criteria and performance standards by which to measure the success of the mitigation, including replacement of impacted lilies at a minimum 2:1 ratio;
- measures to exclude unauthorized entry into the mitigation areas; and
- contingency measures such as replanting or weeding in the event that mitigation efforts are not successful.

The performance standards for the Plummer's Mariposa Lily Mitigation and Monitoring Plan shall be at a minimum the following:

- Within five years after introducing the Plummer's mariposa lily to the mitigation site, the number of established, reproductive plants shall be no less than 2x the number of those lost to project construction, and;
- Non-native species relative cover shall be no more than 5% through the term of the restoration.

The mitigation project shall be initiated prior to development of the Project, and shall be implemented over a five-year period following occupancy or until performance standards are met, whichever period is longer. The mitigation project shall incorporate an iterative process of annual monitoring and evaluation of progress, and allow for adjustments to the Plan, as necessary, to achieve desired outcomes and meet performance standards. Annual reports discussing the implementation, monitoring, and management of the mitigation project shall be submitted to LACDRP. Five years after the start of the mitigation project, a final report shall be submitted to LACDRP, which shall at a minimum discuss the implementation, monitoring and management of the mitigation project over the five-year period, and indicate whether the mitigation project has, in part, or in whole, been successful based on established performance standards. The annual reports and the final report shall include as-built plans submitted as an appendix to the report. The mitigation project shall be extended if performance standards have not been met to the satisfaction of LACDRP at the end of the five-year period.

Special-Status Wildlife Species

Ground and Vegetation Disturbance in Native Chaparral and Disturbed Coastal Scrub Habitats

MM5.3-3 Pre-construction Biological Surveys and Biological Monitoring

Prior to commencement of ground or vegetation disturbing activities, including but not limited to grading, pond maintenance, and landscaping activities in native chaparral, coastal sage scrub, riparian, or aquatic habitats, as well as in landscaped areas, a qualified biologist shall conduct weekly pre-construction surveys for special-status wildlife species beginning no less than thirty (30) and ending no more than three (3) days prior to the commencement of disturbance. The pre-disturbance surveys shall incorporate methods to detect the special-status wildlife species that could potentially occur at the site. To the extent feasible, special-status species shall be avoided. If avoidance is not feasible, the species shall be captured and transferred

to an appropriate habitat and location where they would not be harmed by project activities. Two-striped garter snakes shall be relocated to permanent aquatic habitats that are downstream and as close as feasible to the Project site.

MM5.3-4 Pre-construction Surveys for Shoulderband Snails

Prior to construction of the Project, a qualified biologist shall conduct a habitat assessment to locate all suitable chaparral, coastal sage scrub, and coastal scrub habitats within and directly adjacent to the limits of disturbance that may potentially support the Trask shoulderband snail (Helminthoglypta traskii traskii). Prior to ground or vegetation disturbing activities, a terrestrial snail specialist shall conduct surveys in suitable habitats for the Trask shoulderband snail.

The surveys shall be conducted in the winter to maximize the potential for detecting live snails. The project area shall be subject to a minimum of five (5) visual surveys, preferably spaced one (1) week apart, although surveys spaced more frequently may be acceptable in order to take advantage of wet weather. Surveys may be conducted during periods of rain, dense fogs, or heavy dews, but shall not be conducted during dry weather conditions.

Each survey shall involve a general search for key features and likely places for snails followed by more intensive searching of areas with key habitat features. Surveys shall focus on careful examination of soil, leaf litter, downed wood, debris piles, beneath rocks and vegetation, and the undersides of branches and leaves. The U.S. Fish and Wildlife Morro shoulderband snail (Helminthoglypta walkeriana) Protocol Survey Guidelines (June 2003) may be referred to for additional guidance on surveying for Helminthoglypta snails.

If Trask shoulderband snails are found, they shall be moved to suitable habitat on the Malibu Institute property, such that the snails would not be subject to direct or indirect harm by the project, and would not migrate back into the project area. Handling time shall be minimized and attractants shall not be used, so as to avoid inadvertently attracting vandals or predators of the snail.

The survey shall be valid for two years. Following the two-year period, surveys shall be required prior to new ground or vegetation disturbance in suitable habitat.

Prior to the issuance of a grading permit, the surveying biologist shall provide a report to LACDRP covering the survey methods and results, including maps, photographs, and field notes documenting the area surveyed and any Trask shoulderband snails that were identified and relocated.

Grading and Maintenance of the Golf Course Ponds

Direct impacts would be mitigated by implementation of MM5.3-3 and MM5.3-5.

MM5.3-5 Capture, Management, and Release of Western Pond Turtles

A Western Pond Turtle Mitigation and Monitoring Plan for the avoidance of impacts to the western pond turtle shall be prepared by a qualified biologist and approved by

LACDRP and the CDFW prior to issuance of the grading permit for the Project. The Plan shall involve the capture of all western pond turtles at the Project site, the temporary containment and maintenance of the captured turtles at a suitable on-site or off-site location, and the release of the turtles back to the ponds at an appropriate time when the ponds would provide suitable habitat and the turtles would no longer be threatened by Project activities. The Plan shall at a minimum specify the following:

- timing and methods of capture and removal of the turtles, and turtle eggs if applicable, from the golf course ponds and elsewhere within the Project limits;
- site conditions necessary for the release of the turtles back to the ponds;
- methods for release to the ponds;
- monitoring program to document the status and condition of the turtle population following the release of the turtles back into the ponds;
- a schedule and action plan for monitoring and reporting on the status of the turtle mitigation project;
- criteria and performance standards by which to measure success; and,
- contingency measures in the event that the mitigation effort is not successful.

Alternatively, if feasible, the temporary containment of all or part of the turtle population at the golf course ponds may be avoided if it can be demonstrated that the timing and duration of the period that the ponds would be unsuitable for the species (i.e., lacking water, cover, or food supply) coincides with the seasonal periods that the turtles would move to upland habitats and if the safe dispersal of the turtles between the ponds and the native habitats in the surrounding area could be ensured throughout Project construction. In this case, the Plan shall also specify the timing and duration of the period that the ponds would be unsuitable and methods and monitoring activities to ensure that both direct impacts to individuals and the population of turtles at the Project site would be avoided.

Annual reports discussing the implementation, monitoring, and management of the western pond turtle mitigation project shall be submitted to LACDRP and the CDFW. The fifth annual report shall discuss the implementation, monitoring and management of the mitigation project and indicate whether the mitigation project has, in part, or in whole, been successful based on established performance standards. If performance standards have been satisfied, the mitigation shall be considered complete, and no further reporting shall be required. If performance standards have not been met, mitigation efforts shall be extended, with the incorporation of contingency measures, as identified in the Western Pond Turtle MMP.

Loss and Modification of Habitat

Impacts would be mitigated by implementation of MM5.3-3 and MM5.3-5.

Roosting Special-Status Bats

MM5.3-6 Special-Status Roosting Bats

To avoid the direct loss of bats that could result from removal of trees or structures that may provide maternity roost habitat (e.g., in cavities or under loose bark) or structures that contain a hibernating bat colony, the following steps shall be taken:

- To the extent feasible, tree removal, tree relocation, and demolition of vacant buildings and other suitable man-made structures shall be scheduled between October 1 and February 28, outside of the maternity roosting season.
- If trees must be removed during the maternity season (March 1 to September 30), or structures must be removed at any time of the year, a qualified bat specialist shall conduct a pre-construction survey to identify those trees or structures proposed for disturbance that could provide hibernacula or nursery colony roosting habitat for bats.
- Each tree or structure identified as potentially supporting an active maternity roost and each structure potentially supporting a hibernating colony shall be closely inspected by the bat specialist no greater than 7 days prior to tree disturbance to more precisely determine the presence or absence of roosting bats.
- If bats are not detected, but the bat specialist determines that roosting bats may be present at any time of year, it is preferable to push any tree down using heavy machinery rather than felling it with a chainsaw. In order to ensure the optimum warning for any roosting bats that may still be present, the tree shall be pushed lightly two to three times, with a pause of approximately 30 seconds between each nudge to allow bats to become active. The tree shall then be pushed to the ground slowly and shall remain in place until it is inspected by a bat specialist. Trees that are known to be bat roosts shall not be sawn up or mulched immediately. A period of at least 48 hours shall elapse prior to such operations to allow bats to escape. Bats shall be allowed to escape prior to demolition of buildings. This may be accomplished by placing one way exclusionary devices into areas where bats are entering a building that allow bats to exit but not enter the building.
- Maternity season lasts from March 1 to September 30. Trees or structures determined to be maternity roosts shall be left in place until the end of the maternity season. A structure containing a hibernating colony shall be left in place until a qualified biologist determines that the bats are no longer hibernating.

The bat specialist shall document all demolition monitoring activities and prepare a summary report to the County upon completion of tree disturbance or building demolition activities.

MM5.3-7 Bat Relocation

If confirmed occupied or formerly occupied bat roosting habitat is destroyed, artificial bat roosts of comparable size and quality shall be constructed and maintained at a suitable undisturbed area, preferably on the Malibu Institute property. The design and location of the artificial bat roosts shall be determined by the bat specialist in consultation with CDFW.

In exceptional circumstances, such as when roosts cannot be avoided and bats cannot be evicted by non-invasive means, it may be necessary to capture and transfer the

bats to appropriate natural or artificial bat roosting habitat in the surrounding area. Bats raising young or hibernating shall not be captured and relocated. Capture and relocation shall be performed by the bat specialist in coordination with CDFW, and shall be subject to approval by LACDRP and CDFW.

A monitoring plan shall be prepared for the replacement roosts, which shall include performance standards for the use of the replacement roosts by the displaced species, as well as provisions to prevent harassment, predation, and disease of relocated bats.

Annuals reports detailing the success of roost replacement and bat relocation shall be prepared and submitted to LACDRP and CDFW for five years following relocation or until performance standards are met, whichever period is longer.

Nesting Birds

MM5.3-8 Nesting Bird Surveys

Proposed project activities including, but not limited to, staging and disturbances to native and nonnative vegetation, structures, and substrates shall occur outside of the avian breeding season which generally runs from February 1-August 31 (as early as January 1 for some raptors) to avoid take of birds or their eggs. Take means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill (Fish and Game Code Section 86), and includes take of eggs or young resulting from disturbances which cause abandonment of active nests. Depending on the avian species present, a qualified biologist may determine that a change in the breeding season dates is warranted.

If avoidance of the avian breeding season is not feasible, beginning thirty days prior to the initiation of construction activities, a qualified biologist with experience in conducting breeding bird surveys shall conduct weekly bird surveys to detect protected native birds occurring in suitable nesting habitat that is to be disturbed, including but not limited to site preparation, grading, construction, tree removal, landscaping removal, pond or detention basin maintenance, or building demolition and (as access to adjacent areas allows) any other such habitat within 300 feet of the disturbance area (within 500 feet for raptors). The surveys shall continue on a weekly basis with the last survey being conducted no more than 3 days prior to the initiation of project activities. If a protected native bird is found, the project proponent shall delay all project activities within 300 feet of on- and off-site suitable nesting habitat (within 500 feet for suitable raptor nesting habitat) until August 31. Alternatively, the qualified biologist could continue the surveys in order to locate any nests.

If an active nest is located, project activities within 300 feet of the nest (within 500 feet for raptor nests) or as determined by a qualified biological monitor, must be postponed until the nest is vacated and juveniles have fledged and there is no evidence of a second attempt at nesting. Flagging, stakes, or construction fencing shall be used to demarcate a buffer of 300 feet (or 500 feet) between the project activities and the nest. Project personnel, including all contractors working on site, shall be instructed on the sensitivity of the area. The project proponent shall provide LACDRP the results of the recommended protective measures described above to

document compliance with applicable State and Federal laws pertaining to the protection of native birds.

If the biological monitor determines that a narrower buffer between the project activities and observed active nests is warranted, he / she shall submit a written explanation as to why (e.g., species-specific information; ambient conditions and birds' habituation to them; and the terrain, vegetation, and birds' lines of sight between the project activities and the nest and foraging areas) to LACDRP and, upon request, CDFW. Based on the submitted information, LACDRP (and CDFW, if CDFW requests) will determine whether to allow a narrower buffer.

The biological monitor shall be present on site during all grubbing and clearing of vegetation to ensure that these activities remain outside the demarcated buffer and that the flagging / stakes / fencing is being maintained, and to minimize the likelihood that active nests are abandoned or fail due to project activities. The biological monitor shall send weekly monitoring reports to LACDRP during the grubbing and clearing of vegetation, and shall notify LACDRP immediately if project activities damage active avian nests.

Invasive Animals

The Project would result in a beneficial impact. No mitigation would be required.

Vegetation and CDFW Sensitive Plant Communities

Impacts would be less than significant. No mitigation would be required.

Environmentally Sensitive Habitat Areas (ESHA)

MM5.3-9 The following measures shall be implemented during the construction phase to avoid impacts to ESHAs and other sensitive habitats located adjacent to the Project limits of disturbance, as well as the flora and fauna associated with the ESHAs:

a) Prior to all ground disturbing and construction activities, the Applicant shall demarcate the Project limits of disturbance with sturdy exclusionary fencing to prevent encroachment of Project activities into native habitats adjacent to the Project limits of disturbance and to dissuade wildlife from entering the construction area. The fencing shall be marked with highly visible flagging and signed as a sensitive area. The LACDRP shall verify the fencing has been correctly installed prior to the start of ground disturbance or construction activities. The temporary fencing shall be routinely inspected and maintained in functional condition for the duration of Project construction.
b) All construction and maintenance activities, except in an emergency, shall be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday.
c) If construction lighting is required, then lighting shall be pointed away from native habitats and shall be pointed downward and shielded to the extent practicable.
d) All on-site construction equipment shall have properly operating mufflers.

e) All pets shall be on a leash and shall not be allowed to enter native habitats at the Project site.
f) All food-related trash shall be disposed of in closed containers.

Invasive Plant Species

MM5.3-10 Invasive Plant Species and Landscaping, Bio-detention Basins, and Bio-swales

Prior to the issuance of a grading permit, a Landscaping Plan shall be reviewed and approved by LACDRP to ensure that only non-invasive ornamental plant species or appropriate native plant species are used in landscaping, bio-detention basins, and bio-swales in future development of the project site. The review shall include a comparison of proposed plants with the following lists of invasive plant species: the California Invasive Plant Inventory (California Invasive Plant Council 2006, 2007), the California Invasive Plant Council Watchlist (December 2011), the Federal Noxious Weed List (December 10, 2010), the California Department of Food and Agriculture Pest Ratings of Noxious Weed Species and Noxious Weed Seed (January 2010), the Significant Ecological Area Draft Design Manual list of "L.A. County Non-Native Species to Avoid in Landscaping," (December 2012), and the draft Santa Monica Mountains Local Coastal Program list of "Plants to Avoid in the Santa Monica Mountains."

The Landscaping Plan shall include all plant species that would be planted as part of the proposed project, including but not limited to plant species that would be planted within bio-detention basins and bio-swales and the drought-tolerant grasses for the golf course. Species used in bio-detention basins and bio-swales shall be locally-indigenous natives. Drought-tolerant grasses for the golf course shall be non-invasive and shall not be capable of hybridizing with native grasses in the surrounding habitat. LACDRP shall conduct site inspections to ensure the appropriate plant materials have been planted and are maintained through the life of the project.

Invasive Plant Species

Pollutants Discharged to Habitats within the Trancas Canyon Watershed

Pesticides, Herbicides, and Fertilizers and Pest and Rodent Control

MM5.3-11 Pest and Invasive Species Management Plan

A Pest and Invasive Species Management Plan shall be developed and implemented that emphasizes eradication and control of problem species within the development limits and fuel modification zones, including pests that interfere with the management goals of the Malibu Institute and invasive plant and animal species could adversely affect the quality of native habitats in the surrounding area. If invasive species from the Project site spread to natural areas, control of invasive species shall extend to those areas as well. The Plan shall incorporate sustainable methods, avoid or minimize the use of chemical fertilizers, insecticides, herbicides, fungicides, and rodenticides, and ensure that toxic chemicals or excessive nutrient loads do not adversely affect native habitats and wildlife. Success criteria shall be tied to the control and eradication of problem species, and the lack of adverse effects

of pest management practices and fertilizer use on sensitive species and habitats both at the Project site and in the surrounding area, including downstream from the Project site. The Plan shall allow for adaptation of management strategies, as necessary, and shall include periodic monitoring, reporting, and evaluation of progress. In broad terms, the Plan shall at a minimum include:

- Specific objectives;
- Target species and problem areas;
- Prioritization of threats;
- Success criteria;
- Management strategies that would prevent the establishment of problem species;
- Management strategies that would result in eradication and/or control of problem species;
- Implementation plan;
- Monitoring plan; and,
- Contingency measures.

The Plan shall incorporate but shall not be limited to the following practices and conditions:

- Use of chemical fertilizers, insecticides, herbicides, and fungicides shall be avoided or minimized;
- Pesticides and herbicides used within or near aquatic habitats shall be designated for use in aquatic habitats and shall be applied with techniques that avoid over-spraying and control application to avoid excessive concentrations.
- Water quality shall be monitored and water quality test results evaluated with respect to potential adverse effects on sensitive species and habitats;
- Biological and organic controls shall be used to the maximum extent feasible;
- Chemical pesticides and fertilizers shall be limited to the immediate vicinity of buildings and exotic landscape plantings;
- Bt (*Bacillus thuringiensis kursaki*) or non-native predatory snails (i.e., decollate snails) shall not be used for pest control;
- Rodent eradication efforts shall emphasize the use of traps and shall avoid chemical controls, unless otherwise directed by the Department of Health Services (DOHS);
- Anticoagulant rodenticides shall not be used, as they are a risk to non-target species and have been identified as a factor in the deaths of large predators in the Santa Monica Mountains; and,
- Application of non-anticoagulant rodenticides shall be limited to the vicinity of buildings, facilities, and developed areas and shall not extend to the landscaped areas on the golf course grounds.

The Plan shall be adhered to for the life of the Project and shall be updated every ten years. The Plan shall be prepared by qualified specialists in coordination with personnel responsible for pest and invasive species management at the Malibu Institute, and shall be approved by the Director of Planning prior to issuance of a grading permit for the Project. Implementation of the Plan shall begin with

commencement of ground disturbance for the project. Biannual reports shall be prepared by qualified specialists which document the methods, treatments, and monitoring, and evaluate the implementation of the Plan and whether success criteria have been met. The reports shall be submitted by December 31 to the Los Angeles County Director of Planning for review who will ensure the Plan has been fully implemented and that success criteria have been met.

Jurisdictional Waters, Wetlands, and Habitat

MM5.3-12 Prior to issuance of the grading permit, the Applicant shall prepare and submit to the USACE for verification a "Preliminary Delineation Report for "waters of the U.S."" and a Streambed Alteration Notification package to the CDFW for alterations to USACE jurisdictional "waters of the U.S." and CDFW jurisdictional streambed and habitat. A Clean Water Act Section 404 permit shall be obtained from the USACE, and the Applicant shall comply with the permit conditions. A Streambed Alteration Agreement shall be entered into with the CDFW under Section 1602 of the California Fish and Game Code, and the Applicant shall comply with the associated conditions. A Clean Water Act Section 401 Water Quality Certification shall be obtained from the RWQCB, and the Applicant shall comply with the certification conditions. Mitigation for unavoidable impacts to USACE jurisdictional "waters of the U.S." and CDFW jurisdictional streambed and habitat shall be provided through implementation of the Habitat Mitigation and Monitoring Program, as required by MM5.3-13.

MM5.3-13 The Project shall implement the requirements of the final approved Habitat Mitigation and Monitoring Program, which shall mitigate for permanent impacts to 0.032 acres of CDFW jurisdictional habitat, 0.002 acres of USACE wetland "waters of the United States", and 0.03 acres of USACE non-wetland "waters of the United States" at a 2:1 ratio. Due to the overlap of the jurisdictional areas that would be permanently impacted, a total of 0.032 acres consisting of 0.002 acres of wetland "waters of the United States"/CDFW jurisdictional habitat and 0.03 acres of non-wetland "waters of the United States"/CDFW jurisdictional habitat shall be mitigated.

Also as part of the Habitat Mitigation and Monitoring Program, the Project shall mitigate for temporary impacts to 4.42 acres of CDFW jurisdictional habitat, 2.19 acres of USACE wetland "waters of the United States", 1.63 acres of USACE non-wetland "waters of the United States", and 4.10 acres of single-parameter wetlands at a 2:1 ratio. Due to the overlap of jurisdictional areas that would be temporarily impacted, a total of 4.42 acres consisting of 0.32 acres of CDFW jurisdictional habitat, 0.28 acres of CDFW jurisdictional habitat/single-parameter wetlands, 2.19 acres of USACE wetland "waters of the United States"/CDFW jurisdictional habitat/single-parameter wetlands, and 1.63 of non-wetland "waters of the United States"/CDFW jurisdictional habitat/single-parameter wetlands shall be mitigated.

The Habitat Mitigation and Monitoring Program shall mitigate for permanent and temporary impacts to jurisdictional areas by the on-site or off-site restoration of degraded in-kind wetland and riparian habitats, or by a contribution to an in-lieu fee program approved by the LACDRP, USACE, and the CDFW. Restoration should be implemented only where suitable conditions exist to support viable wetland and riparian habitat. If the mitigation will be performed off-site, to the extent feasible the

restoration should be implemented within the Trancas Canyon Watershed. Also to the extent feasible, in-lieu fees shall be used for the restoration of in-kind wetland and riparian habitat within the Trancas Canyon Watershed.

The final Habitat Mitigation and Monitoring Program shall be developed by a qualified biologist, restoration ecologist or resource specialist and submitted to and approved by the LACDRP, USACE, RWQCB, and CDFW, in compliance with Clean Water Act Sections 401 and 404 and California Fish and Game Code 1602 and supporting regulations, prior to issuance of a grading permit for the Project. The Program shall be based on the USACE Final Mitigation Guidelines and Monitoring Requirements (April 19, 2004) and the Los Angeles District's Recommended Outline for Draft and Final Compensatory Mitigation and Monitoring Plans. In broad terms, this Program shall at a minimum include:

- Description of the project/impact and mitigation sites;
- Specific objectives;
- Success criteria;
- Plant palette;
- Implementation plan;
- Maintenance activities;
- Monitoring plan; and
- Contingency measures.

Success criteria shall at a minimum be evaluated based on appropriate survival rates and percent cover of planted native species, as well as eradication and control of invasive plant and animal species within the restoration area.

The target species and native plant palette, as well as the specific methods for evaluating whether the project has been successful at meeting the above-mentioned success criteria shall be determined by the qualified biologist, restoration ecologist or resource specialist and included in the mitigation program.

To the extent possible, the mitigation project or in-lieu fee contribution shall be initiated prior to development of the Project. If the compensatory mitigation involves the restoration of on-site wetland and riparian habitats that were removed or disturbed by project grading or pond maintenance, the mitigation project shall be initiated as the earliest possible date, but shall not interfere with project development or the planned eradication of invasive animals from aquatic habitats at the site. The mitigation project shall be implemented over a five-year period and shall incorporate an iterative process of annual monitoring and evaluation of progress and allow for adjustments to the program, as necessary, to achieve desired outcomes and meet success criteria. Annual reports discussing the implementation, monitoring, and management of the mitigation project shall be submitted to the LACDRP, USACE, and the CDFW. Five years after project start, a final report shall be submitted to the LACDRP, USACE, and CDFW, which shall at a minimum discuss the implementation, monitoring and management of the mitigation project over the five-year period, and indicate whether the mitigation project has, in part, or in whole, been successful based on established success criteria. The annual reports and the final report shall include as-built plans submitted as an appendix to the report. The project shall be extended if success criteria have not been met at the end of the five-year

period to the satisfaction of the Director of Regional Planning, USACE, and the CDFW.

Wildlife Movement and Habitat Linkages

Impacts would be less than significant. No mitigation would be required.

Oak Woodlands

Impacts would be less than significant. No mitigation would be required.

Protected Oak Trees

Impacts would be less than significant. No mitigation would be required.

Significant Ecological Areas (SEAs) and SEA Buffers

Impacts would be less than significant. No mitigation would be required.

Sensitive Environmental Resources Areas (SERAs)

Impacts would be mitigated to a less than significant level with implementation of MM5.3-9, MM5.3-10, and MM5.3-11.

Cumulative Impacts

Impacts would be less than significant, with implementation of the above mitigation measures.

5.3.7 Residual Impacts

With implementation of the above mitigation measures, the following Project impacts would be reduced to less than significant levels: special-status plant species; ESHAs adjacent to the Project limits of disturbance; jurisdictional wetlands, waters, and riparian habitat; special-status wildlife species; nesting birds; roosting special-status bats; and sensitive native habitats from invasive plant species, pesticides, herbicides, fertilizers, and other pollutants (**Class II**). Project impacts to vegetation and CDFW sensitive plant communities (direct impacts), oak woodlands, protected oak trees, Significant Ecological Areas, and wildlife movement would be less than significant. The Project would also result in a beneficial impact to on-site and downstream habitats by improving water quality and eradicating invasive aquatic animals from the Project site.

5.4 CULTURAL RESOURCES

This section analyzes the impacts of the Project on cultural resources and is based on the analysis in the Phase I Cultural Resources Evaluation for The Malibu Institute Project prepared by Robert Wlodarski of Historical Environmental Archaeological Research Team (H.E.A.R.T.), located in Appendix C of this DEIR. Other studies compiled and reviewed for the completion of this DEIR include the following:

- *A Phase I Archaeological Study for Proposed Improvements to the Malibu Country Club Golf Course and Property Encompassing Approximately 627 Acres of Land within the Coastal Zone of Los Angeles County, California*; prepared by H.E.A.R.T. (Robert J. Wlodarski), January 2006;
- *Final Environmental Impact Report Environmental Assessment Regional Salinity Management Project – Hueneme Outfall Replacement Project* (SCH No. 2007021026), Section 5.11 Cultural Resources; prepared for Calleguas Municipal Water District, September 2007;
- *Phase I Cultural Resources Assessment: Camp Vernon Kilpatrick Replacement Project*; prepared by Patrick Maxon, M.A., RPA, August 2012;
- Letter from Natural History Museum of Los Angeles County (dated November 14, 2012) describing the potential for paleontological resources to be encountered by the Project; and
- California Land Ttitle Association (CLTA) Recorded Document Guarantee, Chain of Title, Stewart Title Company of California December, 21, 2012.

5.4.1 Existing Conditions

Environmental Setting

The Project site is located within the Santa Monica Mountains in an unincorporated area of Malibu in Los Angeles County, California. The Project site is located on the Point Dume USGS 7.5 Minute Quadrangle and is within Township 1 South, Range 19 West, in portions of Sections 2, 3 10, 11 and 15, and within the boundary of the Malibu Topanga Sequit Rancho. The majority of the Project site falls within the upper watershed area of Trancas Canyon with the exception of a small, northerly extension of the Project site that spans the drainage divide and falls into the upper watershed of an unnamed tributary to the Carlisle Canyon watershed. Topographically, the site is situated in a bowl created by the crest of the Upper Trancas Canyon drainage basin. The on-site topography ranges in elevation from peaks that reach 1,900 feet to 2,300 feet above mean sea level (MSL) in the northeast and northwest, to valley bottom elevations that fall to approximately 1,300 feet above MSL. To the southeast, adjacent mountain ridges range from 1,400 feet to 1,900 feet above MSL. Landforms southwest of the site have gentler slopes and range from 1,400 feet to 1,700 feet above MSL. The overall elevation differences between the Project site and the surrounding mountains generally contribute to the formation of a centralized water drainage pattern with branching tributaries. A series of man-made ponds retain water on-site as water features within the existing golf course.

The following prehistoric and historic setting descriptions were taken in large part from *A Phase 1 Cultural Resources Evaluation for the Malibu Institute Project County of Los Angeles, California,* prepared by H.E.A.R.T. in 2013, and other studies listed above.

Prehistoric Setting

The Project site is considered to be within the historic territory of the Chumash, who occupied the region at the time of European contact. The Chumash lived in autonomous settlements along the California coast from Malibu Creek to the southeast, Estero Bay in the north, including the islands of San Miguel, Santa Rosa, and Santa Cruz, and as far as Tejon Pass, Lake Casitas and the Cuyama River inland

(Kroeber 1925; Landberg 1965; Grant 1978; Santa Barbara Museum of Natural History 1986, 1991; Miller 1988; and Gibson 1991).

The local prehistoric chronology is broken up into four major periods, characterized by the prevalence of particular artifacts from each period that likely reflect material/cultural changes at those times. These periods have been designated various names by different writers, although the timing for each period is generally agreed upon by most authors on the subject (Maxon 2012). The earliest evidence of a cultural settlement in Southern California is near Del Mar, with implements that have radiocarbon ages ranging from 6,000 B.C. Artifacts from this Paleoindian time period indicate a hunting economy, with tools suited for game hunting and processing, and a lack of seed processing tools.

The following major periods have been designated as Early, Middle, and Late, based on the Chumash chronology described by Chester King (1990).[1] These periods are differentiated by the types of artifacts found at many sites, indicating changes in subsistence techniques, or population distribution for the Chumash, including those in the Santa Monica Mountains region. The Early period (6,000 to 800 B.C.) is characterized by a primarily seed processing subsistence economy, which potentially was a response to changes in climate and environmental conditions. The Middle Period (800 B.C. – 1100 A.D.) is characterized by archaeological sites that reflect a great reliance on marine resources, in addition to an increased focus on acorn use (King 1990). The Late Period (1100 – 1840 A.D.) was marked by increased social and economic complexity, as shown by the differentiation of bead types (King 1982)[2]. The population increased and numerous small Chumash settlements were abandoned and large historic towns were founded. This change in population distribution is attributed to growth in importance of trade centers, and the development of more integrated political confederations that encouraged trade. The Late Period came to an end as the Chumash culture was dramatically changed by the arrival of a Spanish expedition led by Gaspar de Portola in 1769, and the establishment of the Missions of Santa Barbara, San Buenaventura, Santa Ynez, and La Purisima (Wlodarski 2013).

Historic Setting

Regional History

There was little interference from Europeans in the Chumash region until the Mission Period, when the Spanish established 21 missions along the Camino Real, which connected San Diego with Solano between 1769 and 1823. During this period, many introduced diseases contributed to the decimation of Native Americans, and many of the Chumash were assimilated into the mission system, and moved from their villages to settle near the missions. Following the decline of the mission system, large land grants became ranchos primarily used for cattle grazing, agriculture, and ranching. Rancho Topanga Malibu Sequit encompassed coastal lands in the vicinity of the Project site, including the Project site.

The first European settlers in the vicinity of the Project site were Felipe Santiago Tapia and his family, who settled in the Malibu area. Tapia's eldest son, Jose Bartolome, received a permit to graze cattle on the future rancho lands and in the late 1700s applied for formal possession of the land. Around 1802-1804, Tapia was granted most of the coastal land extending from the Ventura County line near Point Mugu, to Las Flores Canyon on the east as grazing area for his livestock. The only access at the time was by mule or boat. The land continued to be used for cattle and agriculture by Tapia and his descendants (Greene 1980), until 1848, when Leon Victor Prudhomme, a Frenchman obtained title by marrying Tapia's granddaughter. As California transitioned from Mexican rule and became one of the United

[1] King, Chester, 1990, The Evolution of Chumash Society: A Comparative Study of Artifacts Used in the Social Maintenance of the Santa Barbara Channel Islands Region Before A.D. 1804. Garland Publishing, Inc., New York.
[2] King, Chester, 1982, The Evolution of Chumash Society. Ph.D. Dissertation, University of California, Davis.

States, the U.S. Land Commission held hearings in 1852 to segregate private land from public domain, by verifying legal land ownership. During these hearings, Prudhomme was not able to provide proof of the original Tapia grant, and was forced to sell the land. The 13,315-acre land grant was surveyed as Rancho Topanga Malibu Sequit, and patented on August 29, 1873 to Mateo (Matthew) Keller.

The rancho eventually was sold to Frederick Hastings Rindge in 1891, as one of the last, intact, Spanish land grants. Frederick's widow, Rhoda May Rindge, used litigation to prevent encroachment onto her land by the Southern Pacific Railroad, the State, or homesteaders. Although she was successful in delaying a State Highway from being constructed across the property for many years, in 1929 the State of California completed construction of the Roosevelt Highway (now Pacific Coast Highway) for public use between Santa Monica and Oxnard. To pay for the court costs accrued in trying to prevent the Highway's construction, as well as succeeding in blocking Southern Pacific Railroad from placing tracks on the property, Mrs. Rindge began leasing and then selling portions of the property. Since the construction of Pacific Coast Highway and main arterial roads through the Santa Monica Mountains, Malibu has become one of the most desirable areas to own real estate in the United States.

Land use in the region has been under the jurisdiction of the California Coastal Commission since the 1970s, which has limited development in the area. Additionally, large portions of the region have been set aside as part of the Santa Monica Mountains National Recreation Area. This has resulted in very sparse development in the Santa Monica Mountains, particularly in the western portion where the Project site is located.

Project Site History

The Project site is currently occupied by an existing 18-hole golf course and associated support facilities, which is operated as the Malibu Golf Club. The golf course was built in the 1970s, and is located in the southern and central portion of the Project site within the lower elevation areas.

During the late 1920s, a residence was built in the northern portion of the Project site on the south side of Mulholland Highway. Previous reports regarding the Project site indicated this structure was used as a hunting lodge. This structure still exists on bluffs that overlook the canyons and lower-lying areas of the southern portion of the Project site, but is abandoned and is in a state of disrepair, with evidence of trespassing such as graffiti on interior walls. During a site investigation in November 2012, the structure also showed signs of rodent infestation. This structure is not connected with operations of the Malibu Golf Club, and there are no public roadways or trails within the Project site that offer access from the golf course to this structure.

A second residence dating to 1900-1939 is located in the northern portion of the Project site at 32926 Mulholland Highway. This residence was upgraded during the 1980s and currently serves as a caretaker's residence for the Malibu Golf Club.

Archaeological Resources

A record search conducted by professional archaeologist, Wayne Bonner, at the South Central Coastal Information Center (SCCIC), California State University Fullerton on January 19, 2006, indicated the following information for a quarter-mile radius of the Project site:

- Two archaeological sites lie within the Project site boundaries: CA-LAN-527 and CA-LAN-528. Site records for these resources could not be located during the record search phase. The SCCIC did not have active files for either resource. Further research and investigation was conducted regarding these two locations, with the results described in more detail below;

- Two archaeological sites lie outside the northernmost Project site boundaries: CA-LAN-864 and CA-LAN-865;
- Five studies have been conducted that encompass portions of the Project site (McKenna 1990, 2001, 2002; Greenwood & Foster 1985; and Wlodarski 2005);
- No resources on the California Register of Historic Resources exist on the Project site (1992, with supplemental information to date);
- No listed California Historical Landmarks exist on the Project site (1995, with supplemental information to date);
- No California Points of Historical Interest exist on the Project site (1992, with supplemental information to date); and
- No State Historic Resources Commission issues are presented regarding the Project site (1980-present; minutes from quarterly meeting).

CA-LAN-527

Using GPS equipment and archaeological base maps on file at the SCCIC, the suspected location of CA-LAN-527 was plotted within 100 feet of the 18th green within the fairway. Since this area is completely covered in grass, landscaping and cart trails, the actual site boundaries could not be substantiated. No site record exists for this resource; therefore, it is not known what type of resource was documented at this location, the size and depth of the site, the age of the resource, or whether testing or excavation had occurred prior to the construction of the existing golf course. To be conservative, this analysis presumes at least some portion of the resource still exists under the existing fairway near the 18th green.

CA-LAN-528

Using GPS equipment, the cultural resource identified as CA-LAN-528 on archaeological base maps on file at the SCCIC, was determined to be at the location of the abandoned residence dating to the 1920s in the northern portion of the Project site along Mulholland Highway on a bluff overlooking the existing golf course. The SCCIC did not have active files for this resource, and site records for this resource could not be located during the record search. Although the original site record is missing from the SCCIC, based on the identification designation assigned to the site, this resource was originally recorded as a prehistoric resource, as historical resource designations typically are followed by the letter "H" (i.e., CA-LAN-528-H). Field investigations conducted at this location were unable to locate any indications of prehistoric resources in the vicinity of the abandoned residence. Based on those investigations, it was concluded prior owners probably would have destroyed any prehistoric resource during modifications to the landscape, if such resource had been located at the site. The 2013 Cultural Resource Evaluation provided for this Project noted prehistoric sites in the Santa Monica Mountains are often small (under 100 sq. meters) lithic or shellfish scatters, hunting encampments or special use activity areas. These resources are usually fragile in nature and face destruction through minor ground-disturbing activities such as ground clearance, weed abatement programs and fire suppression activities. Because these smaller resources are usually on the surface, they can be destroyed through minor man-made disturbances, which in some cases could be within a short timeframe of the year a resource is first recorded. Thus, the Cultural Resource Evaluation (Appendix C) concluded the prehistoric component that may have originally been designated as CA-LAN-528 appears to have been destroyed.

Following the 2006 investigation of the site's cultural resources that concluded the abandoned residence at this site had reportedly been used as a hunting lodge, SCCIC records were updated to specify the structure was a historical component of site CA-LAN-528, designating it as a potential historic resource in the State of California. The historical component of CA-LAN-528 is described in more detail below, under the Historic Resources heading.

Native American Consultation

A Sacred Lands File search for cultural resources within the Project area was requested from the Native American Heritage Commission (NAHC). A reply letter from the NAHC dated September 27, 2012 (included with Appendix C) states the Sacred Lands File (SLF) failed to indicate the presence of known sacred or significant sites in the Project vicinity. The NAHC reply letter did include a list of Native Americans and tribes that could be interested in proposed development of this site. Those individuals and tribes listed were sent Notice of Preparation (NOP) documents for this Project dated November 19, 2012, and a subsequent NOP dated December 11, 2012 that provided notification of an extension of the review and comment period. At the close of the review period, no comments had been received from those Native American tribes or individuals, with the exception of another comment letter from the NAHC (Appendix A).

Historic Resources

Historic maps on file at the Geography Department Map Reference Center, California State University Northridge (CSUN), and City of Los Angeles, Bureau of Engineering, were consulted as follows:

- 1853-1897 Township-Range Plat Survey Maps;
- 1869 Map of Private Grants and Public Lands Adjacent to Los Angeles and San Diego California (Clinton Day);
- 1871 Plat Survey Map of Rancho Topanga Malibu Sequit (granted to Matthew Keller);
- 1881 Map of the County of Los Angeles, California (Stevenson);
- 1888 Map of the County of Los Angeles, California (Rowan);
- 1891 Map of the Reservoir Lands in the County of Los Angeles (Seebold); and
- Inspection of the Camulos (1901) and Triunfo Pass (1921/1943) 15-minute USGS topographic maps.

Inspection of these maps indicated the region, as of 1900, was largely undeveloped, with only a few dirt roads and scattered structures in place at that time. The route of what would become Pacific Coast Highway is shown as an unimproved road, and an unnamed dirt road is shown trending north into the canyon that is currently occupied by Encinal Canyon Road. By 1929, Pacific Coast Highway is shown as paved and operational, and a few structures appear near and within the Project area along the unimproved Mulholland Highway. By the 1940s, U.S. Route 101, Mulholland Highway, Decker Canyon Road and Encinal Canyon Road were constructed and several structures exist near the Project area. Two structures in particular are denoted on the historic maps within the Project site boundaries dating to 1900-1939. These structures have been identified as the residential structures that still exist on the Project site near Mulholland Highway. One of these structures is currently abandoned and the other structure is currently used as a caretaker's residence associated with the existing golf course.

CA-LAN-528 (Historical Component)

As discussed above, using GPS equipment, the cultural resource identified as CA-LAN-528 on archaeological base maps on file at the SCCIC, was determined to be at the location of the abandoned residence dating to the 1920s in the northern portion of the Project site along Mulholland Highway on a bluff overlooking the existing golf course. Although the original site record is missing from the SCCIC, based on the identification designation assigned to the site, this resource was originally recorded as a prehistoric resource, as historical resource designations typically are followed by the letter "H" (i.e., CA-LAN-528-H).

Following a 2006 investigation of the site's cultural resources, which concluded the abandoned structure at this site reportedly had been used as a hunting lodge, SCCIC records were updated to specify the structure was a historical component of site CA-LAN-528, indicating that the building may have been associated with the lives of persons important to California history. Subsequent investigations were not able to confirm the use of the site as a hunting lodge, and based on information obtained through an extensive title search (1904 to present), the abandoned residence at this location has not been owned by any famous person or persons of historic significance.

Caretaker's Residence

A residence dating to 1900-1939 was noted at 32926 Mulholland Highway. Preliminary data indicates homesteaders named the Kesters built and occupied this structure (720 sq. ft.) until 1968 when Mrs. Kester died in a car accident. The Romppanen family then lived in the house from 1968 until 1988 when the CPL bought the land. Ultimately, Fuji Corporation purchased the house. It was upgraded during the 1980s and currently serves as a caretaker's residence for the Malibu Golf Club. Due to lack of historical association and structural integrity associated with the existing residence, this structure is not considered significant under CEQA evaluation criteria as described below in Section 5.4.2, Regulatory Setting, and is not associated with CA-LAN-528-H.

Paleontological Overview

Based on the Project's Geotechnical Investigation dated July 16, 2012, the site is immediately underlain by Quaternary-age alluvium (Qa) and Tertiary-age extrusive rocks of the Conejo Volcanics (Tcvb). The field investigation of subsurface conditions consisted of exploratory boreholes that encountered artificial fill and alluvium immediately overlying volcanic bedrock at depths that ranged from 5 to 27 feet below ground surface (bgs). Because the Project's development would occur within a previously disturbed development footprint, the site grading would occur predominantly within artificial fill soils. Accordingly, the Project's grading would be unlikely to uncover paleontological resources, such as significant fossil vertebrate remains.

A search of Vertebrate Paleontology records for the Project site was conducted in 2012 by the Los Angeles County Natural History Museum Vertebrate Paleontology Section. A letter provided by the Los Angeles County Natural History Museum (LACNHM) dated November 14, 2012 reported the results of the records search. The two nearest known vertebrate fossil sites are located near the U.S. 101 Freeway intersection with Westlake Boulevard (LACNHM 3213), and between the U.S. 101 Freeway and East Thousand Oaks Boulevard east of Highway 23 (LACNHM 7660). The letter includes discussion about the underlying geology of the site, much of which includes exposures of the Tertiary age Conejo Volcanics that are devoid of fossils. The Project site also includes surficial deposits of younger Quaternary Alluvium, as fan or fluvial deposits within the Trancas Canyon drainage and the eastern canyon portion of the Malibu Golf Club. These deposits typically do not contain significant vertebrate fossils in the uppermost layers, but at depth may contain fossil vertebrate remains, as these deposits are similar to those sediments that produced the two vertebrate fossils identified above. Excavations in the Conejo Volcanics bedrock that is exposed in elevated terrain would not encounter any fossils, and shallow excavations in the Quaternary Alluvium would be unlikely to encounter significant fossil vertebrate remains. However, if deeper excavations were to occur in the Alluvium, significant vertebrate fossils could potentially be uncovered.

Field Survey

A field reconnaissance of the Project site was performed by H.E.A.R.T. principal investigator Robert Wlodarski (B.A. in History and Anthropology and M.A. in Anthropology from California State University Northridge). The field survey was performed on November 7, 2012, to update information from a previous field survey of the area, also led by Robert Wlodarski, which was conducted January 27, and January 28, 2006, and included an inspection of all topography that could reasonably be expected to contain cultural resources without major modification of the land surface.

5.4.2 Regulatory Setting

Federal

First authorized by the Historic Sites Act of 1935, the National Register of Historic Places (National Register) was established by the National Historic Preservation Act of 1966 (NHPA), as "an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment." The National Register recognizes properties that are significant at the national, state, and local levels.

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. Four criteria have been established to determine the significance of a resource:

A. It is associated with events that have made a significant contribution to the broad patterns of our history;
B. It is associated with the lives of persons significant in our past;
C. It embodies the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. It yields, or may be likely to yield, information important in prehistory or history.

A property eligible for the National Register must meet one or more of the above criteria. In addition, unless the property possesses exceptional significance, it must be at least fifty years old to be eligible for National Register listing. However, the National Register does not prohibit the consideration of properties less than fifty years in age whose exceptional contribution to the development of American history, architecture, archaeology, engineering, and culture can be clearly demonstrated.

As defined in *National Register Criteria Consideration G: Properties that have Achieved Significance Within the Past Fifty Years*, a property achieving significance within the past fifty years is eligible only if it is of *exceptional importance*, or if it is an integral part of a district that is eligible for listing in the National Register. Criteria Consideration G "guards against the listing of properties of passing contemporary interest and ensures that the National Register is a list of truly historic places." A property that is less than fifty years old must meet Criteria Consideration G, as must "a property that continues to achieve significance into a period less than 50 years before the nomination."

In addition to meeting the criteria of significance, a property must retain its historic integrity. "Integrity is the ability of a property to convey its significance." According to the *National Register Bulletin*, the National Register recognizes seven aspects or qualities that, in various combinations, define integrity. To

retain historic integrity, a property will always possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association. The following is excerpted from the *National Register Bulletin, How to Apply the National Register Criteria for Evaluation,* which provides guidance on the interpretation and application of these factors:

- Location is the place where the historic property was constructed or the place where the historic event occurred.
- Design is the combination of elements that create the form, plan, space, structure, and style of a property.
- Setting is the physical environment of a historic property.
- Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.
- Association is the direct link between an important historic event or person and a historic property.

In assessing a property's integrity, the National Register criteria recognize that properties change over time, therefore, it is not necessary for a property to retain all its historic physical features or characteristics. The property must retain, however, the essential physical features that enable it to convey its historic identity.

For properties which are considered significant under National Register Criteria A and B, the *National Register Bulletin, How to Apply the National Register Criteria for Evaluation*, states that a property that is significant for its historic association is eligible if it retains the essential physical features that made up its character or appearance during the period of its association with the important event, historical pattern, or person(s). In assessing the integrity of properties, which are considered significant under National Register Criterion C, the *National Register Bulletin, How to Apply the National Register Criteria for Evaluation*, provides that a property important for illustrating a particular architectural style or construction technique must retain most of the physical features that constitute that style or technique.

State

The California Office of Historic Preservation (OHP), a division of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also carries out the duties as set forth in the Public Resources Code and maintains the California Historic Resources Inventory and California Register of Historical Resources. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the state. Also implemented at the state level, CEQA requires the identification and mitigation of substantial adverse impacts that may affect the significance of identified historical resources and archaeological resources as part of the environmental review process conducted under CEQA.

California Register of Historic Resources

Created by Assembly Bill 2881 in 1992, the California Register of Historical Resources (California Register) is “an authoritative listing and guide to be used by state and local agencies, private groups, and

citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change." The criteria for eligibility for the California Register are based upon National Register criteria. The California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register of Historic Places and those formally Determined Eligible for the National Register of Historic Places;
- California Registered Historical Landmarks from No. 770 onward;
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Resources Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Individual historical resources;
- Historical resources contributing to historic districts;
- Historical resources identified as significant in historical resources surveys with significance ratings of Category 1 through 5 as defined on the California Department of Parks and Recreation's Form 523;
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

To be eligible for the California Register, a historic resource must be significant at the local, state, or national level, under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or has the potential to yield, information important in prehistory or history.

Additionally, a historic resource eligible for listing in the California Register must also retain its integrity. In other words, it must retain "enough of its historic character or appearance to be recognizable as a historic resource and to convey the reasons for its significance." As indicated in the California Register:

> Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. The resource must also be judged with reference to the particular criteria under which it is proposed for eligibility. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.[3]

[3] California Code of Regulations, California Register of Historical Resources (Title 14, Chapter 11.5), § 4852(c).

CEQA

CEQA requires a lead agency to analyze whether historic and/or archaeological resources may be adversely impacted by a project. Under CEQA, Public Resources Code Section 21084.1, a "project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment." This statutory standard involves a two-part inquiry. The first involves a determination of whether the project involves a historic resource. If so, the lead agency must determine whether the project may involve a "substantial adverse change in the significance" of the resource. CEQA Guidelines Section 15064.5 provides, for the purposes of CEQA compliance, the term "historical resources" shall include the following:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register.
- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements in Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat such resources as significant for purposes of CEQA unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets one of the criteria for listing on the California Register.

The fact that a resource is not listed in, or determined to be eligible for listing in the California Register, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in a historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

CEQA Guidelines Section 15064.5 also provides that "[s]ubstantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." Material impairment occurs when a project materially alters or demolishes in an adverse manner "those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion" in the California Register or a local historic registry or that justify its eligibility for inclusion.

CEQA considers project impacts to "unique archaeological resources." As used in CEQA, Public Resources Code Section 21083.2(a), "a unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;

- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

CEQA requires the lead agency to consider whether the project would have a significant effect on unique archaeological resources or resources eligible for listing in the California Register, and to avoid these resources when feasible or to mitigate any effects to less than significant levels. (Public Resources Code Sections 21083.2 and 21084.1). CEQA Guidelines Section 15064.5(c)(4) notes that if an archaeological resource is neither a unique archaeological resource nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment.

CEQA Guidelines Section 15064.5(e) provides procedures to be followed in the event of the accidental discovery of human remains. If remains are discovered, the county coroner examines the remains to determine the nature of the remains and cause of death. If the remains are determined to be of Native American origin, the county coroner contacts the Native American Heritage Commission (NAHC), which identifies the person or persons it believes to be the most likely descendant(s) of the deceased Native American. The most likely descendant may make recommendations for the excavation work and for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods. Under certain conditions, the landowner or his authorized representative may rebury the human remains and associated grave goods with appropriate dignity on the property in a location not subject to further disturbance. Native American burials in California are protected by Public Resources Code Sections 5097.9 – 5097.991 and Section 7050 of the Health and Safety Code.

Paleontological resources are also afforded protection under CEQA. Appendix G (part V) of the CEQA Guidelines provides guidance relative to significant impacts on paleontological resources, which states, "a project will normally result in a significant impact on the environment if it will …disrupt or adversely affect a paleontological resource or site or unique geologic feature, except as part of a scientific study." Section 5097.5 of the Public Resources Code also specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, the California Penal Code Section 622.5 sets the penalties for the unauthorized damage or removal of paleontological resources.

Native American Consultation

Pursuant to Senate Bill 18 (2004), Government Code section 65352.3 includes requirements for local governments to provide opportunities for the involvement of California Native American Indian tribes during the preparation or amendment of a general plan. Specific requirements include:

- Prior to the adoption or any amendment of a city or county's general plan, the city or county shall conduct consultations with California Native American tribes that are on the contact list maintained by the Native American Heritage Commission for the purpose of preserving or mitigating impacts to places, features, and objects (described in Sections 5097.9 and 5097.995 of the Public Resources Code) that are located within the city or county's jurisdiction.
- From the date on which a California Native American tribe is contacted by a city or county pursuant to this subdivision, the tribe has 90 days in which to request a consultation, unless a shorter timeframe has been agreed to by that tribe.

Local

County of Los Angeles Historical Landmarks and Records Commission

Los Angeles County Historical Landmarks and Records Commission reviews and recommends cultural heritage resources in the unincorporated area for inclusion in the State Historic Resources Inventory. The Commission considers criteria for designation as specified in State law, including the California Public Resources Code, or in regulations and interpretations of the State Historical Resources Commission, including significance and access, and provision for maintenance. Criteria for consideration and comment on applications relating to the National Register of Historic Places shall be as specified in federal law and regulations relating to the National Register of Historic Places.

County of Los Angeles General Plan

The Los Angeles County General Plan is the guide for growth and development for the unincorporated areas of Los Angeles County and is designed to guide the long-term physical development and conservation of the County's land and environment through a framework of goals, policies, and implementation programs. The Conservation and Open Space Element of the General Plan establishes the goals of preserving and protecting sites of historical, archaeological and scientific value and defines the following policies:

Policy 17: Protect cultural heritage resources, including historical, archaeological, paleontological and geological sites, and significant architectural structures.

Policy 18: Encourage public use of cultural heritage sites consistent with the protection of these resources.

Policy 19: Promote public awareness of cultural resources.

Policy 20: Encourage private owners to protect cultural heritage resources.

In addition, the Land Use Element of the County of Los Angeles General Plan indicates that cultural heritage resources include known archaeological and paleontological areas, sites and structures, which have been identified in authoritative surveys of archaeological societies, historical societies and academic studies. The Land Use Element also states that within the unincorporated area, the following guidelines shall apply to proposed development in areas identified in the above-mentioned authoritative surveys and for sites found to have historical or scientific value:

a. A literature search for valid archaeological or paleontological surveys shall be conducted (for each initial study of a public or private project).
b. If the literature search indicates a strong likelihood that an archaeological or paleontological resource would be impacted by the project, a study of the development area shall be made by a qualified archaeologist or paleontologist. This study shall determine the scientific value of finds, if any, and a recommendation as to their preservation or disposition.
c. Prior to approving a project, the approving agency shall make a determination based on the above report as to what conditions would be necessary to preserve the archaeological or paleontological resources.
d. When determination has been made to salvage the finds, a reasonable period of time shall be allowed prior to the start of grading to adequately salvage the site.

e. It is recommended that any materials collected during surface surveys or salvage operations be donated to an appropriate nonprofit institution. In the event the property owner wishes to retain possession of the artifacts found, it is desirable that archaeologists or paleontologist be allowed to study and photograph the artifacts.

Malibu Local Coastal Program Land Use Plan

Malibu Local Coastal Program (LCP) Land Use Plan, which is part of the Los Angeles County Local Coastal Program and was certified by the California Coastal Commission in December 1986, provides policies for development within the Malibu Coastal Zone. The LCP lists policies and standards for protection of cultural resources within Los Angeles County in Section 4.2.5 Archaeology. The following policies could be applicable to the Project site:

P168: Development projects requiring County permits and government initiated or funded projects should be reviewed by the Department of Regional Planning for location in archaeologically, paleolontologically, or historically sensitive areas.

P169: Site surveys performed by qualified technical personnel should be required for projects located in areas identified as archaeologically/paleontologically sensitive. Data derived from such surveys shall be used to formulate mitigating measures for the project.

P170: Encourage the conservation of local resources that have historical value.

P173: Location of all coastal zone archaeological and paleontological sites should be kept confidential to avert disturbance or destruction.

P175: Recreation and visitor-serving facilities siting should consider archaeological and paleontological resources in order to minimize loss through vandalism.

5.4.3 Thresholds of Significance

Based on Appendix G of the CEQA Guidelines and the County's Environmental Checklist Form (Initial Study) prepared for the Project by the County of Los Angeles Department of Regional Planning, the Project would result in a significant impact on cultural resources if the Project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature or contain rock formations indicating potential paleontological resources;
- Disturb any human remains, including those interred outside of formal cemeteries.

5.4.4 Project Impacts

The Project would include the construction of new facilities as well as the removal of existing ones, and the remodel of an existing golf course. The structural components of the Project would be clustered within an approximately 20-acre area in the southern portion of the Project site, and all proposed development would occur within the previously disturbed development footprint of the existing golf

course. The Project would conserve over 450 acres of the Project site, which would not be disturbed by construction or operations or the Project and would be dedicated as permanent open space.

The Project component areas were intensively surveyed and studied for cultural resources for the purpose of this investigation. The records check identified two cultural resource areas (CA-LAN-527 and CA-LAN-528) within the Project site. Site records for these resources were not located during the record search phase; therefore, it is unclear what types of resources were observed at these locations that led to their initial mapping and designation. It is also unknown whether testing of these sites was conducted prior to the construction or other ground disturbance activities at these locations.

Archaeological Resources

Threshold: Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

CA-LAN-527

Using GPS equipment and archaeological base maps on file at the SCCIC, the suspected location of CA-LAN-527 was plotted within 100 feet of the 18th green within the fairway. Since this area is completely covered in grass, landscaping and cart trails, the actual site boundaries could not be substantiated. No site record exists for this resource; therefore, it is not known what type of resource was documented at this location, the size and depth of the site, the age of the resource, or whether testing or excavation had occurred prior to the construction of the existing golf course. To be conservative, this analysis presumes at least some portion of the resource site still exists under the existing fairway near the 18th green. With implementation of the Project, this area would remain part of the remodeled golf course. If resources were found during the implementation of the Project, potential impacts to the resource would be considered potentially significant but could be mitigated to less than significant levels with implementation of mitigation measures MM5.4-1 through MM5.4-5 (**Class II**).

CA-LAN-528

Using GPS equipment, the cultural resource identified as CA-LAN-528 on archaeological base maps on file at the SCCIC, was determined to be at the location of the abandoned residence dating to the 1920s in the northern portion of the Project site along Mulholland Highway on a bluff overlooking the existing golf course. The SCCIC did not have active files for this resource, and site records for this resource could not be located during the record search. Although the original site record is missing from the SCCIC, based on the identification designation assigned to the site, this resource was originally recorded as a prehistoric resource, as historical resource designations typically are followed by the letter "H" (i.e., CA-LAN-528-H). Field investigations conducted at this location were unable to locate any indications of prehistoric resources in the vicinity of the abandoned residential structure that currently occupies this site. Based on those investigations, it was concluded prior owners probably destroyed any prehistoric resource during modifications to the landscape, if such resource had been located at the site. The 2013 Cultural Resource Evaluation provided for this Project noted prehistoric sites in the Santa Monica Mountains are often small (under 100 square meters) lithic or shellfish scatters, hunting encampments or special use activity areas. These resources are usually fragile in nature and face destruction through minor ground disturbing activities such as ground clearance, weed abatement programs, and fire suppression activities. Because these smaller resources are usually located on the surface, they can be destroyed through minor man-made disturbances, which in some cases could be within a short timeframe from the year a resource is first recorded. Any prehistoric component that may have originally been designated as CA-LAN-528 could potentially have been destroyed in this manner, or from other disturbance related to the site's previous development with a residence and associated use of that structure. The demolition of the

structure will not grade the area around the structure. Therefore, cultural resources impacts related to removal of the structure that occupies this site would be less than significant (**Class III**).

Historical Resources

Threshold: Would the Project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?

CA-LAN-528

Following the 2006 investigation of the site's cultural resources that concluded the abandoned structure at this site reportedly had been used as a hunting lodge, SCCIC records were updated to specify that the structure was a historical component of site CA-LAN-528, indicating that the building may have been associated with the lives of persons important to California history, specifically Robert Montgomery, a 1930s era Hollywood actor.

Subsequent investigations were not able to confirm the use of the site as a hunting lodge, and based on information obtained through an extensive title search (1904 to present), the abandoned residence at this location has not been owned by any famous person or persons of historic significance. This abandoned residence is a 4,749-square foot, two-story redwood-frame structure constructed around 1928. Although originally constructed of redwood, stucco was added in the 1980s along with new windows, doors, a composite roof, and a garage. A round, brick fountain in the courtyard made of Malibu tile was destroyed in the 1980s. The abandoned residence is in poor condition with graffiti and evidence of rat infestation. As a result, it has lost much of its integrity to be identifiable as an early twentieth-century hunting lodge in terms of location, design, setting, materials, and workmanship. Due to substantial alterations and its state of decay, the abandoned residence does not convey its historic context. Thus, this abandoned residence is not potentially eligible as a historic resource and therefore the "historical component" ascribed to CA-LAN-528 is not considered a significant historic resource under CEQA.

Due to evidence that trespassing has occurred within this unmaintained, abandoned residence, its state of disrepair, and its infestation by rats, the Project would remove this structure from the site for public safety and security reasons. Because there is a lack of a prehistoric component observed at this site, and due to prior disturbances of the site as evidenced by the existing structure, this site is not considered sensitive for prehistoric resources. Additionally, due to a lack of historical value and structural integrity, the abandoned residence at this site is not eligible for listing and is not considered a significant historic resource under CEQA. Therefore, no additional cultural resources work is warranted for this potential resource. As such, cultural resources impacts related to removal of this structure would be less than significant (**Class III**).

Caretaker's Residence

The 1920s era residence located at 32926 Mulholland Highway is not identified as a potential resource by the SCCIC. There are no indications that this building meets any criteria for listing in the California Register as discussed above in Section 5.4.2, Regulatory Setting. Because of this, and due to alterations that were previously made to the building, this residence does not represent a resource of historic significance. The Project would retain this building, which would continue to serve as a caretaker's residence as it does under existing conditions. Therefore cultural resource impacts related to this structure would be less than significant (**Class III**).

Paleontological Resources

Threshold: Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature or contain rock formations indicating potential paleontological resources?

Surface grading or shallow excavations in the previously disturbed artificial fill and alluvium soils of the Project's development footprint are unlikely to uncover significant fossil vertebrate remains. However, any substantial excavations in the sedimentary deposits in the central-southern portion of the Project site would have the potential of encountering significant vertebrate fossils, which if damaged or destroyed would represent a significant adverse impact on the region's paleontological resources. Proper mitigation to minimize these potential impacts have been suggested by Samuel A. McLeod, Ph.D. of the Vertebrate Paleontology Section if the Natural History Museum of Los Angeles County, and is included as mitigation measure MM5.4-5.

Therefore, any substantial excavations in the Project site within previously undisturbed sedimentary soils should be monitored closely to recover any fossil remains discovered, which should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations. Impacts to paleontological resources associated with the Project would be potentially significant but reduced to less than significant levels through implementation of mitigation measure MM5.4-5 (**Class II**).

Human Remains

Threshold: Would the Project disturb any human remains, including those interred outside of formal cemeteries?

As discussed above, the Project component areas were studied by site visits and by records investigations to determine if cultural resources were likely to exist. There was no evidence discovered that would indicate human remains are interred on the site either formally or informally. The records check indicated two cultural resource areas (CA-LAN-527 and CA-LAN-528) were registered within the Project site. Because it is unclear what types of resources were observed at these locations that led to their initial mapping and designation, Mitigation Measure MM5.4-4 is provided for ground disturbance activities in the vicinity of these locations as well as throughout the site, to reduce impacts related to the disturbance of unknown human remains to less than significant. (**Class II**).

5.4.5 Cumulative Impacts

Over time, cultural resources may be impacted either through natural events or as a result of development projects or other human activities. With any development, there is the potential to disrupt unknown resources, especially given the large number of known sites within the Malibu area. However, related projects in the vicinity also would be reviewed under CEQA, and appropriate mitigation would be applied to protect and/or record potential cultural resources found during project development. With implementation of mitigation measures MM5.4-1 through MM5.4-5, the Project's contribution to potentially significant cumulative impacts would be reduced to less than significant levels (**Class II**).

5.4.6 Mitigation Measures

The Project shall incorporate the following measures to reduce potential impacts to existing and potential cultural resources to less than significant levels.

MM5.4-1 A protective fence shall be installed and maintained surrounding site CA-LAN-527 prior to all earth moving activities that occur within 100-feet of the site (within the existing fairway for Hole #18, approximately 100 feet from the green).

MM5.4-2 A qualified archaeologist shall monitor all stripping and other earthmoving activities occurring within 100-feet of site CA-LAN-527 (within the existing fairway for Hole #18, approximately 100 feet from the green).

MM5.4-3 In the event unknown archaeological resources are discovered during Project construction, all ground-disturbing activities within the vicinity of the find shall cease until a qualified archaeological or paleontological monitor inspects the resources, identifies appropriate treatment, and documents the resource as necessary. The archaeologist shall record all recovered archaeological resources on the appropriate California Department of Parks and Recreation Site Forms to be filed with the California Historical Resources Information System–South Central Coastal Information Center, evaluate the significance of the find, and if significant, determine and implement the appropriate mitigation in accordance with the U.S. Secretary of the Interior and California Office of Historic Preservation guidelines, including but not limited to a Phase III data recovery and associated documentation. The archaeologist shall prepare a final report about the find to be filed with the Applicant, the County of Los Angeles Department of Regional Planning, and the California Historical Resources Information System–South Central Coastal Information Center, as required by the California Office of Historic Preservation. The report shall include documentation of the resources recovered, a full evaluation of the eligibility with respect to the California Register of Historical Resources, and treatment of the resources recovered. In the event of a find, archaeological and Native American monitoring shall be provided thereafter for any ground-disturbing activities within the boundary of the archaeological site.

MM5.4-4 In the event human remains are encountered during construction activities, all ground-disturbing activities within the area of the human remains shall cease and the County coroner shall be notified. In the event the remains are determined to be of Native American descent, the coroner shall notify the California Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall identify the person(s) thought to be the Most Likely Descendant of the deceased Native American, who shall have 48 hours from notification by the Native American Heritage Commission to inspect the site of the discovery of Native American remains and to recommend to the Applicant or landowner means for the treatment and disposition of the human remains and any associated grave goods. The Applicant or landowner shall reinter the remains and associated grave goods with appropriate dignity on the property in a location not subject to further disturbance. In the event Native American remains are found, Native American monitoring shall be provided thereafter for any ground-disturbing activities in the area of the remains.

MM5.4-5 A paleontological monitor, supervised by a qualified paleontologist, shall monitor all excavation activities within previously undisturbed sedimentary soils (Quaternary Alluvium) in the lower lying central-southern portion of the site. If fossils are found, the paleontological monitor shall be authorized to halt the ground-disturbing activities within 25 feet of the find in order to allow evaluation of the find and determination of appropriate treatment in accordance with Society of Vertebrate Paleontology guidelines for identification, evaluation, disclosure, avoidance or recovery, and curation, as

appropriate. Any fossils recovered during mitigation shall be deposited in an accredited and permanent scientific institution for the benefit of current and future generations. The paleontologist shall prepare a final report on the monitoring. If fossils are identified, the report shall contain an appropriate description of the fossils, treatment, and curation. A copy of the report shall be filed with the Applicant, County of Los Angeles Department of Regional Planning, and the Natural History Museum of Los Angeles, and shall accompany any curated fossils.

5.4.7 Residual Impacts

With implementation of the mitigation measures identified above, the Project's impacts and its contribution to cumulative impacts would be reduced to less than significant levels (**Class II**). Therefore, the Project would not result in any significant unavoidable adverse impacts.

5.5 GEOLOGY AND SOILS

This section describes the potential impacts of the Project on geology and soils. The information contained within this section is based on the geotechnical investigation of the Project site in the Geotechnical Investigation of The Malibu Institute and Proposed Renovations and Expansion of the Malibu Golf Course (Sladden Engineering, July 2012), approved by County of Los Angeles Department of Public Works, the architectural drawings and cross-sections for the primary on-site buildings prepared by LRS/Paul Boundy Architects, the Project's Preliminary Grading Plan (RCE Consulting, 2012), and the Golf Course Landscape Plan prepared by Pinnacle, which are either included in Appendix E or provided as Exhibits in either Section 3.0, Project Description, or within this section. Other references used to supplement these reports are listed in Section 9.0, References, and include the 2001 California Geological Survey's Seismic Hazard Zone Report for the Point Dume 7.5-Minute Quadrangle (Report 056), the USGS 2004 publication Comments on Potential Geologic and Seismic Hazards Affecting Coastal Ventura County, and the CGS Special Publication 42, Fault-Rupture Hazard Zones in California (Interim Revision - 2007).

The Project-specific geotechnical investigation includes: (a) reviews of available geotechnical data pertaining to the Project site and surrounding areas; (b) description of subsurface conditions; (c) geological reconnaissance mapping and subsurface excavation (i.e., field borings and laboratory testing); (d) analysis of slope stability; and (f) performance of a deterministic and probabilistic seismic hazard assessment of the Project site. The relevant portions of the Geotechnical Investigation are summarized in this analysis. The Geotechnical Investigation is incorporated by reference and is provided in its entirety in **Appendix E**.

5.5.1 Existing Conditions

Regional Geologic Setting

Regional Topography and Landforms

The Project site is located within the USGS Point Dume 7.5-Minute Quadrangle, which includes approximately 50 square miles of land and 11 square miles of ocean in western Los Angeles County. The rugged, deeply dissected Santa Monica Mountains cover most of the Quadrangle with the exception of the bench-like terrain north of Point Dume and elsewhere close to the coastline. The highest elevation in the quadrangle is 2824 feet above mean sea level (AMSL) at Castro Peak.

The Santa Monica Mountains are the southernmost range of the east/west trending Transverse Ranges geomorphic province. These mountains have undergone fairly rapid uplift during the Quaternary period, as evidenced by the deeply incised stream canyons and by thrust faulting near the coast that places Tertiary bedrock over Quaternary marine and non-marine terrace deposits. Leveling surveys and GPS data indicate these mountains are still rising.

Triunfo Canyon and its tributaries Lobo and La Sierra canyons and Medea Creek form the principal drainage system in the Point Dume Quadrangle. Other significant drainages are Trancas, Zuma, Ramierez, Escondido, Latigo, and Solstice canyons, all of which drain directly into the Pacific Ocean and are usually dry during the summer. The Santa Monica Mountains National Recreation Area occupies all but 10,000 acres of the Quadrangle.

The oldest geologic unit mapped in the Quadrangle is the Late Cretaceous Tuna Canyon Formation (Kt), which crops out in the upper Solstice Canyon located in the east-central part of the mapped area and between Trancas and Zuma canyons in the southwest. The Tuna Canyon Formation consists of massive, coarse-grained, thickly bedded marine sandstone and pebbly sandstone interbedded with thin-bedded

siltstone. In the vicinity of Trancas Canyon these deposits are overlain by Eocene very fine- to fine-grained, semi-friable to hard, thick-bedded marine sandstone, resistant pebble conglomerate, and conchoidally fractured siltstone of the Coal Canyon formation (Tcc). The middle Eocene Llajas Formation (Tll) overlies the Coal Canyon Formation in upper solstice Canyon and Trancas Canyon and is composed of very fine-grained, micaceous marine sandstone and siltstone with minor pebble conglomerate.

Approximately ten percent of the land area in the Quadrangle is covered by unconsolidated to moderately consolidated sedimentary deposits of Quaternary age (excluding Qls (undivided landslide deposits) and Qdt (debris train deposits)). Upper Pleistocene marine and non-marine coastal terrace deposits rest on three distinct erosional platforms cut into older bedrock within approximately 2.55 miles of the tip of Point Dume. Holocene and upper Pleistocene stream terrace deposits (Qts) are perched on the flanks of Trancas, Zuma, Ramirez, and Medea Creek canyons. For the most part these terrace deposits consist of gravel, sand, and silt that tend to be compact and dense. Groundwater is usually fairly deep within these deposits because they tend to occur in locally high topographic areas.

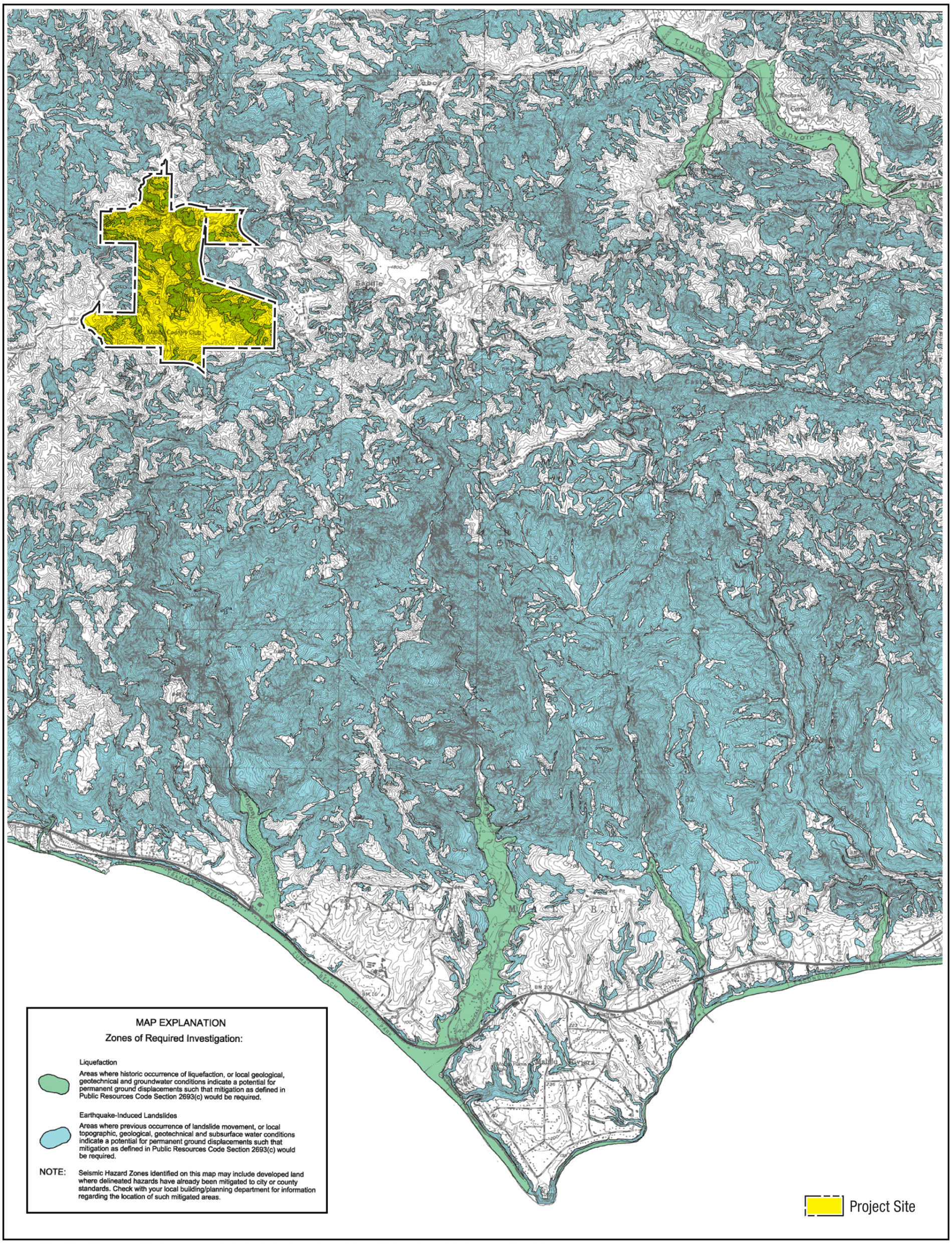
Exposed pre-Quaternary bedrock is almost entirely of Tertiary age, with some Cretaceous rocks exposed on the southern flank of the Santa Monica Mountains (Campbell and others, 1996). This bedrock can be classified into two distinct stratigraphic sequences, separated by the Malibu Coast Fault. South of the fault, the sequence consists of the middle and upper Miocene Monterey Shale, overlying the Trancas Formation (detrital sedimentary rocks), which in turn overlies and intertongues with the low and middle Miocene Zuma Volcanics. All of these rocks appear to have been deposited in a marine environment. North of the Malibu Coast Fault, the middle Miocene Topanga Group comprises the Calabasas Formation (marine detrital sedimentary rocks), the Conejo Volcanics, and the Topanga Canyon Formation (marine and nonmarine detrital sedimentary rocks). Basaltic and andesitic dikes and sills intrude into middle Miocene and older strata in this area.

The bedrock units comprising the mountain range have been folded into a large, asymmetrical anticline (i.e., an uneven upward arching fold) and have been subjected to extensive faulting. The faults that have accommodated the continuing uplift of the Santa Monica Mountains include the Malibu Coast Fault, the Malibu Bowl Fault, the Zuma Fault, and the Escondido Thrust Fault, all of which are east/west trending north-over-south reverse faults located within the southern Santa Monica Mountains.[1] Rapid tectonic uplift along the coastline has contributed to the rejuvenation of coastal terrace stream courses that has led to the development of numerous deeply incised stream channels distinguished by steep gradients (headwater to stream mouth), minor meandering, and minimal floodplain development. The geologic setting for the site and site vicinity is presented on **Figure 5.5-1**.

Regional Faulting and Seismicity

The boundary between the Pacific Plate and the North America Plate is delineated by the San Andreas Fault Zone, with the Pacific Plate moving in a northwesterly direction relative to the North American Plate. The faulting and seismicity of southern California is dominated by the intersection of the San Andreas Fault Zone and the Garlock fault (which runs perpendicular to the San Andreas along the Traverse Ranges) in the Cajon Pass. At this intersection, the San Andreas Fault bends in an east-west direction, causing the fault's right-lateral strike-slip movement to produce north-south compression between the two plates. This compression is what has produced the rapid uplift of many of the mountain ranges in southern California, including the Santa Monica Mountains. According to the Southern

[1] Seismic Hazard Zone Report 056, Seismic Hazard Zone Report for the Point Dume 7.5-Minute Quadrangle, Los Angeles and Ventura Counties, California, California Geological Survey, 2001.



Source: Seismic Hazard Zone Report of the Point Dume 7.5 Min. Quadrangle, Los Angeles County, California Division of Mines and Geology, Seismic Hazards Report 056.

Regional Geologic Map

FEET 0 1,750 3,500

FIGURE 5.5-1

California Earthquake Center, the north-south compression experienced in southern California has been estimated at between 5 to 20 millimeters per year (SCEC, 1995).

The major faults and fault zones associated with the southwestern Transverse Ranges are geologically identified as the Transverse Ranges Southern Boundary Fault System and, at its south margin, include the Malibu Coast fault, the Anacapa-Dume fault, and the Santa Monica fault. The faults of this region are generally complex fault systems, composed of numerous sub-parallel faults that splay or step from the main fault traces. Like the Santa Monica Mountains, these fault systems extend off shore.

Other Geologic Issues – Landslides

In California, large earthquakes, such as the 1971 San Fernando, the 1989 Loma Prieta, and the 1994 Northridge earthquakes, have triggered landslides responsible for destroying or damaging structures and infrastructure and blocking transportation corridors. The opportunity for strong earthquake ground shaking is high in southern California because of the presence of numerous active faults. Steep slopes in poorly cemented or highly fractured rocks, areas underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits are the most susceptible to earthquake-induced landslides. The combination of these factors creates a significant seismic hazard in the hillside areas of the Point Dume Quadrangle.[2] The Northridge Earthquake caused a number of relatively small, shallow slope failures in and adjacent to the Quadrangle that included rock falls, soil falls, debris falls, and debris slides, which occurred in poorly indurated or highly fractured sedimentary and volcanic rock on steep slopes and along road cuts.

Geologists mapping the Quadrangle have found it difficult to definitively identify landslides in its mountainous areas because of the structural complexity of the area and the presence of coastal terraces, which can be mistaken for landslide morphology. In general, landslides tend to be abundant in the southern two thirds of the Point Dume Quadrangle, where the sedimentary rocks have been deformed by several episodes of folding and faulting. Relatively few landslides occur in the less deformed volcanic terrain in the northern part of the quadrangle: however, rock falls, rock slides, and debris avalanches involving jointed and fractured bedrock of the Sespe and Vaqueros formations and volcanic breccias[3] are known to occur on the area's steeper slopes regardless of location. Numerous slides have occurred in the crumbly shale and friable sandstone of the Trancas Formation in the southeast. Rotational and translational rock and debris slides are also common along the south-trending canyons south of the range crest, especially in the vicinity of faults and folds. Numerous large, ancient landslides have been mapped in Sespe, Vaqueros, and Escondido Canyon Shale strata in the south-central part of the Quadrangle. Many of the more recently active slides occur within these older, previously identified landslides.

A pilot study performed by the Department of Mining and Geology (1996) concluded earthquake-induced landslide hazard zones should encompass all areas within the Quadrangle that have a High, Moderate, or Low level of hazard potential. This would include all areas where analysis indicates earthquake displacement of 5 centimeters of greater. Areas with a Very Low Hazard potential (i.e., less than 5 centimeters displacement) are excluded from the zone.

Malibu Institute Site Conditions

Institute Site Topography, Landforms, and Soils

The 650-acre Project site is located at 901 Encinal Canyon Road in the Malibu area of unincorporated Los Angeles County, within the USGS Point Dume 7.5 Minute Quadrangle. The proposed development area

[2] Seismic Hazard Zone Report for the Point Dume Quadrangle, Section 2 Earthquake-induced Landslide Evaluation Report, California Geologic Survey, 2001.

[3] Volcanic breccia. A pyroclastic rock that consists of angular volcanic fragments that are larger than 64 mm in diameter and that may or may not have a matrix.

of the Project site, which includes the proposed structures and the remodeled golf course, covers approximately 150 acres of the Project site. The majority of the Project site falls within the upper watershed area of Trancas Canyon in the south/central Santa Monica Mountains, with the exception of a small, northerly extension of the site that spans a drainage divide and falls into the upper watershed of an unnamed tributary to the Carlisle Canyon watershed.

The Project site is situated in a bowl created by, and south of, the crest of the Upper Trancas Canyon drainage basin. The on-site topography ranges in elevation from peaks that reach 2,300 feet AMSL in the northwest, to valley bottom elevations of approximately 1,300 feet AMSL. To the southeast, adjacent mountain ridges range from 1,400 feet to 1,700 feet AMSL and have gentler slopes. Approximately 78 percent of the landform surfaces within the Project site consist of steep hillsides and ridges that collectively exceed slope gradients of 15 percent. The proposed development area of the Project site would be confined to site areas with slope gradients of less than 15 percent and would include the lower interior hills and the relatively flat portions of the interior valley floor that were previously graded and contoured when the existing Malibu Golf Club was constructed in the 1970s.

In 2012, the Applicant's geologist, Sladden Engineering, conducted a site investigation that included site reconnaissance to assess existing surface conditions on and adjacent to the Project site. The investigation also explored the subsurface conditions of the proposed development area of the Project site. In the course of the investigation Sladden drilled 11 exploratory boreholes, located as illustrated in **Figure 5.5-2**. Both artificial fill and native alluvium were immediately encountered and overlay volcanic bedrock at relatively shallow depths. The artificial fill (FILL) consists of clayey sand (SC) to gravelly sand (SP) described as dry to moist, fine to course-grained, and light yellowish brown to dark gray in color. Native alluvial materials (Qal) were encountered within each of the borings at depths ranging from five to twenty-seven feet below ground surface (bgs).

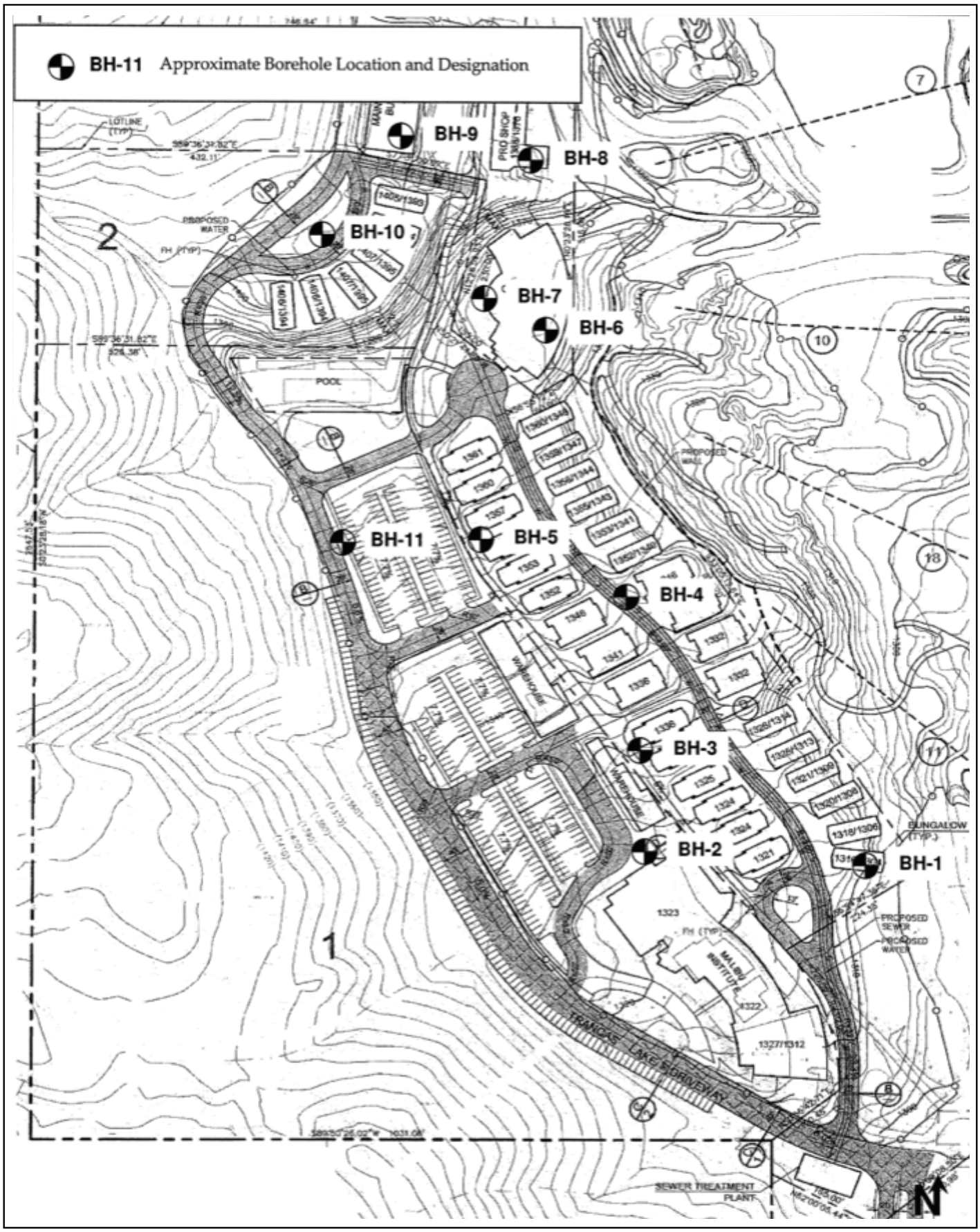
Artificial Fill (FILL): Artificial fill is located throughout the developed portion of the site. Fill materials consist of loose to medium dense clayey sand and gravel at depths generally ranging from two to eight feet. In some locations the artificial fill makes direct contract with the Conejo Volcanics bedrock formation and in other locations lays on top of natural alluvial deposits.

Alluvial deposits (Qal): Alluvial deposits were found throughout the developed portion of the site and consist of medium dense fine to course grained sand and clayey sand that range in depth from two to twenty-six feet to the bedrock.

Conejo Volcanics (Tcvb): The Conejo Volcanics in the western Santa Monica Mountains is one of the largest middle Miocene accumulations of intrusive bodies and extrusive flows and breccias in southern California. Composition of the lava includes both basalt and dacite. The Sladden geotechnical investigation characterizes the volcanic breccia as moderately strong, moderately weathered materials that ultimately break down into silty sand or clayey sand soil types. Bedrock was encountered at depths ranging from eight and twenty-seven feet bgs.

Localized Faulting and Seismicity

There are two significant fault systems located in close proximity to the Project site. One is the Malibu Coast fault system, considered a part of the Santa Monica fault system, which covers an area of folding and faulting up to several miles in width (north/south) and includes two roughly parallel branches that are steeply north dipping. The Project site lies within the western section of this fault zone that traverses both on-shore and offshore areas between Santa Monica and Point Dume. **Figure 5.5-3**, Regional Fault Map, illustrates the location of fault zones in the vicinity of the Project site. The State of California Earthquake

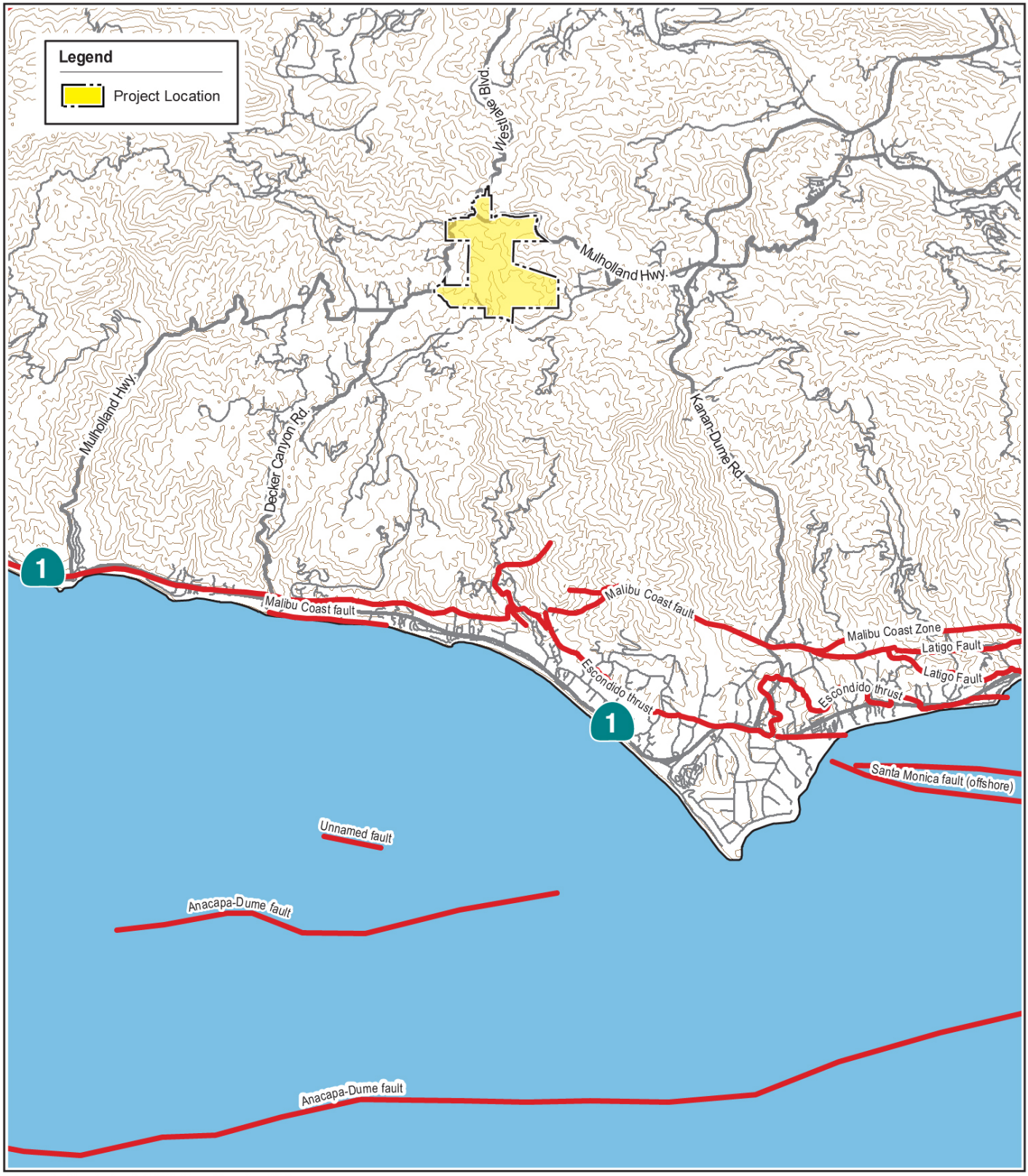


Source: Sladden Geotechnical Study, 2012.

Boring Locations

Map Not to Scale

FIGURE 5.5-2



Source: Los Angeles County GIS Database Shapefiles, 2010.

ENVICOM CORPORATION

Regional Fault Map

0 0.75 1.5 Miles

PLATE 5.5-3

Fault Zone Point Dume Quadrangle Official Map (July 1, 1995) is included in Appendix E for additional reference.

The Anacapa-Dume fault is a near vertical offshore escarpment 62 miles in length that lies offshore at a distance of approximately two miles in the vicinity of the Project site. It is considered capable of producing the largest earthquake in the immediate vicinity, which is an earthquake up to a magnitude 7.5. Other faults at greater distances also have the ability to generate seismic events of a magnitude sufficient to impact the Project site. Table 5.5-1 lists 19 faults that have the potential to affect the Project site with effects ranging from very mild to severe ground motions (Sladden, 2012). In the immediate area of the Project site, smaller faults such as the Malibu Bowl fault, Zuma fault, Puerco fault, Latigo fault, and the Escondido Thrust fault appear to be splays of the larger Malibu Coast fault system and are therefore not listed separately.

Table 5.5-1
Active Faults in Proximity to the Project Site

Fault Name	Distance (Km)	Maximum Event
Anacapa – Dune	<2.0	7.5
Malibu Coast	<2.0	6.7
Santa Monica	16.9	6.6
Simi – Santa Rosa	19.1	7.0
Northridge (E. Oak Ridge)	21.2	7.0
Oak Ridge (On shore)	25.7	7.0
Palos Verdes	30.6	7.3
Santa Susana	30.9	6.7
Raymond	34.1	7.0
Oak Ridge (Blind Thrust Offshore)	34.6	7.1
San Cayetano	34.9	7.0
Channel Island Thrust (Eastern)	37.6	7.5
Ventura – Pitas Point	38.5	6.9
Hollywood	39.2	6.4
Sierra Madre (San Fernando)	42.0	6.7
Oak Ridge Mid-Channel Structure	42.5	6.6
Verdugo	44.4	6.9
Newport/Inglewood (LA Basin	45.0	7.1
San Gabriel	47.1	7.2
Source: Sladden Engineering Seismicity & Faulting Study/Malibu Institute Geotechnical Study (2012).		

Seismic Ground Shaking

Earthquake generated ground shaking is the most pervasive and critical seismic effect considered for development planning purposes. The intensity of ground shaking at a site is primarily dependent upon the earthquake's magnitude, the distance of the epicenter of the earthquake event from the site, and the geologic conditions of the site. The nearby Anacapa-Dume fault is capable of producing an earthquake with a maximum magnitude of 7.5, which could potentially produce a peak horizontal ground acceleration in excess of 1 g-force (g) depending upon the underlying geology and proximity to the epicenter of the seismic event. However, based on the USGS Probabilistic Hazard Curves (USGS, 2011) the Project site would most likely be subjected to ground accelerations on the order of 0.43g in the event of a peak

seismic event on the Anacapa-Dume fault. The peak ground acceleration at the site is believed to have a 475-year return period and a 10 percent chance of exceedance in 50 years.

Fault-Induced Ground Rupture

When an earthquake is sufficiently large, or the hypocenter[4] is shallow enough, the rupture may extend to the ground surface. This surface movement creates offsets that can pass through buildings and cause serious structural damage. The State's *Alquist-Priolo Earthquake Fault Zoning Act* addresses fault rupture as it relates to the placement of habitable structures in the vicinity of known active faults. Los Angeles County adheres to the Act and, in addition, imposes other local requirements that address construction-specific local conditions in the vicinity of potentially active faults.

There are no known faults on the Project site (Jennings (1994), Hart and Bryant (1997), Dibblee & Ehrenspeck (1993), CDMG (1995), and Sladden (2012)). The two parallel branches and numerous splays of the Malibu Coast fault, located less than two miles south of the site, may be able to break the ground surface in areas located adjacent to their mapped alignments during a major earthquake on the fault. Most studies have concluded that any surface rupture associated with a strong seismic event on the fault would be concentrated along its mapped traces. The closest fault traces are located a few thousand feet south of the Project site at their closest points. None of the previously cited studies found evidence of secondary seismic effects such as lateral spreading or lurching in the course of field investigation at the Project site.

Secondary Effects of Seismic Ground Shaking

Liquefaction and dynamic (seismically-induced) settlement, and ground lurching are potential secondary effects of seismic ground shaking.

Liquefaction and Dynamic Settlement:

Liquefaction occurs when loose, cohesionless, water-saturated soils (generally fine-grained sands) are subjected to strong seismic ground motion of significant duration. Under these conditions such soils lose cohesion and behave like liquids, resulting in the loss of all bearing strength. Structures built on liquefaction-prone soils may tilt or sink when the underlying soils liquefy unless foundations are designed to withstand the temporary loss of support.

Liquefaction occurs most often in earthquake-prone areas that are underlain by young alluvium and that have a groundwater table that is less than 50 feet below the ground surface. There is no evidence of shallow groundwater or seepage within the proposed development area of the Project site. Only one boring (BH 11), located in the proposed parking area, found evidence of possible perched groundwater within the alluvium layer at 13 feet bgs. No other area of perched groundwater was documented. With this single exception, no porous or saturated surficial deposits have been identified within 50 feet of the surface at the Project site. The USGS Seismic Hazard Map does not identify the Project site as a liquefaction hazard zone.

Ground Lurching:

Ground lurching is the result of the rolling motion of the ground surface associated with a seismic event. Such rolling motion can cause cracks to form in the ground surface and offsets to occur that may be visible in curbs, walls and fences, and foundations. When shifting of the ground during an earthquake causes sudden, high ground velocities and concomitant accelerations, the ground can lurch a meter or more in one direction within one to three seconds. Ground lurching can also occur on slopes and ridge tops where seismic shaking causes lateral movement of the ground and results in rock or soil fracturing. Ridge-top lurching was observed in the hills and mountain slopes of the Santa Monica Mountains during

[4] The point within the earth where earthquake energy is released that lies directly beneath the earthquake epicenter.

the 1971 San Fernando earthquake and the 1994 Northridge earthquake. The potential for surface cracking due to ground lurching is greater, however, in areas with poorly consolidated colluvial or alluvial deposits or at the contact of surface materials with bedrock. As previously noted, alluvial deposits were found throughout the developed portion of the site and consist of medium dense, moderately consolidated, fine to course grained sand and clayey sand that range in depth from two to twenty-six feet to the bedrock. Accordingly, there is potential for ground lurching to occur in those portions of the site where poorly consolidated alluviums and uncertified fill have not been removed in the course of grading, and where compaction required to prepare pads for building construction has not taken place, such as the golf course greens.

As noted in the Project's Geotechnical Investigation, ground lurching may damage lightly loaded structures such as pavement, fences, pipelines, and walkways while more heavily loaded structures, such as buildings, appear to resist such damage. The County has no specific Building Codes related to ground lurching; however, the County recognizes the potential for resulting infrastructure damage and requires that it be addressed if the potential for ground lurching exists at a specific site.

The Project site was developed with its current use in the late 1970s and was subject to ground shaking as the result of the Northridge Earthquake in 1994, which was strong enough to trigger landslides on Encinal Road and Decker Road in close proximity to the shoreline, approximately four miles from the Project site; however, there is no written record of physical evidence of ground lurching such as surficial cracks, offsets in sidewalks or paved golf course paths, or in retaining walls dating from that period. Sladden Associates found no such evidence of ground lurching during their field investigation conducted in connection with the development of the Project. According to the Project's Geotechnical Investigation, there is no evidence of ground lurching within the proposed development area of the Project site.

Geologic Hazards

Slope Failure, Landslide, and Rock Falls

In general, landslides are abundant in the southern two thirds of the Point Dume Quadrangle where the sedimentary rocks have been deformed by several episodes of folding and faulting. Relatively few landslides exist in the less deformed volcanic terrain in the northern part of the map. Approximately two thirds of the Project site is located in the south or "Coastal" area of the Quadrangle while the balance of the site is located within the northern, inland area. Landslides in the area range from minor surficial failures resulting from soil and rock creep, rock fall, soil and debris slumps, and debris flows to large rotational and translation landslides, some of which are relatively old and deeply eroded.

Rock falls, rock slides, and debris avalanches involving jointed and fractured bedrock of volcanic breccias are known to occur on the steeper slopes within the Santa Monica Mountains. These conditions occur on the Project site, but not within the proposed development area. Debris flows are common on moderate to steep slopes within the mountains. The large and varied assortment of rock units within a very complex structural setting of the Quadrangle is characterized by intense faulting and deformation in a deeply dissected terrain that has produced widespread and abundant landslides, as illustrated in the 2001 CGS Seismic Hazard Report for the Quadrangle (see Plate 2.1). More than 500 landslides were included in the 2001 California Geological Survey inventory. These conditions contribute to an earthquake-induced landslide zone that covers about 54 percent of the land in the Point Dume Quadrangle. Individual debris-flow tracks and deposits were not mapped for the 2001 CSG Seismic Report because of their number; however, the Report does identify areas throughout the Point Dume Quadrangle that have historically demonstrated substantial potential for landslides and slope instability. These locations are shown as Seismic Hazard Zones on the CGS 2002 map. The Project site is not identified as one of these locations.

There is, however, potential for offsite landslides along Encinal Canyon Road south of the Project site. An ancient and active landslide occurs in the lower Encinal Canyon and is identified on the CGS Seismic Hazard Map for the Quadrangle. Landslides along Encinal Canyon Road north of Pacific Coast Highway have resulted in prolonged road closures during periods of heavy rain and during seismic events and therefore have the potential to impact ingress/egress from the Project site.[5] Numerous landslide-related closures of Encinal Canyon Road in the vicinity of the Luchenza Highlands subdivision are noted in the Land Use Element of the Malibu General Plan (Section 1.6.11). In 1994, the Northridge Earthquake resulted in a landslide on Encinal Canyon Road that was documented in the USGS 2001 Seismic Hazard Zone Report for the Point Dume 7.5 Minute Quadrangle. In 2005, Encinal Canyon Road was closed for approximately two weeks due to a storm-induced landslide at Via Vienta.[6] The Decker Canyon-Encinal Canyon Action Plan included within the Santa Monica Mountains Community Wildfire Protection Plan also documents the instability of the Lower Encinal Canyon Slides, which it notes has required ongoing engineering efforts to support hillsides and roads. Documented closures occurred approximately five miles south of the Project site within the Lower Encinal Canyon Slides area. Other roads potentially providing access to the site, including Decker Canyon Road, Mulholland Highway, Kanan Dume Road, and Westlake Boulevard, also traverse areas of the Santa Monica Mountains that are subject to landslides, rock falls, mud flows and debris flows under certain conditions.

Expansive Soil

Expansion index testing of select soil samples from the proposed development area of the Project site was performed by Sladden in 2012. Soil expansion indexes varied from 28 to 55 and 60, depending upon the location from which the soil sample was taken. Based on these results, the proposed development area of the Project site has a low to medium expansion potential.

Settlement

Consolidation is the adjustment of soil or loose bedrock in response to an increased load and may involve simple decrease in open pore space, squeezing of water out from pore space, taking water into pore space, or decomposition of materials such as organic matter. Mitigation for consolidation and settlement are addressed in the California Building Code, the County of Los Angeles Building Code and in the site-specific recommendations contained in the Project's Geotechnical Investigation (Sladden 2012).

Land Subsidence

Land subsidence occurs over a broad area. It may be a uniform process or it may produce local differential movement. In California, subsidence is most often related to human activity such as the withdrawal of oil and groundwater, oxidation of subsurface organic material, and hydro-compaction of clays in arid and semi-arid areas that have been irrigated extensively. No land subsidence has been identified at or in the vicinity of the Project site.

Erosion

Erosion is the wearing away of soil and bedrock by weathering, mass wasting, and transport by wind and water. The potential severity of erosion is controlled by (a) the hardness, compactness, and cementation of the earth materials, (b) the slope of the ground, and (c) the presence of man-made drainage control devices and vegetation/ground cover. During construction, the County requires implementation of best management practices (BMPs) to control erosion of exposed soils. The County also requires an Erosion Control Plan for grading projects in hillside areas. Within the Project site, erosion can occur on all sloping ground with exposed soil, artificial fill, or bedrock during grading and construction.

[5] California Department of Conservation Division of Mines. Seismic Hazard Zone Report for the Point Dume 7.5-Minute Quadrangle, Los Angeles and Ventura Counties. 2001. Section 2 – Earthquake-Induced Landslide Evaluation.

[6] The Malibu Times. Local Businesses Suffer Losses with Recent Road Closures. March 2, 2005 and March 9, 2005.

Erosion along the ridgelines and steep slopes that characterize the undeveloped area of the site is considered an ongoing natural process.

5.5.2 Regulatory Setting

State

Alquist Priolo Earthquake Fault Zoning Act (1972)

The Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621) was enacted by the State of California in 1972 to address the hazard of surface faulting to structures for human occupancy.[7] The Alquist-Priolo Earthquake Fault Zoning Act was a direct result of the 1971 San Fernando Earthquake, which was associated with extensive surface fault ruptures that damaged homes, commercial buildings, and other structures. The primary purpose of the Alquist-Priolo Earthquake Fault Zoning Act is to prevent the construction of buildings intended for human occupancy on the surface traces of active faults. The Alquist-Priolo Earthquake Fault Zoning Act is intended to provide citizens with increased safety and to minimize the loss of life during and immediately following earthquakes by facilitating seismic retrofitting to strengthen buildings against ground shaking. The Alquist-Priolo Earthquake Fault Zoning Act requires the State Geologist to establish regulatory zones, known as "earthquake fault zones," around the surface traces of active faults and to issue appropriate maps to assist cities and counties in planning, zoning, and building regulation functions. Maps are distributed to all affected cities and counties for the controlling of new or renewed construction and are required to sufficiently define potential surface rupture or fault creep. The State Geologist is charged with continually reviewing new geologic and seismic data, revising existing zones, and delineating additional earthquake fault zones when warranted by new information. Local agencies must enforce the Alquist-Priolo Earthquake Fault Zoning Act in the development permit process, where applicable, and may be more restrictive than State law requires. According to the Alquist-Priolo Earthquake Fault Zoning Act, before a project can be permitted, cities and counties must require a geologic investigation, prepared by a licensed geologist, to demonstrate that buildings will not be constructed across active faults. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back. Although setback distances may vary, a minimum 50-foot setback is required. The Alquist-Priolo Earthquake Fault Zoning Act and its regulations are presented in California Department of Conservation, CGS, Special Publications (SP) 42, *Fault-Rupture Hazard Zones in California*.

Seismic Hazards Mapping Act of 1989

In order to address the effects of strong ground shaking, liquefaction, landslides, and other ground failures due to seismic events, the State of California passed the Seismic Hazards Mapping Act of 1990 (Public Resources Code Sections 2690–2699). Under the Seismic Hazards Mapping Act, the State Geologist is required to delineate "seismic hazard zones." Cities and counties must regulate certain development projects within these zones until the geologic and soil conditions of a project site are investigated and appropriate mitigation measures, if any, are incorporated into development plans. The State Mining and Geology Board provides additional regulations and policies to assist municipalities in preparing the Safety Element of their General Plan and encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety. Under Public Resources Code Section 2697, cities and counties must require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard. Each city or county must submit one copy of each geotechnical report, including mitigation measures, to the State Geologist within 30 days of its approval.

[7] The Act was originally entitled the *Alquist-Priolo Geologic Hazards Zone Act*.

State publications supporting the requirements of the Seismic Hazards Mapping Act include the CGS SP 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California* and CGS SP 118, *Recommended Criteria for Delineating Seismic Hazard Zones in California*. The objectives of SP 117 are to assist in the evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigations and to promote uniform and effective statewide implementation of the evaluation and mitigation elements of the Seismic Hazards Mapping Act. SP 118 implements the requirements of the Seismic Hazards Mapping Act in the production of Probabilistic Seismic Hazard Maps for the State.

2010 California Building Code and 2010 California Residential Code

In 2007, the International Building Code (IBC) replaced the Uniform Building Code (UCB) as the basis for California building codes. Since 2007, the State code and most local codes have been amended to reflect changes in requirements. The 2010 California Residential Code (CRC) and 2010 California Building Code (CBC) are the most current versions applicable to development of the Project site. The CRC replaces the CBC in determining standard for 1-2 family residential dwellings up to 3 stories in height. The 2010 CBC applies to all other structures.

The IBC-based CBC replaced previously used seismic zones with acceleration maps that ascertain site seismicity and determine the Seismic Design Category (SDC) of a given structure and location, based on the structure's proposed use. It is the Seismic Design Category that drives the level of structural detailing required for seismic resistance and is determined by first classifying a structure according to its use and/or function into one of four Seismic Use Group (SUBs):

- Standard occupancy structures such as single family and multifamily residences and standard commercial structures;
- Special occupancy structures, such as those used for public assembly such as conference rooms, auditoriums, dining rooms and wastewater treatment facilities;
- Hazardous facilities that support or contain sufficient quantities of toxic or explosive substances that would be dangerous in the event of release; and
- Essential facilities, which include hospitals, fire stations, and designated emergency shelters, such as schools.

Structures are also assigned a Seismic Design Category (SDC) based on these SUBs and the applicable design ground motion (expressed in terms of gravitational forces or "g"). While the SUG classification dictates the seismic performance objective a particular building, the SDC determines the permissible structural system, allowable height, and other design parameters. **Tables 5.5-2** and **5.5-3,** respectively, illustrate the SUGs and the SDCs used by the County of Los Angeles.

Table 5.5-2
Basis for Seismic Design Criteria in Model Codes and Standards

	Seismic Zones	Seismic Performance Categories	Seismic Design Categories
Classifications	0, 1, 2, 3, 4	A, B, C, D, E	A, B, C, D_0, D_1, D_2, E, F
Criteria for Classification	Location	Location and Building Use	Location, Building Use, and Soil Type
Used by Model Codes and Standards	UBC 1997[8] SBC 1991[9] BOCA/NBC 1990[10] MSJC 1992	SBC 1999 BOCA/NBC 1999 MSJC 1999[11]	IRC 2009/CRC 2010[12]

Table 5.5-3
Basis for Seismic Design Categories – Percentage of Gravity (g)[13]

Seismic Design Category	S_{ds} (g)
A	≤0.17
B	≥0.17 ≤0.33
C	≥0.33 ≤0.50
D_0	≥0.50 ≤0.67
D_1	≥0.67 ≤0.83
D2	≥0.83 ≤1.17
E	≥1.17

California Seismic Safety Commission

The California Seismic Safety Commission was created in 1975 to provide oversight, review, and recommendations to the Governor and State Legislature regarding seismic issues. In 2006 the commission's name was changed to the Alfred E. Alquist Seismic Safety Commission. Documents adopted by the Commission that might apply to the Institute Project include:

- Research and Implementation Plan for Earthquake Risk Reduction in California 1995 to 2000, December 1994;
- Seismic Safety in California's Schools, 2004, "Findings and Recommendations on Seismic Safety Policies and Requirements for Public, Private, and Charter Schools, December 1994;
- Commercial Property Owner's Guide to Earthquake Safety, October 2006; and
- California Earthquake Loss Reduction Plan 2007-2011, July 2007.

[8] UBC = Uniform Building Code
[9] SBC = Standard Building Code
[10] BOCA/NBC = Building Officials and Code Administrators National Building Code
[11] MSJC = Masonry Standards Joint Committee
[12] CRC = California Residential Code
[13] Table R301.2.2.1.1 of 2006 IRC as retrieved from http://ngmdb.usgs.gov/Info/docs/DMT08 3/6/2011

State of California Geological Survey (CGS)

Previously known as the California Division of Mines and Geology, the California Geological Survey (CGS) has adopted updated guidelines, polices, and standards for the mitigation of seismic hazards, which are contained in Special Publication 117A (September 2008). The 2001 CGS Seismic Hazard Evaluation of the Point Dume Quadrangle provides the most current available information for seismic hazards in the vicinity of the Project site and is repeatedly referenced in this analysis.

Local

County of Los Angeles General Plan Safety Element

The County of Los Angeles General Plan Safety Element contains policies related to seismic and geotechnical hazards and flood and inundation hazards. The County also has adopted a Local All Hazards Mitigation Plan. The two documents are intended to be used together. Key General Plan goals and policies include:

Policy 3: Continue enforcement of stringent site investigations (such as seismic, geologic, hydrologic, and soils investigations) and implementation of adequate hazard mitigation measures for development projects in areas of high earthquake hazard, especially those involving critical facilities. Do not approve proposals and projects, which cannot mitigate safety hazards to the satisfaction of responsible agencies.

Policy 8: Review proposals and projects proposing new development and expansion of existing development in areas susceptible to landsliding, debris flow, and rockfalls, and in areas where collapsible or expansive soils are a significant problem; and disapprove projects that cannot mitigate these hazards to the satisfaction of responsible agencies.

Policy 9: Continue to improve and enforce stringent slope investigation and design standards, and to apply innovative hazard mitigation and maintenance plans for development in hillside areas.

Policy 10: Upgrade slope maintenance measures and improve emergency response capability in hillside areas.

Malibu Local Coastal Program Land Use Plan

The Malibu Local Coastal Program (LCP) Land Use Plan, which is part of the Los Angeles County Local Coastal Program and was certified by the California Coastal Commission in December 1986, provides the following policies for development within the Malibu Coastal Zone:

P82: Grading shall be minimized for all new development to ensure that potential negative effects of runoff and erosion are minimized.

P89: Grading plans in upland areas of the Santa Monica Mountains shall minimize cut and fill operations in accordance with the requirements of the County Engineer.

P91: For permitted grading operations on hillsides, the smallest practical area of land should be exposed at any one time during construction, and the length of exposure should be kept to the shortest practicable amount of time.

P94: Cut and fill slopes should be stabilized with planting at the completion of final grading. Such planting should be adequate to provide ninety percent coverage within ninety days, and should be repeated if necessary to provide such coverage. This requirement should

apply to all disturbed soils. Jute netting or other stabilization techniques may be utilized as temporary methods.

P95: Where construction will extend into the rainy season, temporary vegetation, seeding, mulching, or other suitable stabilization methods should be used to protect soils subject to erosion. The appropriate methods should be approved by the County Engineer.

P147: Continue to evaluate all new development for impact on, and from, geologic hazard.

P148: Continue to limit development and road grading on unstable slopes to assure that development does not contribute to slope failure.

P149: Continue to require a geologic report, prepared by a registered geologist, to be submitted at the applicant's expense to the County Engineer for review prior to approval of any proposed development within potentially geologically unstable areas including landslide or rock-fall areas and the potentially active Malibu Coast-Santa Monica Fault Zone. The report shall include mitigation measures proposed to be used in the development.

P150: Continue Hillside Management procedures as contained in Ordinance No. 82-0003 for proposed development on sites with an average slope greater than 25 percent (4:1). Grading and/or development-related vegetation clearance shall be prohibited where the slope exceeds 2:1, except that driveways and/or utilities may be located on such slopes where there is no less environmentally damaging feasible alternative means of providing access to home sites located on slopes of less than 50%, where no alternative home sites exist on the property, and where maximum feasible mitigation measures are taken.

County of Los Angeles Grading Guidelines

In 2008, the County Department of Public Works published an Informational Manual for the use of building contractors and engineers for the preparation and processing of grading permit applications.

County of Los Angeles Manual for the Preparation of Geotechnical Reports

The Manual for the Preparation of Geotechnical Reports dated July 1, 2013, or the latest edition, contains the requirements for geotechnical work required for development projects in the County and is based on Los Angeles County Building Code Section 111 and the Los Angeles County Subdivision Code Section 21.48.050.8.

Los Angeles County Building Code

The project is responsible for complying with all applicable Building Code requirements as they relate to geotechnical issues.

5.5.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the County of Los Angeles Environmental Checklist Form (Initial Study), the Project would be considered to have a significant geology and soils impact if it would:

a. Expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known active fault trace.

ii. Strong seismic ground shaking.

iii. Seismic-related ground failure, including liquefaction and lateral spreading.

iv. Landslides.

b. Result in substantial soil erosion or the loss of topsoil;

c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;

d. Be located on expansive soil, as defined in Table 18-1-B of the California Building Code (1994), creating substantial risks to life or property;

e. Have soils incapable of adequately supporting the use of onsite wastewater treatment systems where sewers are not available for the disposal of wastewater;

f. Conflict with the Hillside Management Area Ordinance (L.A. County Code, Title 22, § 22.56.215) or hillside design standards in the County General Plan Conservation and Open Space Element.

5.5.4 Project Impacts

Introduction to Analysis

Implementation actions and geologic hazards with potential to affect the Project site include:

- Site grading, including cuts into underlying bedrock to accommodate subsurface/or semi-subsurface levels of three buildings;
- Potential effects of seismic activity (fault rupture, strong ground shaking and related seismic effects);
- Expansive soils conditions;
- Erosion control; and
- Potential for geologic conditions offsite affecting access to/from the site.

Although the Project would be constructed entirely within the footprint of the existing golf club, it would involve the demolition of existing facilities, removal of existing vegetation, remedial grading to remove and replace uncertified fill and unacceptable soils, and grading to prepare the site for the reconfiguration of its new golf course, provision of wastewater treatment facilities and removal of existing septic systems, installation of new infrastructure, installation of storm water detention and water quality features, grading and paving of a new parking lot, and site preparation to provide building pads for proposed new buildings. The proposed grading would disturb, displace, cover, remove, and/or compact the site's natural rock and soils and previously placed artificial fill. While site preparation and grading would cause local changes in the existing topography, there are no faults or landslides within or in close proximity to the Project's development footprint and there are no significant adverse geologic hazards associated with the Project site that are significant and unavoidable. The Project would comply with all recommendations

contained in Sladden Engineering's Geotechnical Investigation for this Project and requirements contained in the County Building Code. Compliance with regulatory requirements is required and is not considered mitigation.

Impacts related to erosion are closely connected to water quality impacts and mitigation measures addressed in Section 5.8, Hydrology and Water Quality, of the DEIR. This is noted in the analysis where appropriate and the reader is referred to the appropriate section of the DEIR. The following impact analysis is arranged in the order that each specific threshold appears in subsection 5.5.3.

Fault Rupture

Threshold: Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known active fault trace?

The State of California Earthquake Fault Zones Official Map for the Point Dume Quadrangle (June 1, 1995) was reviewed to identify the location of known earthquake fault in the vicinity of the Project site. Other fault maps were also consulted, including the Regional Fault Maps of the City of Los Angeles, the Regional Fault Map provided by the Southern California Earthquake Data Center (2005), and regional seismic mapping from the County of Ventura Multihazard Assessment that extended into the Malibu area. Based on review of these sources, and the findings of the Sladden Engineering Geotechnical Investigation for the site, there are no known active or known inactive faults traversing the Project site. While existing active faults are located in proximity to the site (e.g., Santa Monica fault zone, Malibu Coast fault zone, and Anacapa/Dume fault), ground ruptures have historically been associated solely with ground immediately above either the main fault or the path of a fault splay. Since the site has no known feature of this type on or in the immediate vicinity of the Project site, the fault rupture hazard is considered negligible and would be less than significant (**Class III**).

Strong Seismic Ground Shaking

Threshold: Would the project expose people or structures to potential substantial effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Like most of southern California, the Project site is susceptible to ground shaking from the several known active faults in the region. The closest active faults capable of generating a seismic event in excess of a magnitude 6 earthquake are located approximately two miles from the Project site. One of these (Anacapa/Dume) is thought to be capable of generating a magnitude 7.5 earthquake with an intensity of 1g; however, as noted previously, the Project site is not expected to experience an intensity of ground shaking greater than 0.43g, which is within acceptable design parameters for the types of structures contemplated for the site. This difference in the magnitude of ground shaking is due to the site's distance from the most proximate faults and the characteristics of the soil and bedrock that underlay the Project

site.[14] The assessment of seismic risk at the Project site, completed by Sladden Engineering in 2012 and documented in the Geotechnical Investigation,[15] concluded that the combination of shallow seated bedrock beneath structures together with the proper application of California Building Code (CBC) seismic design requirements and the implementation of the measures recommended by the Project's geologist in the Geotechnical Investigation for grading, building pad preparation and foundation design would minimize the potential for the collapse of buildings, the failure of any proposed fill slopes, and collapse of retaining walls. A sample summary of recommendations by the Project's geologist is provided in **Table 5.5-4** (Summary of Recommendations). The entirety of the Sladden Geotechnical Investigation, inclusive of all recommendations is contained in Appendix E.

Table 5.5-4
Sample Summary of Recommendations by Sladden Engineering Consultants

Topic	Recommendation
Stripping	Areas to be graded should be cleared of existing structures, improvements, vegetation, trees and associated root systems and debris. All areas scheduled to receive fill should be cleared of undocumented fills and any irreducible matter. Undocumented fill soil should be removed in its entirely and replaced as engineered fill. Voids left by obstructions should be properly backfilled in accordance with the compaction recommendations contained in the Geotechnical Investigation.
Preparation of Building Areas	In order to achieve a firm and unyielding bearing surface and to mitigate potential cut/fill transition related to differential settlements, all building areas shall be over-excavated and re-compacted. All artificial fill soil and low-density native soils and/or bedrock should be removed to a minimum depth of three feet below the bottom of the footings. Remedial grading should extend laterally, a minimum of five feet beyond the footings where possible. The exposed surface should be scarified, moisture conditioned to within two percent of optimum moisture content, and compacted to at least 90 percent relative compaction.
Compaction	Compaction testing should be performed on all lifts in order to ensure proper placement of fill materials. Remedial grading should occur within the building envelope extending laterally at least five feet beyond the building limits to a minimum of three feet below the bottom of footings; native/import engineered fill should be placed in lifts not exceeding six inches in loose state, compacted to a minimum of 90 percent relative compaction; asphalt concrete section - compact top 12 inches to at least 95 percent compaction within two percent of optimum moisture content.
Shrinkage and subsidence	Volumetric shrinkage of the material that is excavated and replaced as controlled compacted fill should be anticipated. Shrinkage could vary from 10 to 15 percent. Subsidence of the surfaces that are scarified and compacted should be between one and two tenths of a foot.

[14] The Los Angeles County Building Code uses calculation of peak ground acceleration (PGA) to determine the permissible structural system, allowable height, and other design parameters of proposed structures. The anticipated peak ground acceleration anticipated for this site provides a basis for seismic design category (See Table 5.5-3) that is acceptable for the types of structures proposed for the Project site, subject to appropriate structural engineering (Sladden 2012).

[15] Sladden Engineering, Geotechnical Investigation of the Malibu Institute Proposed Renovations and Expansion of the Malibu Golf Club, 901 Encinal Canyon Road, Los Angeles County, California, July 16, 2012.

Topic	Recommendation
Foundations – Conventional Spread footings	Exterior footings should extend at least 18 inches beneath the lowest adequate grade and interior footings should extend at least 12 inches below slab subgrade. Isolated square or rectangular footings at least two feet square and continuous footings at least 12 inches wide may be designed using allowable bearing pressures of 1800 and 2000 pounds per square foot, respectively. Allowable bearing pressure may be increased by approximately 250 psf for each additional 1 foot of width and 250 psf for each additional six inches of depth. Maximum allowable bearing pressure should be limited to 3000 psf. All footings should be reinforced in accordance with the Project engineer's recommendations. Total static settlement of shallow footings is anticipated to be less than one inch. Differential settlement would be approximately half the total settlement for similarly loaded footings spaced approximately 40 feet apart.

Source: Sladden Engineering – Geotechnical Investigation, The Malibu Institute Proposed Renovations and Expansion, Malibu Golf Club, July 2012

The potential for seismically induced slope instability affecting the development area of the Project site is not a significant adverse impact due to the distance between such slopes and the proposed development area. The Project shall comply with all applicable Building Code requirements as they relate to Geotechnical issues. With implementation of the previously cited regulatory requirements and above-cited grading and structural design recommendations, overall effects of ground shaking on the Project would be less than significant (**Class III**).

Seismic-Related Ground Failure

Threshold: Would the project expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving seismic-related ground failure, including liquefaction and lateral spreading?

Liquefaction

Liquefaction refers to the loss of strength in saturated, cohesionless soils due to the build-up of pore water pressures during dynamic loading. Liquefaction can cause substantial local settlement, particularly where heavy building loads overlie vulnerable substrates. The 2001 CGS Seismic Hazard Report for the Point Dume Quadrangle included an assessment of susceptibility to liquefaction within the Quadrangle and provided a map indicating the location of liquefaction-prone areas. The Project site is not located within any liquefaction-prone area identified in the CGS Report. The liquefaction potential of natural deposits on the site is considered minimal and the impact of liquefaction would be less than significant (**Class III**).

Lateral Spreading

Liquefaction-induced lateral spreading is defined as the finite, lateral displacement of gently sloping ground as a result of pore pressure build-up or liquefaction in a shallow underlying deposit during an earthquake. Lateral spreading refers to more moderate movements of gently sloping ground than would characterize landslides, which involve large down-slope movements or "flow" of completely broken soils over relatively long distances.

As described by Barlett and Youd (1992a; 1992b), liquefaction-induced lateral spreading occurs on mild slopes of 0.3 to 5 percent underlain by loose sands and a shallow water table. These conditions are frequently found along streams and other waterfronts in recent alluvial or deltaic deposits, as well as in loosely placed, saturated sandy fills. Subsidence typically occurs at the head of a lateral spread with

heaving at the toe. Subsurface infrastructure, such as pipelines, is particularly vulnerable to the effects of lateral spreading, as are streets and other paved areas where misalignments are created.[16]

As noted above, the Project site is not located in an identified liquefaction-prone area within the Point Dume Quadrangle. Accordingly, liquefaction-induced lateral spreading would not be anticipated at the Project site and impacts would be less than significant (**Class III**).

Ground Lurching and Cracking

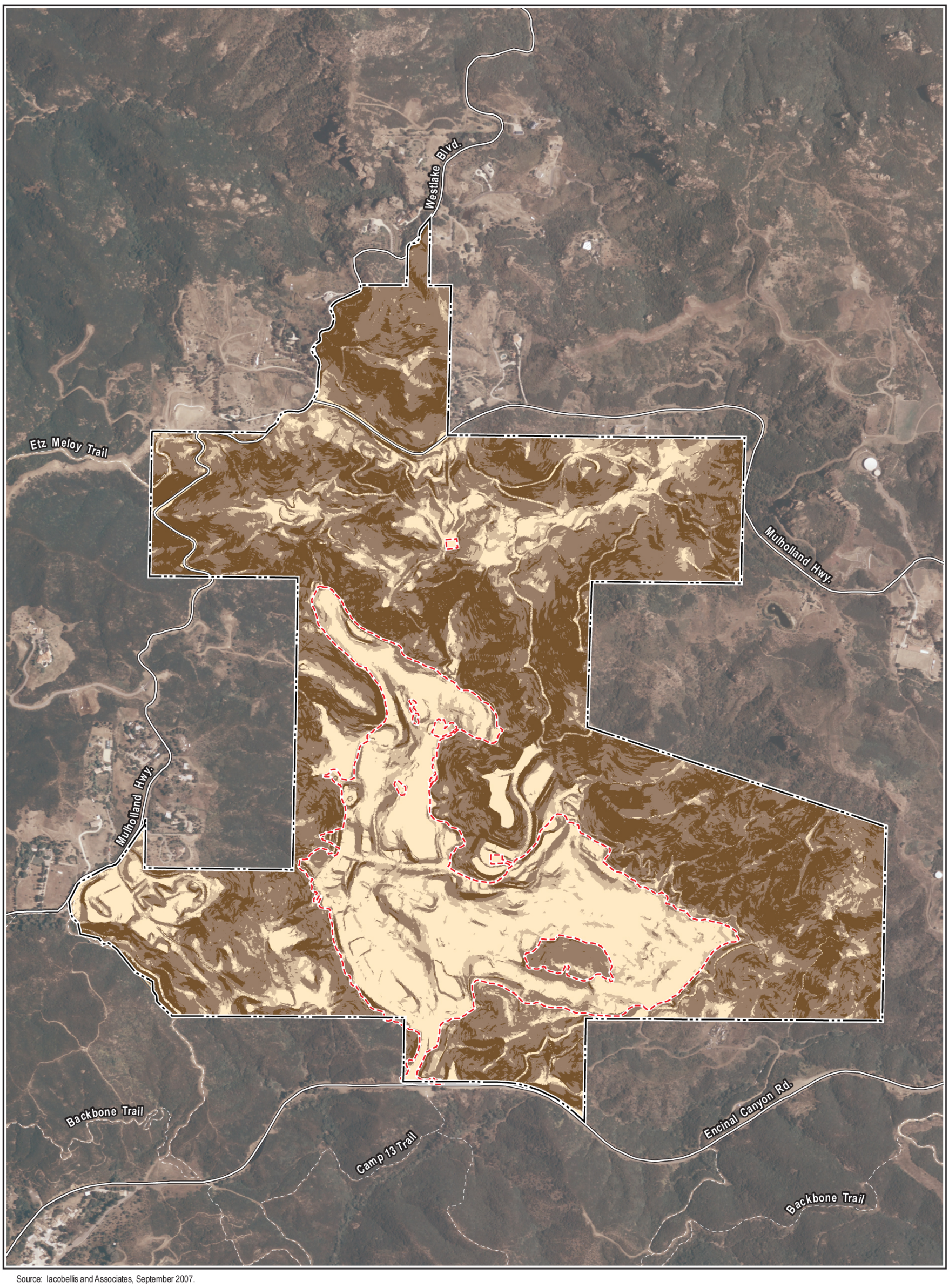
Ground lurching is the horizontal movement of soil, sediments, or fill located on relatively steep embankments or scarps as a result of seismic activity, forming irregular ground surface cracks. The potential for lurching is highest in areas underlain by soft, saturated materials, especially where bordered by steep banks or adjacent hard ground. Lurching could potentially occur as a movement toward the steep slopes on the Project site. However, as part of the Project, soft surficial earth materials with potential for saturation as a result of over-irrigation would be removed and replaced with competent soils that are adequately compacted as required by the recommendations contained in the Geotechnical Investigation (2012). Compliance with all geotechnical recommendations contained in the Project's Geotechnical Investigation and all County-enforced seismic Code requirements would reduce potential hazards to people and structures due to ground lurching and cracking to a less than significant level (**Class III**).

Landslides

Threshold: Would the project expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving landslides?

Landslides can include a wide range of ground movements such as rockfalls, deep slope failures, and shallow debris falls. As noted in Existing Conditions, landslides are abundant in the southern two thirds of the Point Dume Quadrangle where the sedimentary rocks have been deformed by several episodes of folding and faulting. In the past landslide and rockfalls in proximity to the coast have blocked Encinal Canyon Road, Decker Canyon Road, and Mulholland Highway during and after seismic activity or heavy rain. However, relatively few landslides have occurred in the less deformed volcanic terrain in the northern part of the Quadrangle. The development area of the Project site is underlain by very shallow alluvium and undocumented fills spread over such volcanic bedrock. Steep slopes on the Project site that could be susceptible to landslide or rock fall are located well outside the proposed development area, as illustrated in **Figure 5.5-4**. Rock falls could occur in these steeply sloped areas; however, because of the distance between such steep slopes and the Project's development area, landslides, rock falls, and mudflows are unlikely to adversely impact structures or persons within the Project's development area. The Project's Geotechnical Investigation found no evidence of landslide, rock falls or debris falls within the valley area where Project development would occur. Therefore, potential adverse effects associated with landslides would be less than significant (**Class III**).

[16] U.S. Geological Survey, Open File Report 2004-1269 Version 1.0, Liquefaction-Induced Lateral Spreading in Oceano, California During the 2003 San Simeon Earthquake, at http://pubs.usgs.gov/of/2004/1269/ accessed 4/9/13



Source: Iacobellis and Associates, September 2007.

Legend

- Project Boundary
- Limit of Ground Disturbance

Highest	Prevailing slope of 50% and greater.
High	Prevailing slopes from 25%to 49.99%.
Low	Prevailing slopes from 15% to 24.99%.
Least	Prevailing slopes less than 15%.

ENVICOM CORPORATION

Slope Map

0 450 900 Feet

FIGURE 5.5-4

Erosion and Loss of Topsoil

Threshold: Would the project result in substantial soil erosion or the loss of topsoil?

Erosion

Construction Phase: The County's Grading Guidelines and Building Code Appendix J require preparation and implementation of a plan to minimize erosion and related transport of sediment offsite and to protect public and private property from the effects of erosion. The County Department of Public Works requires implementation of temporary Best Management Practices (BMPs) during construction as a means to control erosion of exposed soils due to construction activities. Specific Best Management Practices (BMPs) and statutory requirements to reduce or prevent soil erosion in the course of construction are discussed at length in Section 5.8, Hydrology and Water Quality. These BMPs and code requirements are incorporated into this analysis by reference.

The County's Grading Guidelines list submittal requirements for grading permit applications, including the incorporation of all recommendations included in the soils engineering and geology reports in the grading plans. Additional requirements include incorporation of provisions for storm water flows to prevent erosion and sediment transport onto adjacent properties, adjacent roadways, storm drain systems, and natural drainage courses during the rainy season. County Code Chapter 12.80, *Stormwater and Runoff Pollution Control,* as well as the Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges within the County of Los Angeles (Order No. 01-182) and NPDES General Permit (Construction General Permit) CAS000002 also require implementation of BMPs designed to control erosion during the Project's construction phase.

Specific BMPs for the Project's construction phase would be specified in an approved LSWPPP and would include such measures as gravel bags, silt fences, straw wattles, sediment basins, and soil stabilizers. The County of Los Angeles Building Code (Appendix J – Grading)[17] also includes specific requirements for erosion control, including J101.7 (Storm Water Control Measures), J-110 (Slope Planting and Erosion Control), J110.8.2 (Storm Water Pollution Prevention Plan (SWPPP)), J100.8.3 (Wet Weather Erosion Control Plans (WWECP), J1108.4 (SWPPP – Effect of Non-Compliance), and J111 (National Pollutant Discharge Elimination System (NPDES) Compliance). The Project would comply with all State, federal, and local requirements for erosion control during construction. Compliance with all applicable regulatory requirements would reduce potential construction phase erosion impacts to less than significant (**Class III**).

Operational Phase: The Project would be constructed within the footprint of the existing Malibu Golf Club. Once grading is completed, the golf course would be landscaped, parking lots would be paved with a combination of pervious and impervious pavement, buildings would be constructed, retaining walls would be constructed, if necessary, and pathways would be paved or otherwise stabilized. All constructed slopes would be planted and maintained pursuant to the Project's approved landscape plan as required by County Building Code Appendix J, J110 (Landscape). As noted above, the County Code requires NPDES compliance, including preparation and implementation of a Standard Urban Stormwater Mitigation Plan (SUSMP), which must include provisions for post-construction erosion and sediment control. The 2012 Geotechnical Investigation indicates, given the anticipated level of post-construction ground coverage and soil-stabilizing landscape, post-construction erosion effects would be less than significant (**Class III**).

[17] County of Los Angeles Building Code – Appendix A (Grading)

Loss of Topsoil

Construction Phase: The Project would be constructed within the footprint of the existing Malibu Golf Club. The site would be cleared and grubbed prior to grading and recontouring. Much of the existing parking lot paving would be removed so that it could be replaced with buildings and pervious paving. The existing golf course greens and much of the existing irrigation would be removed either permanently or temporarily to allow placement of a sand cap and construction of buildings. Non-native vegetation would be removed and replaced with native, drought tolerant species. Uncertified fill and incompetent soils, including alluviums, which form much of the topsoil within the development area, would be removed as part of the site preparation required for building construction, disturbed by trenching for utilities, or exposed due to the removal of vegetation. Accordingly, during the construction phase, there is potential for the loss of topsoil. As previously noted, the BMPs would be incorporated into the Project's LSWPPP and Grading Plan, implemented in the course of construction, and adequately maintained until permanent construction is completed, paving is installed, and permanent landscape is installed and established with a minimum of 50 percent coverage.

These same measures, taken to reduce or eliminate erosion impacts during the construction phase, would also retain topsoil, where possible, given the requirements of the Project. Loss of topsoil due to wind-induced erosion would be mitigated through hydroseeding exposed soils, the use of straw blankets, where necessary, and tarping dirt stockpiles (Also see Section 5.2, Air Quality). Conformance to the County's standard regulatory requirements and those imposed by the South Coast Air Quality Management District to reduce erosion caused by wind, noted in Section 5.2, Air Quality, would reduce the Project's impacts regarding loss of topsoil during construction to a less than significant level (**Class III**).

Operational Phase: During the Project's operation phase, topsoil would be restored when replanting occurs. The Project would conform to applicable recommendations for green waste management contained in the County's Green Waste Management Resource Guide for Los Angeles Residents and Businesses (DPW-Environmental Programs Division, 2013) and would implement a green waste program as part of the long term management strategy of the golf course and Project landscape maintenance. Green waste would be gathered and composted on site for reuse as a soil amendment and to mulch exposed ground to avoid both moisture evaporation and loss of soil due to wind or water. Replacement of topsoil as part of the Project's landscape and revegetation plan, the use of effective water conserving irrigation systems as discussed in Section 5.11, Public Utilities, of this DEIR, and the use of the products of ongoing green waste management to provide natural soil cover, would reduce the Project's impacts regarding loss of topsoil during the operational phase to a less than significant level (**Class III**).

Unstable Soils

Threshold: Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

The Regional Water Quality Control Board defines unstable areas as characterized by landslides or unstable soils or by some or all of the following: hummocky topography consisting of rolling bumpy ground, frequent benches, and depressions; short irregular surface drainage that begin and end on a slope; tension cracks and head wall scarps that visibly indicate slumping; slopes that are irregular and may be slightly concave in the upper half and convex in the lower half as a result of previous slope failure; and evidence of impaired ground water movement resulting in local zones of saturation within the soil mass, which is indicated at the surface by ponding with standing water, springs, or patches of wet ground (California Code of Regulations, Title 14, Section 895.1). The Project site is not located in an area that is

subject to liquefaction. That issue and the issues of lateral spreading and on-site landslides have already been addressed under the analysis provided under prior thresholds.

Soil Stability

Many soils present special challenges because they may become unstable due to inherent properties of the soil. These may include: (1) soft soils (weak and compressible fine grained soils containing large amounts of water) that are common in areas adjacent to water bodies or which were previously bays, lagoons, lakes, river courses, or wetlands before being drained; (2) organic soils that contain the decayed remains of vegetation that grow in wetlands that have been drained, which are particularly susceptible to subsidence; (3) expansive soils that swell as they become wet and contract as they dry and are comprised primarily of clay materials that have the ability to absorb large quantities of water; (4) collapsible soils, which are distinguished by their low density found in loess (windblown dust) and earth flows comprised of fine-grained sediment common on alluvial fans that were only rarely wetted due to arid conditions in the areas where they were deposited; and (5) liquefiable soils. [18]

According to the Project's Geotechnical Investigation, artificial fill was encountered in borings to a maximum depth of approximately ten feet below ground surface (bgs) throughout the site's proposed developed area. Native alluvial materials on the site consist of clayey sand that appeared moist and fine to coarse-grained when examined. Bedrock was encountered within each of the borings at depths ranging from five to 27 feet bgs. The bedrock consisted of aphanitic volcanic rock typical of Conejo Volcanics. Perched groundwater was encountered in only one borehole at a depth of 13 beet bgs but is not considered indicative of the actual water table level. Historical records indicate that groundwater below the site occurs in two aquifers: an upper and a lower. The existing wells on the site pump groundwater from the lower aquifer at a depth of 300 to 400 feet. The upper aquifer was estimated to be over 50 feet in depth by CDMG in their geotechnical study (2002).

The presence of soft and compressible near surface soil and relatively shallow bedrock would require the use of remedial grading at the Project site to ensure stable soils that can safely support proposed structures. The Geotechnical Investigation requires the over-excavation and/or re-compaction of all uncertified artificial fill soil, the primary foundation bearing soil, and any bedrock encountered at the planned footing elevations of each new structure. **Table 5.5-4** lists further requirements contained in the Project's Geotechnical Investigation designed to ensure structures constructed as part of the Project rest on competent soils capable of supporting building loading. As noted previously, the County requires the Project's grading plans incorporate all recommendations included in the soils engineering and geology report(s) prepared for the Project. Compliance with the provisions of the County's Building Code would ensure soil stability and result in a less than significant impact (**Class III**).

Consolidation and Settlement

When man-made structures are built over areas that may experience consolidation of more than an inch, structural damage can occur due to the consolidation of soils and subsequent settlement of building foundations. The materials of the underlying shallow seated bedrock on the Project site have a high density and low compressibility, with an expansion index ranging from 28 to 60, depending upon location. As part of the 2012 Geotechnical Investigation, the consolidation characteristics of the native alluvial materials were assessed and recommendations were made regarding removals and replacement with engineered fill to construct engineered building pads.

[18] Holzer, Thomas, *Living with Unstable Ground,* American Geological Institute and U.S. Geological Survey, 2009, at https://profile.usgs.gov/myscience/upload_folder/ci2011Aug0119050042954Unstable%20Ground%20Book%20final%20090407.pdf, accessed 4/10/13

According to the Geotechnical Investigation, settlement would be less than one inch with recommended building loads. Differential settlement between footings would account for approximately one-half of the total potential settlement. Total settlement was determined to be within the tolerances required by the County Building Code. Compliance with the relevant provisions of the County's Building Code and required incorporation of the recommendations of the Project's geologist into the Project's grading plan would reduce the hazard to buildings due to consolidation and settlement to a less than significant level (**Class III**).

Subsidence and Collapse

Subsidence is the sinking or gradual lowering of the earth's surface. Collapse is the sudden lowering of the surface. Both subsidence and collapse can occur in a variety of environments and can result from either natural or manmade causes. Natural geologic causes of subsidence and collapse are basin downwarp, fault movement, subsurface water movement, and sediment compaction. Manmade causes include groundwater pumping, mining, oil and gas production, and surface loading. Of these, overdraft of groundwater accounts for approximately 80 percent of subsidence and collapse in California while the majority of the balance is the result of prior mining or oil and petroleum extraction. Surface loading issues associated with the Project and the potential for sediment compaction already have been addressed under the sub-headings Consolidation and Settlement and Soil Stability. The Project site does not overlay a groundwater basin and is not identified by the USGS as an area subject to subsidence due to groundwater pumping.[19] Neither mining nor gas and oil production have ever taken place on or in the immediate vicinity of the Project site. Accordingly, the manmade or natural causes of subsidence are absent from the Project site, while compliance with existing statutory requirements, including mandatory incorporation of the recommendations of the Project's geotechnical engineer into the Project's grading plans, would address other potential causes of subsidence, reducing the potential impacts associated with subsidence to less than significant (**Class III**).

Indirect Offsite Soils and Slope Stability

There is a potential indirect geological impact on the Project site created by the presence of an active landslide area near the intersection of Encinal Canyon Road at Pacific Coast Highway as illustrated in the landslide hazard map contained in the 2001 Point Dume Quadrangle Seismic Hazard Assessment (CGS 2001). Landslide potential also exists at the mouths of Decker Canyon Road and Kanan Dume Road south of the Project site and along Mulholland Highway north of the site. A significant rockslide occurred along Encinal Canyon Road during the 1994 Northridge Earthquake, blocking the road in one direction from the Project site. Since Encinal Canyon Road is the primary paved access to the site, its blockage as a result of a landslide due to any cause, including but not limited to a seismic event, could have a potentially significant indirect impact on the Project unless other paved access is available. With the Project site, Encinal Canyon Road provides access in two directions.

The existing paved connections from Encinal Canyon Road to Decker Canyon Road via Lechusa Road and also to Kanan Dume Road via Mulholland Highway provide alternate egress routes from the Project site to the southwest and northeast, respectively. While portions of Decker Canyon Road and Kanan Dume Road are, as noted above, susceptible to landslide neither of these roads appeared to be affected by the 1994 Northridge Earthquake. The Encinal Canyon connection to Kanan Dume Road also traverses a portion of Mulholland Highway northeast of the site. While portions of this road also are susceptible to landslide, there is no historic record of blockage due to seismic-induced landslide, rock, or debris falls. Lastly, as Decker Canyon extends north from the connection to Encinal Canyon road, it becomes Westlake Boulevard (State Route 23) within the Conejo Valley, where it makes a connection to the 101

[19] USGS Water Science, *Land Subsidence Map (California),* at http://ga.water.usgs.gov/edu/earthgwlandsubside.html, accessed 5/14/13

Freeway. Kanan Dume Road is also a cross-mountain road, extending north into the Conejo Valley, and making similar connections to the north, as well as connecting to Pacific Coast Highway (PCH) to the south, as illustrated in **Figure 5.5-5.** Simultaneous blockage of all of the several routes to the site by seismically induced landslide, rock slide, or debris flows is highly unlikely and the presence of multiple routes for evacuation of the site or access to the site by emergency vehicles would reduce the potential indirect impacts of off-site landslides to less than significant (**Class III**).

Expansive Soils

Threshold: Would the Project be located on expansive soil, as defined in Table 18-1-B of the California Building Code (1994), creating substantial risks to life or property?

Expansion index testing of select soil samples from the Project site was performed by Sladden Engineering in 2012. As previously noted, the site's expansion indices vary from 28 to 55 and 60, depending upon the location from which the soil sample was taken. Based on these results, the development area of the Project site has a low to medium expansion potential.

The Geotechnical Investigation recommends the removal and/or over-excavation of expansive materials and their replacement with compacted engineered fill. Any residual expansion impacts would be mitigated through the use of appropriately designed footings and slabs.

The County Department of Public Works has issued Guidelines for the design of foundations on expansive soils. These Guidelines require foundation and near building design that satisfy these requirements. Compliance with the recommendations of the Geotechnical Investigation and the provisions of the County Building Code Section 1803.5.3 (Expansive Soils) pursuant to County Information Bulletin P/BC 2011-116 would provide uniform bearing surfaces to support all occupied structures and provide foundations designed to reduce potentially adverse impacts of expansive soils to less than significant (**Class III**).

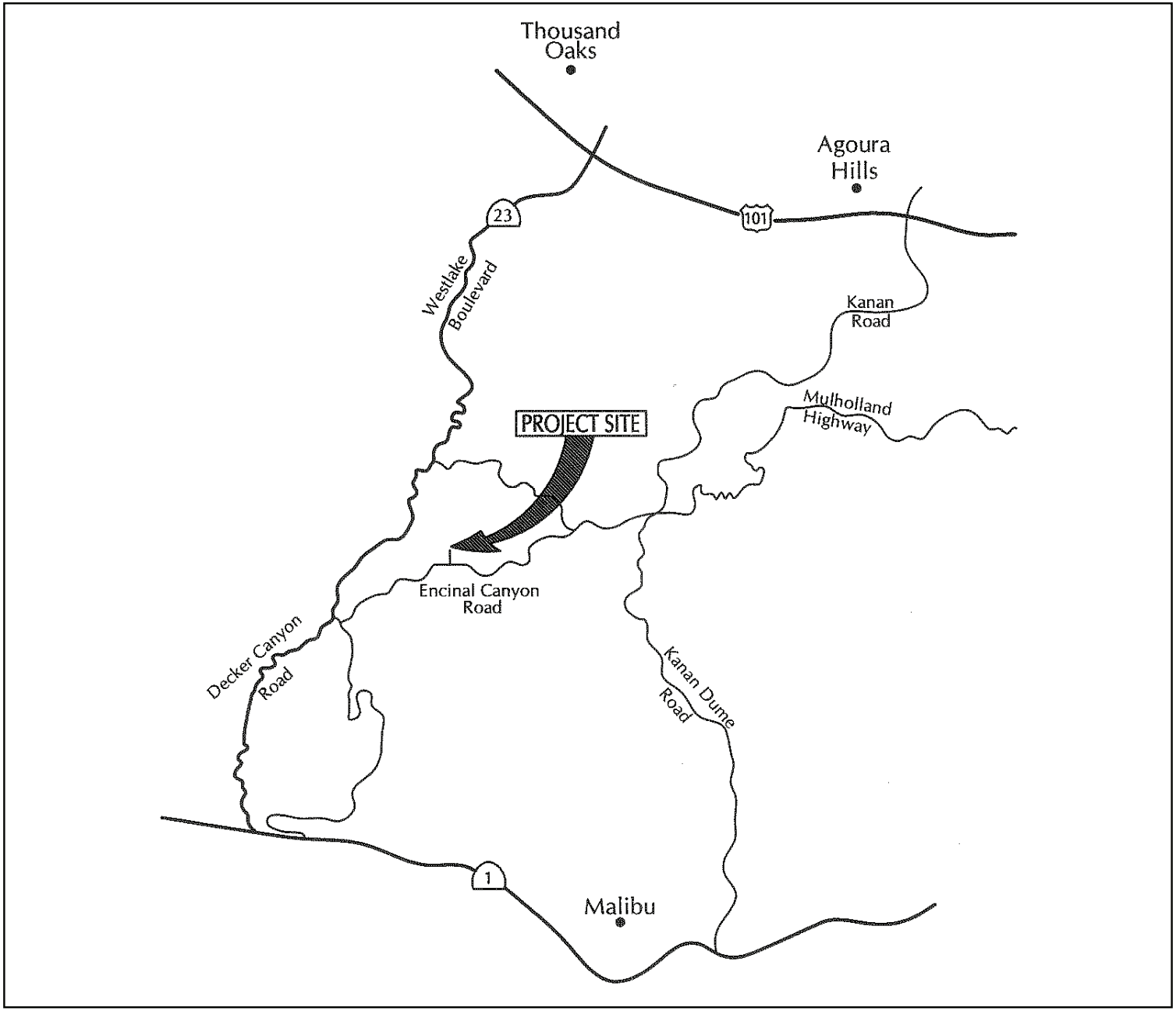
Capacity to Support Onsite Wastewater Treatment Systems

Threshold: Would the Project have soils incapable of adequately supporting the use of onsite wastewater treatment systems where sewers are not available for the disposal of wastewater?

As noted in Existing Conditions, the original Malibu County Club relied on a septic system for waste disposal. The Project would replace the majority of the site's septic system with an onsite wastewater treatment facility that would provide recycled water for use in irrigating the golf course. Only one septic tank would remain in place to serve an existing 900-square foot caretakers cottage near Mulholland Highway. There have been no documented problems with the septic system at the one remaining location. The capacity of the Project's soils to support the use of onsite wastewater treatment systems have already been established in connection with the site's original septic system and would be adequate to support the proposed, more efficient and modern facilities. For these reasons, Project impacts associated with this threshold would be less than significant (**Class III**).

Hillside Management Area Ordinance

Threshold: Would the Project conflict with the Hillside Management Area Ordinance (L.A. County Code, Title 22, § 22.56.215) or hillside design standards in the County General Plan Conservation and Open Space Element.



Source: Associated Transportation Engineers, December 4, 2012.

Site Access

Map Not to Scale

FIGURE 5.5-5

Analysis of the Project's consistency with the County's Hillside Management Area Ordinance and hillside design standards is provided in Section 5.9, Land Use, as part of the Los Angeles County General Plan consistency analysis. As discussed in that section, the Project would not be in conflict with the ordinance or standards regarding hillside development, and as such, impacts related to this threshold would be less than significant (**Class III**).

5.5.4 Cumulative Impacts

Most geologic, geotechnical, and seismic impacts associated with the development of the Project site would be localized and would not directly or indirectly affect offsite areas. Direct impacts to persons and property on the site as a result of exposure to seismic and geologic hazards would be reduced to a less than significant level through the implementation of the recommendations of the Project's geotechnical engineer in the design of buildings, compliance with County Code, and implementation of the BMPs to control construction phase erosion impacts.

There is, however, one potential indirect cumulative impact associated with geotechnical and soils conditions to which Project development may contribute. The Project's location in the Santa Monica Mountains makes it vulnerable in the event that landslides and rock falls impact roads providing access to the Project site. Since development continues in the Santa Monica Mountains, exposure to the hazards of full or partial road closures due to landslides and rock falls is a potentially significant indirect cumulative impact. With the addition of classroom facilities and guest bungalows to the Project site, implementation of the Project would increase the number of people who may be required to use these roads to evacuate or emergency medical personnel who may need to reach the Project site in the event of an earthquake or other cause.

As previously noted, most roads providing access to the Project site traverse areas that are susceptible to landslides, rock falls, and debris flows that have the potential to cause partial or permanent blockage for significant periods of time. Two active slides, which are located on Decker and Encinal Canyon Roads, have been responsible for road blockage absent any seismic inducement. All of the roads providing access to the Project site may be vulnerable to blockage caused by seismically induced landslides, based on the CGS Seismic Hazards Map – Landslides (2001). However, as previously noted, there are multiple routes to and from the Project site from Pacific Coast Highway to the south and from the Conejo Valley to the north. The likelihood of all of these routes being blocked simultaneously by landslide, rock fall, or debris/mud flows is slight. Therefore, while the addition of classrooms and guest bungalows to the Project site would result in an increase in the number of people on the site at any given time, the number of access routes to/from the site in multiple directions would allow Project-generated traffic to safely disburse and provide multiple means of access for emergency personnel. Accordingly, the Project's contribution to cumulative impacts related to landslides would be considered less than cumulatively considerable (**Class III**).

5.5.5 Mitigation Measures

Based on the results of the Sladden Engineering Geotechnical Investigation (2012), the Project is feasible from a geotechnical perspective provided the recommendations contained in the report are incorporated into the design and carried out through construction. The primary geotechnical concerns for design and construction are the presence of relatively shallow bedrock, potentially compressible near surface native soil, and the presence of moderately expansive soils. The County Building Code requires the incorporation of all of the recommendations in the Geotechnical Investigation (and any subsequent recommendations contained in any subsequent Geotechnical Reports or Field Requirements as determined by County Inspectors) into the Project's Grading Plan as a condition of issuance of a grading permit. For this reason, the Geotechnical Investigation recommendations are considered regulatory

requirements that, together with other County Code and other regulatory requirements cited above, would reduce any potentially significant geologic impacts to less than significant. Therefore, no mitigation measures are required.

5.5.6 Residual Impacts

Implementation of the regulatory requirements and recommendations of the Project's Geotechnical Investigation, cited above, would ensure any potentially significant geotechnical or soils-related adverse impacts would be reduced to less than significant levels (**Class III**). Therefore, the Project would not result in any significant unavoidable adverse impacts.

5.6 GREENHOUSE GAS EMISSIONS

This section addresses the Project's impacts on global climate change related to greenhouse gas (GHG) emissions. This evaluation is based on the Project's estimated increase in these emissions relative to current emissions associated with operation of the existing Malibu Golf Club, and the Project's proposed features that would reduce such emissions.

5.6.1 Existing Conditions

Introduction/Background

The accumulation of GHGs in the atmosphere over time is believed to result in climate change. Climate change refers to any significant change in average climatic conditions (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). The Earth's climate has changed many times during the planet's history due to natural conditions, with resulting events ranging from ice ages to long periods of warmth. However, beginning late in the 18th century, human activities associated with the Industrial Revolution also have changed the composition of the atmosphere and therefore very likely are influencing the Earth's climate.[1]

Historical Climate Patterns

Global climatic conditions have changed throughout the Earth's history. Scientists have been able to piece together a picture of the Earth's climate dating back to millions of years ago by analyzing a number of measures of climate from ice cores, boreholes, tree rings, glaciers, pollen residues, and ocean sediments, and by studying changes in the Earth's orbit around the Sun. From these analyses, it is clear the Earth has undergone intervals of warming and cooling.

Earth's temperature depends on the balance between energy entering and leaving the planet's atmospheric system. When incoming energy from the sun passes through the atmosphere, it is absorbed by the Earth and warms the planet. Some of this heat energy is released back into the atmosphere as infrared radiation, where it may pass back into space, cooling the planet, or certain gases in the atmosphere may absorb it before leaving the Earth's atmospheric system. When this heat energy is blocked from escaping into space, heat is retained within Earth's atmospheric system, keeping the planet warmer than if the heat had passed into space. This process is commonly known as the "greenhouse effect", and atmospheric gases that absorb this heat energy are referred to as greenhouse gases (GHGs). These gases are identified and described further below.

In general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes, such as changes in the Earth's orbit, solar activity, volcanic eruptions, or natural changes in atmospheric GHG concentrations. For example, the so-called "Little Ice Age" which occurred between the 17th and 19th centuries may have been partially caused by a low solar activity phase from 1645 to 1715, which coincided with cooler temperatures across most of the planet.[2] Since the Industrial Era began, humans have had an increasing effect on climate, particularly by adding GHGs, including carbon dioxide (CO_2) and other heat-trapping gases to the atmosphere as a byproduct of burning wood and fossil fuels for energy.[3]

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[1] Environmental Protection Agency. http://www.epa.gov/climatechange/science/causes.html and http://www.epa.gov/climatechange/basicinfo.html, accessed September 28, 2012.

[2] Ibid.

[3] United States Environmental Protection Agency (EPA), Causes of Climate Change | Climate Change | US EPA, http://www.epa.gov/climatechange/science/causes.html, accessed September 28, 2012.

The heating or cooling of the Earth's surface due to variations in the amount of solar energy absorbed by the Earth can cause natural changes in atmospheric concentrations of GHGs. Specifically, when global temperatures warm, the oceans release carbon dioxide (CO_2), a common GHG, increasing concentrations of CO_2 in the atmosphere that may amplify the warming by enhancing the greenhouse effect. When temperatures become cooler, the oceans absorb CO_2, which reduces the greenhouse effect and contributes to additional cooling. During the past 800,000 years, with the exception of the past century, CO_2 levels tended to track the glacial cycles. These natural cycles of warming or cooling caused atmospheric CO_2 concentrations to vary within a range of about 180 to 300 parts per million by volume (ppmv). Therefore, during warm interglacial periods, CO_2 levels have been high, and during cool glacial periods, CO_2 levels have been low.

Although natural causes have contributed to changing climate in the past, according to the National Research Council (2006), recent climate changes cannot be explained by natural causes alone. Research indicates that human activities can very likely explain most observed warming since the Industrial Revolution, especially warming since the mid-20th century. [4]

Greenhouse Effect

The Earth's temperature is regulated by a system commonly known as the greenhouse effect. GHGs, primarily water vapor, CO_2, methane (CH_4), and nitrous oxide (N_2O) absorb heat radiated from the Earth's surface. As the atmosphere warms, heat is radiated back to the surface to create the greenhouse effect. The Earth's surface temperature would be about 34 degrees Celsius (°C) (or 61°F) colder than it is now if it were not for the natural heat trapping effect of climate change pollutants like CO_2, CH_4, N_2O, and water vapor.[5] Greenhouse gases (GHG) emitted by human activity are implicated in global climate change, including global warming. Increases in GHG emissions contribute to an increase in the temperature of the Earth's atmosphere by allowing incoming short wavelength visible sunlight to pass through and warm the Earth's surface, but then preventing outgoing long wavelength heat radiation from passing through, thus trapping the heat energy within the atmosphere. Water vapor is the most abundant greenhouse gas. While humans are not significantly increasing its concentration, it contributes to the enhanced greenhouse effect because the warming influence of GHGs leads to a positive water vapor feedback.[6] In the United States, energy-related activities account for the majority of human-generated GHG emissions, mostly in the form of CO_2 emissions from burning fossil fuels for energy. In 2010, electricity generation facilities contributed 34 percent of GHG emissions in the United States, transportation activities contributed 27 percent, and industrial uses contributed 21 percent. Contributions also come from commercial and residential land uses, and agriculture.[7]

Greenhouse Gases

For the purposes of this analysis, GHG emissions are the six gases identified in the California Climate Action Registry (CCAR) General Reporting Protocol, Version 3.1 (January 2009): CO_2, N_2O, CH_4, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). CO_2 is the most common of these gases, however, when comparing equivalent masses, each GHG differs in the ability to trap heat in the atmosphere. Such differences are based on the ability of each gas to directly absorb radiation, the length of time it remains in the atmosphere, chemical transformations that produce other GHGs, or by affecting atmospheric processes that alter the radiative balance of the earth (e.g., affect cloud

[4] Ibid.
[5] California Climate Action Team. Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006.
[6] Environmental Protection Agency. http://www.epa.gov/climatechange/glossary.html#W, accessed September 28, 2012.
[7] Environmental Protection Agency. http://www.epa.gov/climatechange/ghgemissions/sources.html, accessed September 28, 2012.

formation or reflectivity).[8] The relative potential of a GHG to trap atmospheric heat compared to CO_2 is referred to as its global warming potential (GWP). Because of this, GHG emissions are commonly expressed in terms of carbon dioxide equivalents (CO_2e), where CO_2e is calculated by the quantity of each GHG multiplied by its associated GWP factor. The total GHG emissions from individual sources are then determined by summing the CO_2e for each GHG constituent gas, which is generally reported in metric tons (MT) and expressed as metric tons of carbon dioxide equivalents ($MTCO_2e$). Below is a description of each GHG emission as described by the CCAR General Reporting Protocol, including their sources of emissions and GWP.

Carbon Dioxide (CO_2)

Consisting of a single carbon and two oxygen atoms, CO_2 is the most common of the six primary GHG emissions and provides the reference point for the GWP of other gases. Thus, the GWP of CO_2 is equal to one. CO_2 is emitted in a number of ways, including naturally through the carbon cycle, and through human activities, most notably the burning of fossil fuels. CO_2 emissions are also produced as a by-product of various non-energy related industrial activities, including production of metals such as steel, production of mineral products such as cement, and chemical production.

Nitrous Oxide (N_2O)

Consisting of two nitrogen atoms and a single oxygen atom, N_2O possesses a GWP of 310, and is typically generated as a result of soil cultivation practices, particularly the use of commercial and organic fertilizers, fossil fuel combustion, nitric acid production, and biomass burning.

Methane (CH_4)

Consisting of a single carbon atom and four hydrogen atoms CH_4 possesses a GWP of 21, and is produced through the anaerobic decomposition of waste in landfills, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Hydrofluorocarbons (HFCs)

Primarily used as refrigerants, HFCs consist of a class of gases containing hydrogen, fluorine, and carbon. HFCs can slowly leak out of air conditioning systems by permeation through hoses or leakage due to deterioration of seals and fittings. In vehicular air conditioning systems, larger leaks may occur during traffic accidents, maintenance and servicing, and vehicle disposal. HFCs possess a range of high and very high GWP values from 120 to 12,000.

Perfluorocarbons (PFCs)

PFCs consist of a class of gases containing carbon and fluorine, originally introduced as alternatives to ozone depleting substances. They are typically emitted as by-products of industrial and manufacturing processes, and possess GWPs ranging from 5,700 to 11,900.

Sulfur Hexafluoride (SF_6)

SF_6 consists of a single sulfur atom and six fluoride atoms, possessing a very high GWP of 23,900, and primarily used in electrical transmission and distribution systems.

[8] U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2010, (EPA 430-R-12-001), April 15, 2012.

Human Activity and Global Climate Change

The current warming trend is of particular importance because human activities are responsible for almost all of the increase in greenhouse gases in the atmosphere over the last 150 years. Human activities, including burning fossil fuels (which emits CO_2 into the atmosphere) and depleting forests (which absorb CO_2 from the atmosphere), are influencing some of the key factors that regulate climate by changing the composition of the atmosphere.[9]

According to the Intergovernmental Panel on Climate Change (IPCC), global greenhouse gas emissions due to human activities have grown since pre-industrial times, with an increase of 70 percent between 1970 and 2004. Human activities result in emissions of four long-lived greenhouse gas emissions: carbon dioxide, methane, nitrous oxide, and halocarbons (a group of gases containing fluorine, chlorine or bromine). The global atmospheric concentrations of carbon dioxide, methane, and nitrous oxide have increased markedly as a result of human activities since 1750 and now far exceed pre-industrial values, which has been determined from ice cores spanning many thousands of years.

The IPCC asserts most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations. The observed widespread warming of the atmosphere and ocean, together with ice mass loss, support the conclusion it is extremely unlikely global climate change of the past 50 years can be explained without external forcing and very likely it is not due to known natural causes alone.[10]

The California Climate Action Team (CAT)/California Environmental Protection Agency (Cal EPA) March 2006 Report to Governor Arnold Schwarzenegger and the Legislature states end-of-century projected climate change impacts may include Sierra snowpack loss, a rise in sea level, a rise in the number of critically dry years, increased large fire risk, increased electricity demand, a rise in the amount of urban area heat waves and heat-related deaths, decreased forest yields, and an increase in days meteorologically conducive to ozone formation.[11]

Greenhouse Gas Emissions Inventory

In 2010, total worldwide GHG emissions were estimated to be 25,824 Teregrams (Tg)[12] CO_2e, excluding emissions/removals from land use, land use change, and forestry.[13] In 2010, GHG emissions in the U.S. were 6,822 Tg CO_2e.[14] California is a substantial contributor of GHGs, as the State produced 456.8 Tg CO_2e in 2009,[15] which is approximately seven percent of U.S. emissions. The major source of GHG emissions in California is transportation, contributing 37.9 percent of the State's total GHG output in 2009. Electricity generation is the second largest source, contributing approximately 23 percent of the State's greenhouse gas emissions in 2009.[16]

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[9] Ibid.
[10] Intergovernmental Panel on Climate Change. Climate Change 2007: Synthesis Report.
[11] California Climate Action Team. Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006.
[12] One teragram equals 1,000,000 metric tons.
[13] United Nations Framework Convention on Climate Change, GHG total excluding LULUCF, http://unfccc.int/ghg_data/ghg_data_unfccc/time_series_annex_i/items/3841.php, accessed October 1, 2012.
[14] U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2010, (EPA 430-R-12-001), April 15, 2012.
[15] California Environmental Protection Agency Air Resources Board (ARB), Trends in California Greenhouse Gas Emissions for 2000 to 2009, December 2011. http://www.arb.ca.gov/cc/inventory/data/data.htm accessed October 2, 2012.
[16] Ibid.

GHG Emissions From Existing Operations

The Project site is currently occupied by the Malibu Golf Club, which operates a 118-acre golf course and accessory facilities. GHG emissions due to operation of the existing golf course were modeled using the California Emission Estimator Model (CalEEMod) provided by the Southern California Air Quality Management District (SCAQMD), as discussed in Section 5.2, Air Quality. The CalEEMod modeling reported in **Table 5.6-1** is based on the demand for imported water for irrigation of the existing 118-acre golf course as reported by the Preliminary Water System Design Report for Malibu Institute Development (March 29, 2013) provided as Appendix I to this document.

Table 5.6-1
Existing GHG Emissions
(Metric Tons CO_2e)

Consumption Source	Existing (Golf Course)
Area Sources	0
Energy Utilization	0
Mobile Source	0
Solid Waste Generation	49.9
Water Consumption	457.2
Total	507.1

The results of the computer modeling indicate approximately 507.1 metric tons of CO_2e are generated by the existing golf course operations. The CalEEMod output tables are included as Appendix B.

5.6.2 Regulatory Setting

Federal

There are no Federal GHG regulations that would apply directly to the Project. The following Federal initiatives and programs, including voluntary and incentive-based programs, are listed to indicate the level of importance that has been assigned to GHG reductions at the national level.

Current and Near-Term Greenhouse Gas Reduction Initiatives

The Federal government administers a wide array of public-private partnerships to reduce U.S. greenhouse gas intensity. These programs focus on energy efficiency, renewable energy, methane and other non-carbon dioxide gases, agricultural practices, and implementation of technologies to achieve GHG reductions. The EPA implements several voluntary programs that substantially contribute to the reduction of GHGs. By participating in these voluntary energy and climate programs, businesses and organizations reduced over 345 million metric tons of greenhouse gases in 2010.[17] Some examples of these programs include:[18]

- The AgSTAR Program proposes to reduce methane emissions at animal feedlots by promoting the use of biogas recovery systems.

[17] USEPA. What EPA is Doing | Climate Change | US EPA. Accessed at http://www.epa.gov/climatechange/EPAactivities.html. September 28, 2013.
[18] USEPA. EPA Partnership Programs. Accessed at http://www.epa.gov/partners/programs/. April 5, 2013.

- Clean Diesel Campaign (includes Clean Construction USA, Clean Ports USA, Clean School Bus USA, Diesel Retrofit) - The National Clean Diesel Campaign (NCDC) is working to reduce the pollution emitted from diesel engines across the country through the implementation of varied control strategies and the sustained involvement of national, state, and local partners.
- The Energy Star program helps increase the sales of energy efficient products to raise energy efficiency standards for home construction and renovations, and improve the efficiency of commercial and industrial facilities through strategic energy management practices.
- Green Power Partnership - The Green Power Partnership provides advice, tools, and resources to encourage organizations to buy green power from clean, renewable resources such as solar, wind, geothermal, biomass, and low-impact hydro facilities to reduce the environmental impact from electricity use.
- Landfill Methane Outreach Program (LMOP) - This program promotes the capture of landfill gas from decomposing waste, comprised primarily of carbon dioxide and methane, for use as a renewable, green energy source.
- Mobile Air Conditioning Climate Protection Partnership - The program seeks to improve the energy efficiency of new mobile air-conditioning systems and reduce refrigerant leakage to reduce the impact of mobile air conditioning units on the environment.
- Voluntary Aluminum Industrial Partnership - Primary aluminum industry companies work with EPA to improve aluminum production efficiency while reducing perfluorocarbon (PFC) emissions, potent greenhouse gases that remain in the atmosphere for thousands of years.

Climate Change Technology Program

The Federal government established the multi-agency Climate Change Technology Program (CCTP) in February of 2002 to accelerate the development and deployment of key technologies to reduce GHG emissions.

Climate Change Science Program

In February of 2002, the United States government announced a climate change research initiative to focus on key remaining gaps in climate change science. To meet this goal, the Federal, multi-agency Climate Change Science Program (CCSP) was established to investigate natural and human-induced changes in the Earth's global environmental system, to monitor, understand and predict global change, and to provide a sound scientific basis for national and international decision-making. The EPA's primary role in CCSP is evaluating the potential consequences of climate variability and the effects on air quality, water quality, ecosystems and human health in the United States.[19]

Federal Clean Air Act

In April 2007, the U.S. Supreme Court ruled in *Massachusetts v. Environmental Protection Agency* (2007) 549 U.S. 497, that carbon dioxide and other GHGs are pollutants under the Federal Clean Air Act, which the Federal Environmental Protection Agency (US EPA) must regulate if it determines they pose an endangerment to public health or welfare. On April 17, 2009, the US EPA issued a proposed finding that GHGs contribute to air pollution that may endanger public health or welfare. On April 24, 2009, the proposed rule was published in the Federal Register under Docket ID No. EPA-HQ-OAR-2009-0171. The 60-day public comment period on the proposed rule ended June 23, 2009. The US EPA also is authorized by the Clean Air Act to regulate carbon dioxide emissions from new motor vehicles.

[19] Environmental Protection Agency. http://www.epa.gov/climatechange/EPAactivities.html, accessed September 28, 2012.

Federal Corporate Average Fuel Economy Standards

The 2007 Energy Bill mandates improved national standards for fuel economy for passenger vehicles and light trucks. The Federal legislation requires a fleet-wide average of 35 miles per gallon to be achieved by 2020. The National Highway Traffic Safety Administration is directed to phase-in requirements to achieve this goal. The US EPA is responsible for calculating the average fuel economy for each manufacturer.

State

State Assembly Bill 1493

Assembly Bill (AB) 1493, adopted September 2002, requires the development and adoption of regulations to achieve "the maximum feasible reduction of GHGs" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in California. Although setting emission standards on automobiles is solely the responsibility of the US EPA, the Federal Clean Air Act allows California to set State-specific emission standards on automobiles if the state first obtains a waiver from the US EPA. The US EPA granted California that waiver on July 1, 2009. A comparison between the AB 1493 standards and the Federal Corporate Average Fuel Economy Standards was completed by CARB and is available at www.arb.ca.gov/cc/ccms/reports/ab1493_v_cafe_study.pdf. The emission standards become increasingly more stringent through the 2016 model year. California is also committed to further strengthening these standards beginning in 2017 to obtain a 45 percent GHG reduction from 2020 model year vehicles.

California Executive Order S-1-07 (California Low Carbon Fuel Standard)

Executive Order S-1-07, the Low Carbon Fuel Standard (issued on January 18, 2007), requires a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. Regulatory proceedings and implementation of the Low Carbon Fuel Standard have been directed to CARB. The Low Carbon Fuel Standard has been identified by CARB as a discrete early action item in the adopted *Climate Change Scoping Plan*. CARB expects the Low Carbon Fuel Standard to achieve the minimum 10 percent reduction goal, however, many of the early action items outlined in the *Climate Change Scoping Plan* work in tandem with one another. To avoid the potential for double counting emission reductions associated with AB 1493, the *Climate Change Scoping Plan* has modified the aggregate reduction expected from the Low Carbon Fuel Standard to 9.1 percent.

California Executive Order S-3-05

In 2005, Governor Arnold Schwarzenegger issued California Executive Order S-3-05 establishing the following emission targets for California: 1) reduce GHG emissions to 2000 levels by 2010; 2) reduce GHG emissions to 1990 levels (427 MMT CO_2e) by 2020; and 3) reduce GHG emissions to 80 percent below 1990 levels (85 MMT CO_2e) by 2050. Executive Orders are binding on State agencies. Accordingly, S-3-05 will guide State agencies' efforts to control and regulate GHG emissions but will have no direct binding effect on local efforts.

Assembly Bill (AB) 32 - California Global Warming Solutions Action of 2006

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the *California Global Warming Solutions Act of 2006*. AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide greenhouse gas (GHG) emissions. AB 32 requires statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 also includes guidance to institute emission reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions. AB 32 demonstrates

California's commitment to reducing the rate of GHG emissions and the State's associated contribution to climate change, without intent to limit population or economic growth. Although AB 32 did not amend CEQA, it identifies the environmental problems in California caused by global warming (Health and Safety Code, Section 38501a).

California Senate Bill 1368

Senate Bill (SB) 1368, a companion bill to AB 32, requires the California Public Utilities Commission and California Energy Commission to establish GHG emission performance standards for the generation of electricity. These standards also generally will apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32.

Senate Bill (SB) 97

Senate Bill (SB) 97, enacted in 2007, amended CEQA to establish GHG emissions and their effects are prominent environmental issues that require analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency (Resources Agency) guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions by July 1, 2009. On April 13, 2009, OPR submitted to the Resources Agency proposed amendments to the state CEQA Guidelines for GHG emissions. The Natural Resources Agency adopted amendments to the CEQA Guidelines for greenhouse gas emissions that became effective on March 18, 2010. These new CEQA Guidelines provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents.

As an interim step toward development of required guidelines, OPR published a technical advisory entitled, *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act Review*, in June 2008. The technical advisory recommended lead agencies make a good-faith effort, based on available information, to estimate the quantity of GHG emissions that would be generated by a proposed project, and to mitigate the impacts where feasible. OPR acknowledges in this document that the most difficult part of the climate change analysis will be the determination of significance. OPR also asked CARB technical staff to recommend a method for setting thresholds, which would encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the state.

State of California Climate Change Scoping Plan

In October 2008, CARB published its *Climate Change Scoping Plan*[20] (Scoping Plan), which is the State's plan to achieve GHG reductions required by AB 32. The Scoping Plan contains the main strategies California will implement to achieve a reduction of 169 MMT of CO_2e, or approximately 30 percent from the state's projected 2020 emission level of 596 MMT of CO_2e under a business-as-usual scenario. The Scoping Plan states land use planning and urban growth decisions will play an important role in the State's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. CARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The proposed scoping plan was released on October 15, 2008 and approved at the Board hearing on December 12, 2008. In August 2011, the Scoping Plan was re-approved by the Board, and includes the Final Supplement to the Scoping Plan Functional Equivalent Document (FED).

[20] California Air Resources Board, Climate Change Scoping Plan, December 2008.

Senate Bill (SB) 375

SB 375, also known as California's Sustainable Communities Strategy and Climate Protection Act, became effective on January 1, 2009. SB 375 establishes the reduction of GHG emissions as one of the main goals for regional planning. The legislation calls for the creation of regional plans to reduce GHG emissions from vehicle use throughout the state through the integration of transportation, land use, and housing planning by creating Sustainable Community Strategies (SCS). As required by SB 375, CARB developed regional GHG emission reduction targets for each Metropolitan Planning Organization (MPO) to achieve by 2020 and 2035. The MPOs are required to develop a SCS through integrated land use and transportation planning, and demonstrate an ability to attain the proposed reduction targets by 2020 and 2035.

The Southern California Association of Governments (SCAG) is the MPO for Los Angeles County and is responsible for developing the region's SCS. On April 4, 2012, the Regional Council of SCAG adopted its 2012-2035 Regional Transportation Plan (RTP), which contains the region's first SCS. The draft RTP was submitted to CARB, which evaluated the SCS and affirmed the document had demonstrated that, if implemented, the region will achieve a nine percent per capita GHG reduction in 2020, and a 16 percent reduction in 2035. These reductions exceed the 2020 target of eight percent per capita reduction and the 2035 target of 13 percent per capita reduction that the Board established.[21]

2010 California Green Building Standards Code

California's Green Building Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 11) were established to improve public health, safety and general welfare by enhancing building design and construction through the use of building concepts having a reduced negative impact or positive environmental impact. In addition, the standards encourage sustainable construction practices in planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. These standards can reduce statewide GHG emissions because energy efficient and water efficient buildings require less electricity, natural gas, and other fuels for operations. By reducing the demand for electricity, typically generated by burning fossil fuels, on-site natural gas combustion (typically for water heating), and water, which requires energy to treat and convey, the GHG emissions associated with these activities are also reduced. Therefore, increased resource efficiency in buildings results in fewer GHG emissions on a building-by-building basis.

Amendments to the CEQA Guidelines

OPR's recommended Amendments to the CEQA Guidelines for GHGs were adopted by the Resources Agency on December 30, 2009. The Amendments include changes to various portions of the existing CEQA Guidelines. The Amendments add no additional substantive requirements, but instead assist lead agencies in complying with CEQA's existing requirements. Modifications address those issues where analysis of GHG emissions may differ in some respects from more traditional CEQA analysis.

CEQA Guidelines Section 15064.4 was included to assist lead agencies in determining the significance of the impacts of GHGs. Consistent with developing practice, this section urges lead agencies to quantify GHG emissions of projects where possible and includes language necessary to avoid an implication that a "life-cycle" analysis is required. This section also recommends consideration of several other qualitative factors that may be used in the determination of significance. The adopted Amendments do not establish a threshold of significance, but instead lead agencies are called on to establish significance thresholds for

[21] California Air Resources Board (CARB), Technical Evaluation of the Greenhouse Gas Emission Reduction Quantification for the Southern California Association of Governments' SB 375 Sustainable Communities Strategy, May 2012, http://www.arb.ca.gov/cc/sb375/sb375.htm, accessed October 4, 2012.

their respective jurisdictions in which a lead agency may appropriately look to thresholds developed by other public agencies or suggested by other experts, so long as any threshold chosen is supported by substantial evidence. In addition, two questions relating to the effects of GHGs were added to Appendix G of the CEQA Guidelines and have been used by the County in drafting its significance thresholds.

Local

South Coast Air Quality Management District

On April 6, 1990, the South Coast Air Quality Management District (SCAQMD) adopted a "Policy on Global Warming and Stratospheric Ozone Depletion". The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan. In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- Phase out the use and corresponding emissions of chlorofluorocarbons, methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995;
- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons by the year 2000;
- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and
- Support the adoption of a California GHG emission reduction goal.

SCAQMD, however, has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects) and has formed a GHG Significance Threshold Working Group to further evaluate potential GHG significance thresholds.[22]

County of Los Angeles Green Building Ordinances

On November 18, 2008, the Los Angeles County Board of Supervisors adopted the Green Building Ordinance, which added Part 20 of Chapter 22 to the Los Angeles County Code to establish green building development standards for new projects. The following information summarizes portions of the ordinance that would directly or indirectly result in GHG reductions.[23]

The purpose of the Green Building Ordinance is to conserve water, energy, and natural resources; divert waste from landfills; minimize impacts to existing infrastructure; and promote a healthier environment. Some of the mandatory requirements for all new projects would include consuming at least 15 percent less energy than permitted by the 2005 California Energy Efficiency Standards, covering 75 percent of landscaped areas with drought-tolerant species, and recycling and/or salvaging for reuse a minimum of 65 percent of non-hazardous construction and demolition debris by weight. For building permit applications submitted on or after January 1, 2010, County of L.A. Green Building Standards would apply, as well as GreenPoint Rated™ (GPR), California Green Builder (CGB), and/or Leadership in Energy and Environmental Design Green Building Rating System (LEED ™) standards, or equivalent as determined by the Department of Public Works. GPR is a green building system for residential construction, developed and administered by Build It Green™. CGB is a green building rating system for residential construction, developed by the California Building Industry Association. LEED ™ is a system

[22] GHGs Significance Thresholds, www.aqmd.gov/ceqa/handbook/GHG/GHG.html, accessed December 21, 2010.
[23] County of Los Angeles Department of Regional Planning Green Building Program website, http://planning.lacounty.gov/view/green_building_program, accessed October 4, 2012.

established by the United States Green Building Council as an independent means to verify the sustainable qualities of different building types.

In 2010, in response to the passage of CALGreen (2010 California Green Building Standards Code), the Board of Supervisors adopted the Los Angeles County Green Building Standards Code (Title 31). County staff also recommended a comprehensive revision to Title 22 and amendments to Title 31, which included an update to the Green Building Program Technical Manual. These revisions are currently under development, and are intended to provide clarity for the development community, ensure consistency with the State and other local agencies, and advance sustainable construction standards in the County.

County staff will present its proposal for revising Title 22 to the Regional Planning Commission in 2013. Specifically, staff will recommend that the Drought Tolerant Landscaping requirements of Title 22 be repealed and replaced with amendments to Title 31 (Green Building Standards Code); and that, with the exception of the tree planting requirements, all provisions of the Green Building Ordinance be repealed from Title 22 and replaced with amendments to Title 31.

5.6.3 Thresholds of Significance

In response to the requirements of SB 97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. In March 2010, these new guidelines became state law, codified as part of Title 14 of the California Code of Regulations. The CEQA Appendix G guidelines were modified to include GHG analysis as a required analysis element.

According to Appendix G of the CEQA Guidelines and the County's Environmental Checklist Form (Initial Study), the Project would have a significant impact if it would:

- Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment;
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

CEQA Guidelines Section 15064.4 specifies how significance of GHG emissions is to be evaluated. The evaluation process contains three components: 1) quantifying project-related GHG emissions; 2) determining significance of those emissions; and 3) specifying any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. The CEQA Guidelines allow the lead agency to "select the model or methodology it considers most appropriate." The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in analysis of the Project.

The significance of those emissions then must be evaluated. The selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The CEQA Guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008, the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary

source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO_2e per year. In September 2010, the Working Group released revisions that recommended a threshold of 3,000 MT/year CO_2e for all land use types. Although this screening value has not been formally adopted, the 3,000 MT/year recommendation has been used as a guideline for this analysis, since the Project would not include components that are characteristic of "industrial" land uses.

5.6.4 Project Impacts

Threshold: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction Activity GHG Emissions

During construction activities, the Project would result in GHG emissions from the burning of fossil fuels due to the use of power equipment. The emissions resulting from the Project were calculated using the California Emission Estimator Model (CalEEMod) provided by the Southern California Air Quality Management District (SCAQMD), as discussed in Section 5.2, Air Quality.

The construction build-out timetable for the Project is estimated by CalEEMod to be approximately four years from approval of the Project by the Board of Supervisors. The annual CO_2e emissions predicted by CalEEMod to be generated during Project construction are provided in Appendix B, and summarized in **Table 5.6-2**. Appendix B also reports Daily emissions that represent the maximum emissions from the peak activity expected to occur within a given year. The reported annual emissions are based on an average, as construction activities would not generate emissions every day within a given year, and as peak daily activity would only occur for a limited number of days within the year.

Table 5.6-2
Construction GHG Emissions

Year	GHG Emissions MT/year CO_2e [a]
2014	812.9
2015	525.3
2016	482.3
2017	11.2
Total	**1,831.6**
SCAQMD Threshold	**3,000**

Source: CalEEMod (output provided in Appendix B)
[a] Reported in Metric Tons CO_2e per year.

In determining a project's GHG significance from construction activities, it is the policy of SCAQMD to amortize emissions over a 30-year lifetime. The Project's total CO_2e emissions of 1,831.6 MT from construction activities, which is below the significance threshold of 3,000 MT/year, would result in an amortized amount of 61.1 MT of CO_2e per year. Therefore, Global Climate Change impacts from construction of the Project would be less than significant (**Class III**).

Project Operational GHG Emissions

Operational GHG emissions were calculated for the Project using CalEEMod. The CalEEMod output provided in Appendix B includes daily and annual estimates. The daily estimates are the maximum

emissions expected from peak activity that may occur within a given year, while the annual estimates are adjusted for seasonal variations throughout the year. Two scenarios were modeled to calculate CO_2e emissions with no Project proposed design features applied, as shown in **Table 5.6-3**, and with Project proposed design features incorporated as shown in **Table 5.6-4**. The Project design features that would achieve the reduction in emissions as shown in Table 5.6-4 are:

- Utilize gas hearths rather than wood burning fireplaces in bungalows;
- Install photovoltaic panels over parking lot shade structures and some Project rooftops capable of reducing demand for electricity generated off-site;
- Use reclaimed water for a portion of golf course irrigation; and
- Install smart irrigation systems for the golf course capable or reducing water consumption by 35 percent.

Table 5.6-3
Operational GHG Emissions (No Project Proposed Measures)

Emission Source	Annual Emissions MT/year CO_2e [a]
Area Sources	30.2
Energy Utilization	1,315.5
Mobile Source	1,294.4
Solid Waste Generation	102.3
Water Consumption[b]	536.6
Annualized Construction	61.1
Total	**3,338.1**

Source: CalEEMod (output provided in Appendix B)
[a] Reported in Metric Tons CO_2e per year.
[b] Water consumption does not consider net reduction from existing golf course irrigation.

Table 5.6-4
Operational GHG Emissions (With Project Proposed Measures)

Emission Source	Annual Emissions MT/year CO_2e [a]
Area Sources	27.1
Energy Utilization[b]	942.3
Mobile Source	1,294.4
Solid Waste Generation	102.3
Water Consumption[c]	279.0
Annualized Construction	61.1
Total	**2,706.2**

Source: CalEEMod (output provided in Appendix B)
[a] Reported in Metric Tons CO_2e per year.
[b] Conservatively assumes 50 percent of electricity needs will be met by onsite generation, although proposed solar panels could supply 75-100 percent of the Project electricity needs.
[c] Water consumption does not consider net reduction from existing golf course irrigation.

As shown in Table 5.6-3, total Project GHG emissions are less than the recommended SCAQMD significance threshold of 3,000 CO_2e MT/year with the application of Project design features proposed by the Applicant. Project emissions would be expected to be even less than that reported in Table 5.6-4 as the Project is seeking LEED™ Platinum certification or equivalent, which would require substantial energy use reductions relative to County requirements and those modeled in the CalEEMod report.

The CalEEMod modeling reported in the above tables considered the proposed 107-acre remodeled golf course as a new use. However, as discussed above under existing conditions, the Project site contains a fully-operational 118-acre golf course. To accurately calculate net new Project impacts, this existing use was modeled separately in CalEEMod. As the existing golf course does not contain water efficiency features, such as the modern irrigation system and the use of reclaimed water, those features were not applied to the estimation of GHG emissions under existing conditions. The GHG emissions associated with the existing golf course are provided in **Table 5.6-5**, as well as the net GHG emissions for the Project as calculated by subtracting the existing emissions from those of the proposed uses.

Table 5.6-5
Net Operational Emissions (MT/year CO_2e)

Emission Source	Existing Use Golf Course	Proposed Uses[a] without Project Design Features	Net Project Impact without Project Design Features	Proposed Uses[a] with Project Design Features	Net Project Impact with Project Design Features
Area Sources	0	30.2	30.2	27.1	27.1
Energy Utilization	0	1,315.5	1,315.5	942.3	942.3
Mobile Source	0	1,294.4	1,294.4	1,294.4	1,294.4
Solid Waste Generation	49.9	102.3	52.4	102.3	52.4
Water Consumption	457.2	536.6	79.4	279.0	-178.2
Annualized Construction	-	61.1	61.1	61.1	61.1
Total	507.1	3,338.1	**2,833**	2,706.2	**2,199.1**

[a] educational facility, bungalows, support facilities, club house and restaurant and 107-acre golf course

Table 5.6-5 shows Project GHG emissions on a net basis. When current GHG emissions from the existing golf course use are considered, the Project-related net increase would be 2,833 MT CO_2e/year, and less than 2,200 MT CO_2e/year with design features proposed to improve irrigation efficiency, which would be below the threshold of significance. Project GHG emissions on a net basis would be expected to be even less than that reported in Table 5.6-5 as the Project is seeking LEED™ Platinum certification or equivalent, which would require substantial energy use reductions relative to County requirements and those modeled in the CalEEMod report. Therefore, GHG impacts from operation of the Project are considered less than significant (**Class III**).

Threshold: Would the Project conflict with an applicable plan, policy, or regulation adopted for the purposed of reducing the emissions of greenhouse gases?

Additional Project design features have been included with the proposed facilities to achieve greater energy efficiency and reduce water use, which would reduce the Project's GHG emissions. These additional reductions cannot be modeled in the existing version of CalEEMod, however, these design features are noted below and will further reduce GHG emissions associated with the use of electricity, gas, and water:

- Proposed structures would incorporate sustainable and green design with the goal of achieving LEED™ Platinum certification (or equivalent) for all buildings on the property;
- Install green roofs on many of the Project buildings;
- Use highly efficient geothermal HVAC equipment;
- Install photovoltaic solar panels atop proposed parking lot shade structures and some rooftops with the goal of generating electricity onsite from a renewable energy source to meet the majority of the Project's electricity demands;
- Replace existing outdoor overhead parking lot lighting with new lighting complying with the County's Rural Outdoor Lighting District Ordinance that would limit wattage and hours of operation;
- Provide charging stations for electric vehicles;
- Provide pedestrian or electric cart paths for internal circulation onsite without use of private guest vehicles;
- Provide a shuttle service to area airports to transport overnight guests;
- Incorporate a solid waste recycling program as part of operations;
- Provide an on-site wastewater treatment/water recycling system with 100 percent of effluent meeting standards for reuse as irrigation for the remodeled golf course; and
- Use of drip irrigation systems where feasible.

By providing design features such as those listed above to increase efficiency and reduce the Project's GHG emissions, the Project would not conflict with the County's Green Building Ordinance, the anticipated County Framework Plan, the State's Green Building Code, or the GHG reduction goals of AB 32. As such, impacts related to potential conflicts with an applicable plan, policy, or regulation adopted for the purposed of reducing the emissions of greenhouse gases is less than significant (**Class III**).

5.6.5 Cumulative Impacts

Given that global climate would not be affected adversely by the emission of GHGs by a single project, potential GHG impacts on global climate are the result of the increased accumulation of GHGs in the atmosphere from all sources on a worldwide scale. As such, the Project-specific significance thresholds discussed above have been established to provide an appropriate metric by which to determine whether an individual project's GHG emissions would be considered a considerable contribution to global impacts, or significantly contribute to statewide emissions such that the goals of AB32 are not achieved. As determined in the above discussion of Project impacts, based on significance thresholds provided by SCAQMD, the Project would not result in a cumulatively considerable contribution to global climate change impacts, and proposed efficiency features listed above in Section 5.6.4 would further reduce GHG emissions. Project features that would reduce GHG emissions include:

- Installation of drought-resistant landscaping and turf, along with more efficient irrigation controls, to reduce irrigation water demand by 35 percent compared to existing conditions;
- Provision of reclaimed water for irrigation;
- Construction of all buildings onsite with the goal of achieving LEED™ Platinum or equivalent for energy efficiency;
- Installation of solar panels for electricity generation with the goal of providing the majority of the Project's electricity needs with renewable energy produced onsite;

- Provision of a centralized parking area and a clustered development area with interconnected paths providing access between each Project component by foot or electric cart; and
- Provision of a shuttle service for guest transport to reduce the number of vehicles accessing the site.

As such, the Project's cumulative impacts related to GHG emissions would be less than significant (**Class III**).

5.6.6 Mitigation Measures

The Project's impacts would be less than significant. Therefore, mitigation measures are not required.

5.6.7 Residual Impacts

The Project's impacts would be less than significant prior to mitigation. Therefore residual impacts would be less than significant (**Class III**).

5.7 HAZARDS AND HAZARDOUS MATERIALS

This section describes the potential presence of and risk of exposure to hazardous materials at the Project site. The information presented in this section pertaining to hazardous materials at the site is based primarily on an Environmental Site Assessment Information Update (November 5, 2012) for the Project site provided by E2 Environmental, Inc. The document has been provided as an update of the findings discussed in an E2-authored American Society for Testing and Materials (ASTM)-compliant, Phase I Environmental Site Assessment Report (Phase I ESA) dated January 13, 2006 for the Project site. The 2012 Information Update also assessed two structures that were not a part of the 2006 Phase I ESA (two residences within the Project site along Mulholland Highway). The 2006 Phase I ESA and the 2012 update are included as Appendix F.

5.7.1 Existing Conditions

Hazardous Materials

The term "hazardous material" refers to hazardous substances and hazardous waste. A material is identified as "hazardous" if it appears on a list of hazardous materials prepared by a federal, State, or local regulatory agency or if it has characteristics defined as hazardous by such an agency. A "hazardous waste" is a "solid waste" that exhibits toxic or hazardous characteristics. The United States Environmental Protection Agency (EPA) has defined the term "solid waste" to include many types of discarded materials including any gaseous, liquid, semi-liquid, or solid material, which is discarded or has served its intended purpose, unless the material is specifically excluded from regulation. Such materials are considered waste whether they are discarded, reused, recycled, or reclaimed. The EPA classifies a material as hazardous if it has one or more of the following characteristics at specific thresholds: ignitability, corrosivity, reactivity, and/or toxicity.

To update the 2006 Phase I ESA a search of various databases was conducted to help identify environmental conditions at the Project site and adjoining properties that would indicate the presence, or likely presence, of hazardous substances or petroleum products that have been discharged on or within the Project site, potentially impacting soil, groundwater, or surface waters. A representative of E2 Environmental, Inc. conducted a site visit on September 26, 2012 to identify potential areas of concern and changes in the use of the Project site since the 2006 Phase I ESA. The site visit included interviews and submittal of a questionnaire to appropriate site personnel (Malibu Golf Club employees or other personnel deemed appropriate) regarding recent (since 2006) site activities that would indicate the existence of known or suspected "recognized environmental conditions (RECs)" as defined by ASTM.

Historical Land Uses

The Malibu Golf Club currently occupies the Project site and features an 18-hole golf course and clubhouse constructed in the early 1970s. Other land uses on the Project site include an electrical transmission line suspended from steel towers that traverses the eastern portion of the Project site, a small structure constructed in the 1920s that currently functions as a caretaker's residence for the golf course, and a 1920s-era residence, which may have been used in the past as a private hunting lodge but is currently abandoned and in a state of disrepair. Prior to construction of the golf course the lower lying areas of the Project site contained a small reservoir along the Trancas Canyon Creek stream channel that may have been associated with the operations of the private hunting lodge.

The Project site topographical contours have been altered by prior grading activities that are most prominently evident on graded slopes adjacent to the west of Trancas Lakes Drive. There is no indication

of mineral extraction activities or that oil or gas production has occurred on the Project site or in the immediate vicinity.

Site Reconnaissance

Site reconnaissance was conducted on September 26, 2012 by E2 Environmental, Inc. to observe existing site conditions and ascertain the presence of physical evidence that would indicate a recognized environmentally hazardous condition on the Project site. The site was inspected for the presence of visual and/or olfactory indications of contamination, distressed vegetation, petroleum-hydrocarbon staining, waste drums, illegal dumping, or improper waste storage or handling. At the time of the field investigation staining was observed on top of and down the sides of a diesel fuel aboveground storage tank (AST). Storage drums containing used oil and grease were provided secondary containment and a spill barrier and spill kit was observed in a shed where pesticides and herbicides were stored.

Existing Structures

Structures associated with the existing golf course include the clubhouse, located in the southwest portion of the Project site, and the caretaker's residence, located in the northwestern portion of the Project site. Chemicals or hazardous materials are not used within these buildings, with the exception of standard household-type cleaning chemicals and basic janitorial supplies. The maintenance facilities associated with the operation and upkeep of the golf course contain used motor oil and other lubricants used to maintain motorized vehicles and mechanical equipment as well as pesticides and herbicides used to maintain the turf and landscaping of the golf course.

Based on the original date of construction of the on-site buildings, asbestos containing materials (ACMs) may have been used in their construction and may remain present at the site. Asbestos is a naturally occurring fibrous material that has been mined for its useful thermal properties and tensile strength and was used in many commercial products, particularly building materials, manufactured from the 1940s until the 1970s. ACMs can include building materials such as spray acoustic ceilings, acoustic tiles, various plasters, duct wrap, paper backing of linoleum, non-bituminous roofing felt, wallboard, joint compound (joint "mud"), and thermal insulation for pipes and boilers. The South Coast Air Quality Management District (SCAQMD) defines asbestos containing waste material (ACWM) as, "any waste that includes, but is not limited to, asbestos containing material (ACM) which is friable, has become friable, or has a high probability of becoming friable, …or waste generated from its disturbance (i.e. contaminated plastic sheeting, clothing, and cleanup equipment)."

Asbestos is a known carcinogen and there is no known threshold level of exposure at which adverse health effects are not anticipated. The US EPA has identified asbestos as a hazardous air pollutant pursuant to Section 12 of the Federal Clean Air Act. Additionally, the California Air Resources Board (CARB) has identified asbestos as a Toxic Air Contaminant (TAC). There is a potential for exposure when the ACM becomes damaged to the extent asbestos fibers become airborne and are inhaled. If inhaled, asbestos fibers can result in serious health problems. Applicable regulations pertaining to the removal or disturbance of ACMs are described below under the Regulatory Framework section.

Based on the original date of construction of the on-site buildings there is also the potential for the presence of paints and coatings with detectable or elevated concentrations of lead. Coatings containing any detectable lead are regulated through the California Code of Regulations, Title 8, Section 1532.1 (*Lead in Construction*). Building components and fixtures with a potential for lead-containing coatings include, but are not limited to, walls, windows, doors, window/door jambs, railings, poles, parking lot striping, and heating, ventilation, and air conditioning (HVAC) equipment. Lead is a naturally occurring element, which can result in poisoning when consumed or inhaled. Lead poisoning can cause anemia and

damage to the brain and nervous system, particularly in children. Deterioration, damage and disturbance of paints and coatings containing lead can result in hazardous exposure. Applicable regulations pertaining to the removal or disturbance of lead-containing paints and coatings are described below under Regulatory Framework.

Utilities Observed

SCE overhead power lines were observed along the eastern portion of the Project site. A pole-mounted electrical transformer was observed near the caretaker's residence, however, no staining was observed on the transformer or around the pole. Therefore, polychlorinated biphenyls (PCB)[1] releases related to this item are not suspected.

Database Records Review for Site and Neighboring Properties

E2 Environmental, Inc. reviewed a regulatory database report provided by E2 personnel and Environmental Data Resources, Inc. (EDR) to identify recognized environmental concerns in connection with the Project site.

Project Site

The EDR regulatory database report was consistent with the 2006 Phase I ESA, which reported that the Project site was listed on only the HAZNET database for the handling and disposal of "Unspecified oil-containing waste." HAZNET is a hazardous waste information system that extracts data from the copies of hazardous waste manifests received each year by the California Department of Toxic Substances Control (DTSC).

E2 Environmental, Inc. staff records search reported finding a *GeoTracker – Water Discharge Requirements (WDR) – Open Case 12/21/2012* regarding the Project site. *GeoTracker* is a website operated by the Regional Water Quality Control Board (RWQCB) that manages data on sites that impact groundwater. The following documents were found on *GeoTracker*:

- Application/Report of Waste Discharge General Information Form for Waste Discharge Requirements of National Pollutant Discharge Elimination System (NPDES) Permit dated November 1, 2011; and
- California Regional Water Quality Control Board (CRWQCB) - Los Angeles Region letter dated March 15, 2012, and titled "Incomplete Application for Waste Discharge Requirements – Malibu Associates, LLC, The Malibu Institute, 901 Encinal Canyon Road, Malibu, California (File No. 11-199).

These documents are applications submitted to the RWQCB regarding the onsite wastewater recycling system proposed as part of the Project. Additionally, a review of E2 Environmental's own records found information related to the water quality and sediment characterization of the site's ponds from samples tested in 2006. These samples were analyzed for pesticides, herbicides, metals, PCBs, coliform, and a number of parameters designed to characterize general water quality. A summary of the analysis concluded:

- Water Quality – No pesticides, herbicides, or PCBs were detected at concentrations above laboratory reporting limits. Coliform detections were below recommended levels for recreational

[1] PCBs are a probable human carcinogen widely used in electrical transformer cooling oils. The US EPA banned the manufacture and sale of PCB-containing transformers in 1976.

use and typical for the environment. Nitrogen and phosphate levels were above conditional use permit limits but were within historical results for the site. The report states: "If overfertilization of the golf course were occurring, these levels would probably be much higher."

- Pond Sediment Results – No pesticides, herbicides, or PCBs were detected at concentrations above laboratory reporting limits. Coliform detections were below recommended levels for recreational use and typical for the environment. Total metal results were all below the Title 22 limits for classifying a material as a hazardous waste.

Neighboring Properties

Adjoining/surrounding sites were not identified in the 2012 search of records by EDR. However, in the 2006 records search report obtained for the 2006 Phase I ESA seven listings were found associated with 427 S. Encinal Canyon Road and 433 S. Encinal Canyon Road. Both of these addresses are associated with the Camp Miller and Camp Kilpatrick juvenile detention facilities. Based on the reported operations at those facilities, the regulatory status of a hazardous materials abatement action identified at the Camp Kilpatrick facility (case closed), and/or the distance between the camps and the Project site the neighboring properties were determined not to present an environmental concern to the Project site.

5.7.2 Regulatory Framework

Federal

Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act (SARA), 42 U.S.C. Section 11001, *et seq*., amended the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, 42 U.S.C. Section 9601, *et. seq*.) on October 17, 1986. SARA reflected EPA's experience in administering the complex Superfund program during its first six years and made several important changes and additions to the program. SARA also required the EPA to revise the Hazard Ranking System to ensure it accurately assessed the relative degree of risk to human health and the environment posed by uncontrolled hazardous waste sites that may be placed on the National Priorities List.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901, *et seq*., gave the US EPA authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous wastes.

The 1986 amendments to RCRA enabled the US EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. RCRA focuses on active and future facilities. However, once hazardous materials have been released to the environment, they are deemed a waste as soon as the medium they have impacted is disturbed or moved. Therefore, contaminated soil can be regulated under RCRA. The California Department of Toxic Substance Control implements RCRA in California through Unified Program Agencies. In Los Angeles County, the Unified Program Agency is the Los Angeles County Fire Department.

National Emission Standards for Hazardous Air Pollutants (NESHAPs)

In cases where the presence of asbestos-containing materials and lead-based paints is likely, State and Federal standards are applicable. EPA Guidance Document 340/1-92-013 "A Guide to Normal Demolition Practices under the Asbestos NESHAPs" should be referred to prior to initiation of a

demolition project. Work practices described in the guidance document generally involve removing all asbestos-containing materials, adequately wetting all regulated asbestos-containing materials, sealing the material in leak tight containers and disposing of the asbestos-containing waste material as expediently as practicable, as the regulation explains in greater detail.

Lead Exposure in Construction Interim Final Rule

On June 3, 1993, Federal-Occupational Safety and Health Administration (OSHA) implemented 29 Code of Federal Regulations (CFR) Part 1926.62 "Lead Exposure in Construction Interim Final Rule." California subsequently adopted 29 CFR Part 1926.62 and incorporated it into its own standard Title 8 Code of California Regulations (CCR) Section 1532.1. The lead standards apply to all construction work in which lead is present in any amount. "Construction work" is defined as work involving construction, demolition, alteration, repair, painting, or decorating. The regulations require employers to implement stringent employee protection provisions, such as respiratory protection, biological monitoring (blood lead levels), training, and hygiene facilities, even prior to establishing exposure levels. Once an employer has conducted an initial exposure assessment, and depending upon the results of the assessment, changes can be made in the level of personal protective equipment necessary, and the frequency of air and biological monitoring (blood lead levels) can be altered.

Toxic Substances Control Act

The Toxic Substances Control Action of 1976 banned the manufacture, processing, distribution, and use of PCBs in totally enclosed systems. In 1976, the US EPA banned the manufacture and sale of PCB-containing transformers. Prior to this date, transformers were frequently filled with a dielectric fluid containing PCB-laden oil. By 1985, the US EPA required that commercial property owners with transformers containing more than 500 parts per million (ppm) PCBs must register the transformer with the local fire department, provide exterior labeling, and remove combustible materials within 5.0 meters of the transformer (40 CFR Part 761.30: "Fire Rule"). The EPA Regional 9 PCB Program regulates remediation of PCBs in several states, including California.

State

California Office of Emergency Services

The California Office of Emergency Services coordinates the emergency response to an accidental release of acutely/extremely hazardous materials.

California Department of Toxic Substance Control

The California Department of Toxic Substance Control implements RCRA in California through Unified Program Agencies. The hazardous waste regulations are contained in California Code of Regulations (CCR) Title 22, Division 4.5.

California Occupational Safety and Health Act (Cal/OSHA)

Cal/OSHA was enacted in 1973 to protect workers and the public from safety hazards and to enforce California laws and regulations pertaining to workplace safety and health. Workplace safety is the prime responsibility of Cal/OSHA whether protecting workers who may handle hazardous material at an industrial site or protecting certified personnel responsible for remediation of hazardous substances. Title 8 of the CCR, Sections 337-340, requires employers to monitor worker exposure levels to listed hazardous materials and to notify workers of exposure. Regulations stipulate the requirements for injury and illness prevention programs, proper equipment and use procedures, medical exams and training requirements, and reporting requirements.

California Regional Water Quality Control Board – Los Angeles Region

The Regional Water Quality Control Board (RWQCB) and Los Angeles County Fire Department's Health Hazardous Materials Division, Site Mitigation Unit (SMU), enforce Federal and State site remediation regulations. The SMU is the lead agency for the area and has instituted a Site Mitigation Program responsible for the supervision of cleanup at sites located throughout the County. The County will grant closure of an impacted site when confirmatory samples of soil and groundwater reveal that levels of contaminants are below the standards set by the SMU and the RWQCB.

Local

County of Los Angeles General Plan

The County of Los Angeles General Plan Safety Element provides Goals and Policies to address development in areas subject to hazards related to seismic/geotechnical issues, flooding, and fire hazards. These Goals and Policies are discussed within those respective sections of this DEIR.

Malibu Local Coastal Program Land Use Plan

The Malibu Local Coastal Program (LCP) Land Use Plan, which is part of the Los Angeles County Local Coastal Program and was certified by the California Coastal Commission in December 1986, provides policies for development within the Malibu Coastal Zone. The Malibu LCP provides policies that address geologic hazards, flood hazards, and fire hazards. Potential impacts regarding these hazard issues are evaluated in the following sections: Section 5.5, Geology; Section 5.8, Hydrology and Water Quality; and Section 5.11.1, Public Services – Fire.

Los Angeles County Site Mitigation Unit

The Los Angeles County Fire Department Health Hazardous Materials Division Site Mitigation Unit (SMU) oversees the Certified Unified Program Agency (CUPA) inspection and disclosure program for Underground and Aboveground Storage Tanks (USTs and ASTs) as well as the Leaking Underground Fuel Tank (LUFT) program in all cities and unincorporated portions of Los Angeles County. The SMU oversees general permitting and operation of USTs and ASTs as the CUPA. If any releases or contamination associated with a UST is identified, County Fire oversees the assessments and remediation under the LUFT program.

South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) oversees emissions regulations in the region, including asbestos emissions from construction, with regulations requiring that buildings be surveyed for the presence of asbestos containing materials (ACMs) prior to disturbance and that ACM removal procedures limit emissions.

5.7.3 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the CEQA Guidelines and the County's Environmental Checklist Form (Initial Study). For purposes of this DEIR, the Project would result in a significant adverse impact with respect to hazards and hazardous materials if the Project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of sensitive land uses;
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- Be located within an airport land use plan or, within two miles of a public airport or public use airport, that would result in a safety hazard for people residing or working in the project area;
- Be located within the vicinity of a private airstrip that would result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- Expose people or structures to a significant risk of loss, injury or death involving fires, because the project is located:
    - in a Very High Fire Hazard Severity Zones (Zone 4);
    - in a high fire hazard area with inadequate access;
    - in an area with inadequate water and pressure to meet fire flow hazards; or
    - in proximity to land uses that have the potential for dangerous fire hazard (such as refineries, flammables, and explosives manufacturing); or
- Constitute a potentially dangerous fire hazard.

5.7.4 Project Impacts

Threshold: Would the Project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The Project site is located in a rural area of the Santa Monica Mountains that has not been developed with industrial or commercial uses that would lead to the site being used for storage or disposal of significant amounts of hazardous materials.

Various databases were searched to identify environmental conditions in connection with the Project site. A complete list of the Federal, State, Regional, and Local agency records that were searched can be found in Appendix F. As is consistent with the 2006 Phase 1 ESA, the Project site was found to be listed on only the HAZNET database for the handling and disposal of "Unspecified oil-containing waste", related to the maintenance of mechanical equipment onsite.

The 2006 Phase 1 ESA concluded that there was no direct evidence of significant fuel or hazardous materials releases at the Project site, and therefore additional study was not considered necessary. Therefore, this condition would not represent a significant hazard to the public or the environment. Oil-stained soil located in the maintenance area would be removed and properly disposed of off-site pursuant to mitigation measure MM5.7-1 to ensure that impacts related to being included on a list of hazardous materials sites would be reduced to less than significant (**Class II**).

Threshold: Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Asbestos Containing Materials (ACMs)

The Project would demolish the existing clubhouse and maintenance sheds, the large residential structure south of Mulholland Highway in the northern portion of the Project site, and possibly the restrooms currently located on the golf course. ACMs could be present in the building materials of these structures and could potentially be exposed during demolition. Federal and State regulations govern the renovation and demolition of structures where ACMs are present and all demolition activities that could result in the release of ACMs must be conducted according to federal and State standards.

The National Emission Standards for Hazardous Air Pollutants (NESHAP) mandates building owners conduct an asbestos survey to determine the presence of ACMs prior to the commencement of any remedial work, including demolition. If ACMs are found, abatement of asbestos is required prior to any demolition activities. For this reason, the County requires that any person or entity applying for a demolition permit for an existing building with potential to contain ACMs provide a copy of the qualifications/license of the asbestos abatement contractor that will perform the abatement or removal of any asbestos to the County of Los Angeles Department of Public Works Building and Safety Division. This information must be provided prior to the issuance of a demolition permit. If required, the Applicant would also prepare and submit a Hazardous Building Materials Demolition Assessment and Management Plan to the SCAQMD for review and approval to ensure compliance with all applicable federal, State, and local laws and regulations. With remediation for ACMs during demolition activities in accordance with the applicable regulations as cited above, the Project's potential impacts regarding asbestos exposure would be reduced to less than significant (**Class III**).

Lead Exposure

Because of the age of some of the buildings to be demolished there is a potential for demolition workers or handlers of the resultant debris to be exposed to lead in any lead-based building materials, including lead-based paint, if these materials are improperly disturbed, removed, or disposed. Building components and fixtures with a potential for lead-containing coatings include, but are not limited to, walls, windows, doors, window/door jambs, railings, poles, parking lot striping, and heating, ventilation and air conditioning (HVAC) equipment. For this reason, prior to demolition, structures to be demolished would be surveyed for lead based paints and materials in compliance with federal, State and local laws and regulations. If such materials are found, the Applicant would comply with the laws and regulations and provide a copy of the qualifications/license of the lead-based paint abatement contractor that will perform the abatement or removal of lead-based paint to the County of Los Angeles Department of Public Health. This information would be provided prior to the issuance of any demolition permit for any existing building within the Project site containing lead-based paint or materials. If required, the Applicant would prepare and submit a Hazardous Building Materials Demolition Assessment and Management Plan to County of Los Angeles Department of Public Health for review and approval to ensure compliance with all applicable federal, State, and local laws and regulations. OSHA regulations are in place to ensure that these materials are safely removed prior to or during demolition and renovation activities. With remediation for lead-based substances during demolition activities in accordance with the cited regulatory requirements and compliance with regulations requiring removals by firms and individuals licensed to do such work pursuant to applicable regulations, the Project's potential impacts regarding lead exposure would be less than significant (**Class III**).

Pond Sediments

During construction of the remodeled golf course, the Project would clean out the basins of onsite ponds, which are currently water features of the existing golf course, to eradicate non-native species, including crayfish. As no soil export is proposed, any soils removed from the basins would remain onsite, although

possibly redistributed in the course of site grading. As discussed in Subsection 5.7.1, pond sediments were tested in 2006 to determine if they contained concentrations of hazardous materials in the existing conditions. The results of those tests reported that no pesticides, herbicides, or PCBs were detected at concentrations above laboratory reporting limits, and coliform detections were below recommended levels for recreational use and typical for the environment. The tests also showed metal results were below the Title 22 limits for classifying a material as a hazardous waste. However, these tests were conducted in 2006 as part of the Phase I ESA that was prepared for the site at that time and it has been seven years since these tests were conducted. Therefore, it is possible that pond sediment may now contain concentrations of previously detected materials that are high enough to be considered hazardous. Mitigation measure MM5.7-1 would require reevaluation of pond sediments prior to removal to ensure that potentially hazardous concentrations of previously detected materials do not exist. If reevaluation of the sediments finds hazardous concentrations, the contaminated soil would be evaluated and excavated/disposed, treated in-situ (in-place), or otherwise managed and disposed in accordance with all applicable federal, State, and local laws and regulations. With this mitigation measure and compliance with all applicable regulations regarding handling and disposal, risks associated with exposure to potentially hazardous materials in contaminated pond sediments would be reduced to less than significant (**Class II**).

Biological Hazard (hantavirus)

During demolition of the abandoned hunting lodge building, the disturbance of large amounts of rat feces and urine could potentially pose a biological hazard (e.g., hantavirus). Prior to the commencement of activity, workers would wear appropriate personal protection equipment. Appropriate biological samples should be collected and analyzed. With remediation for biological hazards during demolition activities as required by mitigation measure MM5.7-2, the Project's potential impacts regarding exposure to biological hazards would be reduced to less than significant (**Class II**).

Soil Contamination (spilled fuel)

An evaluation of the Project site in November 2012 reported some staining on the top and sides of an aboveground storage tank containing diesel fuel. This staining could indicate that soil in the vicinity of the tank may have absorbed some quantity of diesel fuel. If so, soils in this vicinity could potentially be classified as hazardous materials. Implementation of the procedures required by mitigation measure MM5.7-1 would reduce risks associated with potentially contaminated soil to less than significant (**Class II**).

Operational Impacts

Threshold: Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Implementation of the Project would continue to involve the use and storage of some hazardous materials to be used on the Project site. The Project also would continue to store propane in onsite tanks for heating and cooking purposes. The risks associated with such materials are limited to those typically associated with commercial and residential uses (e.g., cleaning supplies, swimming pool maintenance, landscaping equipment and materials) and storage of heating fuels in residential areas where natural gas is not provided by a regional utility. Without proper precautions in place, the storage, use and/or disposal of such chemicals could expose staff and visitors as well as the general public and the environment to risks associated with these types of hazardous materials. Such risks are considered potentially significant; however, with appropriate precautions for proper storage, use, and disposal of these chemicals and fuels in accordance with applicable regulations as required by mitigation measure MM5.7-3, the Project's

potential impacts regarding the routine transport, use, or disposal of hazardous materials or use of pressurized tanks on-site would be reduced to less than significant (**Class II**).

Threshold: Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of sensitive land uses?

There are no existing or proposed schools or hospitals in the development area of the Project site. The nearest sensitive land use to the Project site are single-family residences located along the northern and western Project site boundary. The nearest of these residences is located approximately 1,200 feet west of the Project development area. A County youth detention facility (Camp Kilpatrick) is located approximately 2,000 feet east of the Project site. The remainder of adjoining lands consists of public or private open space. Hazardous emission impacts related to proximity to sensitive uses would be less than significant as none are located within 500 feet of the Project's development area (**Class III**).

Threshold: Would the Project be located within an airport land use plan or, within two miles of a public airport or public use airport that would result in a safety hazard for people residing or working in the project area?

Threshold: Would the Project be located within the vicinity of a private airstrip that would result in a safety hazard for people residing or working in the project area?

The Project site is not located within an airport land use plan or within two miles of a public airport or private airstrip. The nearest airport operations would be Camarillo Airport and Point Mugu Naval Air Station, both of which are located approximately 15 miles to the west of the Project site. An existing helipad that is located within the Project development area would be relocated within the site for emergency use by Los Angeles County Fire Department. No airport land use plan restrictions are associated with the helipad. Impacts regarding proximity to airports and airstrips would be less than significant (**Class III**).

Threshold: Would the Project expose people or structures to a significant risk of loss, injury or death involving fires, because the project is located:

- in a Very High Fire Hazard Severity Zones (Zone 4);
- in a high fire hazard area with inadequate access;
- in an area with inadequate water and pressure to meet fire flow hazards; and/or
- in proximity to land uses that have the potential for dangerous fire hazard (such as refineries, flammables, and explosives manufacturing)?

Threshold: Would the Project constitute a potentially dangerous fire hazard?

The Project site is located in a Very High Fire Hazard Severity Zone as is the majority of development within the Santa Monica Mountains. Fire hazard risks and mitigations regarding access, and fire flow water pressure are discussed in Section 5.14.1, Public Services – Fire Protection. There is no development of industrial facilities such as refineries, flammables, and explosives manufacturing in the vicinity that would pose a dangerous fire hazard. Based on the evaluation provided in Section 5.14.1, and regulatory requirements regarding access, fire prevention devices, fire flow water pressure, and fuel modification of surrounding vegetation, Project impacts regarding exposure of people or structures to a significant risk of loss, injury or death involving fires because of the Project's location would be less than significant (**Class III**).

The Project would provide overnight accommodations for conference attendees and the general public in 40 bungalows totaling 109,140 square feet and including educational and meeting facilities, a clubhouse with a wellness center, a restaurant and lounge, a swimming pool, a golf pro-shop and grill, and associated support facilities, including a maintenance building, golf cart storage barn, a warehouse, and a security/information building. In total, the Project proposes a combined 225,087 square feet of structures, which would replace the existing 12,475-square foot clubhouse and cart with the proposed educational and meeting facilities of the Malibu Institute building, and also remove 11,160 square feet of existing structures including maintenance sheds associated with the Malibu Golf Club and an abandoned residence located in the northern portion of the Project site. An existing 875-square foot caretaker's residence located on the northern portion of the property along Mulholland Highway would be retained by the Project. At completion, the Project would result in a total net increase of 201,452 square feet of structures on the Project site. All of the proposed improvements would be constructed within the previously disturbed areas of the Malibu Golf Club and would be clustered within an approximate 20-acre development area in the southern portion of the Project site. While the development may require fire flows up to 3,000 gallons per minute at 20 pounds per square inch residual pressure for up to a three hour duration, a reduction in the required fire flow for the development based on the total square footage of the largest building, the type of construction used, and if the building is equipped with an approved fire sprinkler system. The Project's buildings would be equipped with an approved fire sprinkler system and of a size and type of construction which would qualify them for reduced fire flow requirements. The LACFD has established the Project's fire flow requirement as up to 20 psi at a rate of 2,000 gpm for 2 hours. The Project would be situated in areas that are already readily accessible by emergency vehicles, allowing for the use of standard firefighting techniques. Internal circulation pathways are designed with ample width, clearance, turnaround areas, and access to structures for emergency response vehicles, subject to approval by LACFD. The existing helipad would be relocated to an area preferred by the LACFD on an existing cleared pad adjacent to the golf course and a fire hydrant would be added in the vicinity of the helipad for the purpose of filling helicopter water tanks during emergency wildland fire-fighting activities. By providing a designated location for LACFD helicopters to acquire water for water drops, the relocated helipad would increase the site's defensibility from wildfires.

The Project would further enhance the fire safety of the site by implementing a fuel modification plan to minimize the risks of wildfire ignition near the Project and to create a defensible space around the proposed structures. The proposed fuel modification plan has been submitted to and preliminarily approved by the LACFD and is provided in Appendix H. The plan adheres to the LACFD's Fuel Modification Plan Guidelines and delineates four separate fuel modification zones and outlines the required maintenance practices to be performed in each zones. [2]

Zone A, the Setback Zone, would extend 20 feet beyond the edge of any combustible structure, accessory structure, building appendage or projection. This zone would provide adequate defensible space in a fire environment and would be landscaped with highly fire resistant plant species approved for this zone and spaced appropriately. Species not allowed within this zone would be removed if found.

Zone B, the Irrigated Zone, would extend from the outermost edge of Zone A to 100 feet from the structure. Similar to Zone A, areas in this zone would be landscaped with specifically selected fire resistant plants that would be appropriately spaced. Exceptions to this rule would be specimen native plants, which may be approved to remain if properly maintained for adequate defensible space, and well-maintained annual grasses and weeds. The 30-foot minimum buffer between combustible structures and target species, in addition to regulations regarding irrigation and where to implement vegetation, would be

[2] Fuel Modification Plan Guidelines, Los Angeles County Fire Department, July 2011; Proposed Fuel Modification Plan for the Malibu Institute Project, 2012.

similar to those imposed in Zone A with the exception of the height of ground covers and an allowance for incorporating trees. Adherence to provisions for slope coverage in this zone may be required where replacement landscape planting with ornamental or native species is required to meet the minimum slope coverage requirements of the County agencies or other applicable landscape or hillside ordinances.

Zone C, the Native Brush Thinning Zone, would extend from the outermost edge of Zone B up to 200 feet from the structure. As in Zone B, trees and both native and ornamental plant species would be allowed within this zone per the stated requirements (regarding height, spacing, etc. Additional practices required specific to this zone would include thinning and clearance activities for native vegetation.

The Fire Access Road Zone would extend a minimum of 10 feet from the edge of any public or private roadway that may be used as access for fire-fighting apparatuses or resources. In this zone, flammable growth would be cleared and removed for a minimum of 10 feet on each side of the fire access roads. Fire access roads, driveways, and turnarounds would be maintained in accordance with the Fire Code, with the roads themselves required to have unobstructed vertical clearance for a width of 25 feet. Landscaping and native plants within the Fire Access Road Zone would be appropriately spaced and maintained to provide safe egress in wildland fire environments. Unless otherwise approved, all trees would be planted far enough from structures and Fire Department access so that they would not overhang any structure or access at maturity.

According to the fuel modification plan, routine maintenance would be performed regularly in all zones and include activities such as removal and thinning of undesirable combustible vegetation, reduction of fuel load through pruning and thinning, removal of litter, and the incorporation of manual and automatic irrigation systems.

All structures within the Project would be located along paved, all-weather access roads and fire lanes would be provided via Clubhouse Drive and Trancas Lakes Driveway, located in the southern portion of the Project site. Each element of the Project would be served by water provided by the Las Virgenes Municipal Water District.

Fire-safety measures, such as fuel modification zones employed by the proposed Fuel Modification Plan and the Project's required adherence to all applicable code and ordinance requirements for construction, access, water mains, fire flows and hydrants required of all the new development, would be implemented to prevent or decrease the risk of accidental occurrence and/or spread of wildfires along the wildland interface of the developed areas of the Project site. Additionally, the proposed location of the new helipad, which has been approved by the LACFD,[3] would improve firefighting capabilities for the Project and the surrounding properties by providing a safe area for helicopters to land within the Project site and gather water for water drops employed when defending against wildfires. Given the past history of wildfire prevention at the Malibu Golf Club and the required implementation of the fire prevention design features and measures discussed above, the Project's development areas would be defensible from wildfires.

Although the Project would develop land uses in an area subject to wildfires, its occupants and/or property would be adequately protected from wildfires by incorporation of sprinkler systems, green roofs, adequate emergency vehicle access, fuel modification zones for vegetation management, and emergency helicopter access. With these features, the potential for wildfire impacts to occupants/structures related to the Project's location within a high fire hazard area would be less than significant (**Class III**).

[3] County of Los Angeles Fire Department, Conditions of Approval for Subdivision – Unincorporated TR 71735, Tentative Map – Conditions of Approval No. 1, October 31, 2012.

Since most wildfires reported in the Santa Monica Mountains are caused by human activity, this section also considers the possible increase in wildfires that might occur in the Project vicinity as a result of the additional visitors that would use the on-site facilities. Factors which contribute to minimizing potential wildfire impacts include: 1) the design(s) of the Project site plan(s), 2) mandatory compliance with various LACFD fire safety requirements, and 3) fuel modification and brush clearance practices required by the LACFD.

The Project would not place new structures within undeveloped areas containing native vegetation. All new buildings would be developed within areas accessible by emergency equipment vehicles. Where the Project's structures would be situated within 200 feet of hillside areas containing native vegetation, the LACFD regulations requiring brush clearance and establishment of landscaping utilizing native species with fire retardant properties would be applied. When created, new manufactured slopes at any of the internal development areas would be planted with fire retardant ornamental and/or native vegetation. Additional provisions regarding vegetation and maintenance activities are featured in the fuel modification plan, discussed above, and would be employed at the Project site. All proposed Project structures would comply with applicable State or County Fire Code requirements.

The increase in the number of visitors to the Project site with completion of the Project would not substantially increase the possibility of an occurrence of human-caused wildfires following the implementation of the above-mentioned plan and provisions. Therefore, the Project would result in a less than significant impact regarding the potential for an increase in the occurrence of wildfires (**Class III**).

Threshold: Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Project area roadways would typically not be used for emergency evacuations for City of Malibu residents, which would use Pacific Coast Highway to the east and west rather than mountain roads such as Encinal Canyon Road. In the event of an evacuation of the area, Project visitors and employees would leave the area either to north to Kanan Road or to the south to Pacific Coast Highway. Project impacts regarding adopted emergency response or evacuation plans would be less than significant (**Class III**).

5.7.5 Cumulative Impacts

The Project in combination with other developments in the area, as described in Section 4.0, Environmental Setting, would not result in significant cumulative impacts regarding hazardous materials because the identified potential hazardous materials impacts would be limited to the site and adjacent uses.

As the Project would develop land uses in an area subject to wildfires, each additional development creates greater demands on existing fire protection resources. As such, the Project would generate a cumulative impact to fire protection services, to which the payment of a Development Impact Mitigation Fee would be required.[4] The Consolidated Fire Protection District Developer Fee Program enforces a Development Impact Mitigation Fee, which is imposed on all new development within the Consolidated Fire Protection District's three Areas of Benefit, of which the Project site is located within Area of Benefit 1, to fund fire protection and emergency medical services. Area of Benefit 1 contains the Cities of Malibu, Calabasas and Agoura, the Santa Monica Mountains and includes all unincorporated areas within the Area boundary. The County of Los Angeles adopted an updated Developer Fee Program for the benefit of the Consolidated Fire Protection District on November 27, 2012, to be effective February 1,

[4] Personal communication with Loretta Bagwell, Planning Division, Los Angeles County Fire Department, January 16, 2013.

2013. The current Developer Fee Program for Area of Benefit 1 provides for collection of $0.9292 per square foot for new floor area development. Administration and collection of the Developer Fee within the territorial limits of Area of Benefit 1 is the responsibility of the Consolidated Fire Protection District of Los Angeles County. The developer fee revenues supplement funds available to the Consolidated Fire Protection District of Los Angeles County to provide for the acquisition, construction, improvement and equipping of facilities necessary for the District to deliver fire protection services within the County's Areas of Benefit.[5] Mitigation measure MM5.7-5 would require payment of the appropriate Development Impact Mitigation Fee for the benefit of the Consolidated Fire Protection District to reduce cumulative impacts to less than significant (**Class II**).

5.7.6 Mitigation Measures

MM5.7-1 If previously unidentified soil contamination is observed by sight or smell or indicated by testing by a qualified professional using a portable volatile organic compound analyzer during excavation and grading activities associated with removal of pond sediments or in areas used for storage of fuels or pesticides, excavation and grading within such an area shall be temporarily halted and redirected around the area until the appropriate evaluation and follow-up measures are implemented, as contained in the South Coast Air Quality Management District's Rule 1166, to make the area suitable for grading activities to resume. In the event contamination is found, the Applicant shall notify the Los Angeles County Fire Department, the South Coast Air Quality Management District, and/or the California Department of Toxic Substances Control, as applicable. The contaminated soil shall be evaluated and excavated/disposed of, treated in-situ (in-place), or otherwise managed and disposed of in accordance with all applicable federal, State, and local laws and regulations.

MM5.7-2 Prior to the commencement of demolition of the abandoned residence/hunting lodge building, appropriate biological samples shall be collected and analyzed to determine if conditions represent a biological hazard (e.g. hantavirus) due to large amounts of rat feces and urine. Prior to entering the building, appropriate personal protection equipment shall be worn by all personnel.

MM5.7-3 All hazardous materials within the Project site shall be acquired, handled, used, stored, transported, and disposed of in accordance with all applicable federal, State, and local requirements.

MM5.7-4 Prior to any storage or usage of regulated hazardous materials on-site (including pool maintenance chemicals, fertilizers, herbicides, pesticides, insecticides, lubricants, etc.), the Applicant shall obtain approval from the Los Angeles County Fire Department for a Hazardous Materials Business Plan (HMBP) covering the use and storage of all regulated hazardous chemicals and materials to be used and/or stored onsite. Qualified environmental personnel or safety engineers shall develop and implement a business plan and a health and safety plan in order to ensure that compliance issues regarding the proper containment, usage, disposal and transportation practices are used, if required.

MM5.7-5 Prior to occupancy, the payment of a Development Impact Mitigation Fee for the benefit of the Consolidated Fire Protection District would be required, for the purpose of supplementing funds for the acquisition, construction, improvement and equipping of

[5] City of Malibu Council Agenda Report, Agenda Item #4A, January 6, 2009.

facilities necessary to deliver fire protection services within the County. The fee shall be based on the applicable County of Los Angeles Developer Fee Program, last updated on November 27, 2012, to be effective February 1, 2013. The current Developer Fee Program for Area of Benefit 1, which includes the Project site, provides for collection of $0.9292 per square foot for new floor area development. Administration and collection of the Developer Fee shall be the responsibility of the Consolidated Fire Protection District of Los Angeles County.

5.7.7 Residual Impacts

Implementation of existing regulations as well as Mitigation Measures MM5.7-1 through 5.7-5 would reduce the Project's residual impacts related to hazardous materials upset and exposure to less than significant **(Class II)**.

5.8 HYDROLOGY AND WATER QUALITY

This section evaluates the potential impacts of the Project on hydrology and water quality. The "Existing Condition" section describes the current hydrology and water quality of the Project site as developed in the 1970s. The *Preliminary Determination of U.S. Army Corps of Engineers "Waters of the U.S." and Wetlands Jurisdiction on the Malibu County Club Property* and associated exhibits (TeraCor, 2007) were referenced to describe the pre-development condition of the Trancas Canyon headlands drainage at and in the immediate vicinity of the Project site. The *Malibu Institute Drainage Concept/Hydrology Report for TR071735* (Triad/Holmes Associates, 2012, revised 2013), which was approved by the County of Los Angeles Department of Public Works in October 2013, was used to develop a description of the site's existing developed hydrologic regime and the performance of existing facilities as well as to describe the hydrologic regime anticipated following implementation of the Project on the Project site. The Triad/Holmes Report includes the results of HecRAS modeling, sediment analysis, hydraulics analysis, and golf course overland flow analysis and identifies the Low Impact Development (LID) features of the Project. The *Final Water Quality and Hydromodification Technical Report* (Geosyntec, June 2013) was referenced to characterize both existing and projected water quality and hydromodification performance. Both the Triad/Holmes report and the Geosyntec report base their characterizations of post-development conditions and description of proposed drainage and water quality facilities on the Preliminary Drainage Plans prepared by Triad/Homes (2012). The hydrology and water quality studies and reports cited above are provided in their entirety in Appendix G of this Draft EIR. In addition, this section references the March 22, 2013 Addendum to the *Engineering Feasibility Report for the Proposed Wastewater Treatment Facility at the Malibu Institute*, prepared by EPD Consultants. The report provides relevant data on groundwater water quality and effluent irrigation and storage as these issues pertain to the overall water quality analysis.

5.8.1 Existing Conditions

Existing Hydrologic Conditions

Location

The Project site is located at 901 Encinal Canyon Road, within an unincorporated area of Los Angeles County, in the western portion of the Santa Monica Mountains between the City of Malibu to the southeast and the City of Westlake Village in Ventura County to the north. As mapped on the Point Dume USGS 7.5 Minute Topographic Quadrangle, the majority of the 650-acre Project site falls within the Trancas Canyon watershed. A small northerly extension of the site spans a drainage divide and falls into the upper watershed of an unnamed tributary to the Carlisle Canyon watershed. Topographically, the developed area of the Project site is situated in a bowl created by the crest of the Upper Trancas Canyon drainage basin. The site's tributary area, including both on- and off-site areas, is just over 1,300 acres with 1,290 acres tributary to Trancas Canyon Creek, which drains to the Pacific Ocean, and 19 acres tributary to Carlisle Canyon watershed, which drains to Lake Sherwood.

Topography

Onsite elevations range from approximately 2,300 feet above mean sea level (MSL) in the site's northwest corner to valley bottom elevations of approximately 1,300 feet above MSL where Clubhouse Drive intersects Encinal Canyon Road. To the southeast, adjacent mountain ridges range from 1,400 feet to 1,900 feet above MSL. Landforms southwest of the site have gentler slopes and range from 1,400 feet to 1,700 feet above MSL. The overall elevation differences between the Project site and the surrounding mountains contribute to the formation of a centralized natural water drainage pattern with branching tributaries that focus on the site's golf course, where Trancas Canyon Creek originally flowed before being confined to a subsurface culvert. A series of man-made water features on the golf course retain

water onsite. While steep canyon walls and ridges ring the site, the Project's development area would be confined to areas characterized by low interior hills and valley floor with slope gradients of less than fifteen percent. This area was graded and contoured when the existing Malibu Golf Club was constructed in the 1970s.

Precipitation

The Los Angeles County Lechuza Patrol precipitation gage (LCZCI) maintains daily rainfall data for the Project Located at 34°04'35"N, 118°52'51"W at an elevation of 1,620 feet, the gage is approximately 1.5 miles southwest of the Project site. Based on a 47-year record the estimated annual rainfall is 21.5 inches per year.

Regional Surface Water Hydrology

The California Water Resources Board (CWRB) divides California into nine hydrologic regions (HR). Each region is in turn divided into major hydrological units (HUs), which are further divided into hydrologic areas (HAs). Each HA is subdivided into hydrologic subareas (HSA).[1] The Santa Monica Mountains are one of several low to moderate elevation mountain ranges located within the South Coast Hydrologic Region. Several Regional Water Quality Control Boards (RWQCBs) share jurisdiction over various portions of the South Coast HR, among them the Los Angeles Regional Water Quality Control Board (LARWQCB), which has jurisdiction over the Trancas Canyon Creek watershed.

The majority of the Project site is located within the Trancas Canyon HSA, a subunit of the Point Dume HA, located within the eastern portion of the Point Dume Hydrologic Subunit of the Santa Monica Bay HU.[2] The Trancas Canyon Creek watershed (HSA 404.37) drains approximately 6,550 acres. **Figure 5.8-1** (Area Map) illustrates the regional context of the Trancas Canyon Creek watershed. Approximately fifteen percent of the Trancas Canyon Creek HSA is developed. The middle portion of the watershed is undeveloped while the upper reaches are sparsely developed with rural residential uses, minor agricultural uses, the Santa Monica Mountains National Recreation Area, and the Project site.

As noted, the main stem of Trancas Canyon Creek ultimately discharges directly into the Pacific Ocean at Trancas Lagoon, south of Highway 1. The mouth of the creek is often blocked by a sand berm, which prevents tidal exchange and causes the creek water to pond during seasonal high flows, flooding nearby properties. An informal arrangement between County Department of Parks and Recreation and the California Department of Fish and Wildlife allows the County to breach the sand berm on a restricted basis to prevent flooding and allow direct flow into the Pacific Ocean.

Regional Groundwater Hydrology

The Coastal Plain of the Los Angeles Basin is subdivided into several groundwater basins. According to the LARWQCB Basin Plan (1994): "With the exception of groundwater in Malibu Valley, which contains the Malibu Valley Groundwater Basin (DWR Basin No. 4-22), groundwater along the southern slopes of the Santa Monica Mountains does not comprise a groundwater basin and accordingly have not been assigned a basin number by the California Department of Water Resources (DWR)." While the Project site does not overlie a groundwater basin, it does overlie saturated alluvium (upper aquifer). A lower aquifer also appears to exist at a depth of 300 to 400 feet or more below all or a portion of the site

[1] The Department of Water Resources defines HUs as an entire watershed consisting of one or more streams. HAs are major tributaries and/or major groundwater basins within the HU and HSAs are major subdivisions of HAs and include both water bearing and non-water bearing formations.

[2] Caltrans Office of Water Programs, Hydrologic Sub-Area 404.37, http://stormwater.waterprograms.com/wqpt/HSA.asp?HSA=440437#Information, accessed 12/4/12.

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Vicinity Map

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FIGURE 5.8-1

based on the depth of wells drilled on the site that produce water drawn from this aquifer. Little is known about the hydrogeology of this lower aquifer or the extent to which it may have a hydrologic connection to either the Malibu Valley or Hidden Valley Groundwater basins. Apart from testing for water quality there has been no hydrogeological exploration of this area. What is known is that a thick layer of volcanic bedrock separates the upper and lower aquifers; it is unclear as to whether the volcanics serve as a confining layer or whether surface water may percolate through cracks in the bedrock into the lower aquifer, although, if this does occur it takes a long time for surface water to penetrate the volcanic bedrock. There is no evidence, however, that surface water contaminants impact the lower aquifer. The water quality of the lower aquifer will be discussed under Existing Regional Water Quality (Groundwater).

According to the State of California Seismic Hazard Zone Report for the Point Dume Quadrangle (CDMG 2001), the estimated historic highest groundwater level produced by the upper aquifer in Trancas Canyon is approximately 10 feet below ground surface (bgs) flowing through the shallow, saturated alluviums that line the natural creek bed. Perched water has been encountered at 5 feet bgs near the coast. On the Project site, shallow perched groundwater was encountered at a depth of 13 feet bgs within shallow saturated alluvium overlying volcanic bedrock near the northern parking lot (Sladden Engineering, 2012), an area where alluvium is deepest within the development area. No groundwater was encountered in any of the other borings recorded during field surveys, indicating that the shallow aquifer or saturated alluviums are limited to specific areas of the site where outflows of surface water are likely to represent the natural flow of the Trancas Canyon Creek.

The approximately 19 acres of the Project site located north of Mulholland Highway that drain to Lake Sherwood are located outside of the Project's development area and contribute to the Hidden Valley groundwater basin (DWR Basin 4-16), which receives inflow and recharge from the Carlisle watershed. Since this portion of the Project site would not be developed, surface flows would not be contaminated by any man-created potential pollutants and would not, therefore, contribute to any degradation of water quality or reduction of flow into the Hidden Valley Basin's recharge area from any source other than naturally occurring minerals or other natural surface contributors (i.e. animal feces).

Existing Regional Water Quality

Existing Regional Surface Water Quality

Bacterial Load

In 2003, the United States Environmental Protection Agency (US EPA) developed the Santa Monica Bay Beaches Bacterial Total Maximum Daily Load (SMBBB TMDL) in response to high priority Clean Water Act Section 303(d)-listed water quality impairments. A modified Bacteria TMDL was developed and adopted by the LARWQCB in 2004. While modeling focused on the Malibu Lagoon, these findings also apply to the lagoon areas along the entire Santa Monica Bay coastline and permit exclusion of natural sources of various criteria pollutants in determining compliance with applicable TMDLs.

The Los Angeles Regional Water Quality Control Board (LARWQCB) and US EPA also created bacterial standards for waters designated for water contact recreation (REC1). These bacterial standards recognize there may be natural sources of coliform bacteria that contribute to bacterial loading at a level sufficient to cause an exceedance of the single sample or 30-day geometric mean water quality objective. In 2004, the LARWQCB stated that it is not the Board's intention to require treatment or diversion of natural water bodies or require treatment of natural sources of bacteria from undeveloped areas since such treatment, if imposed, could adversely affect valuable aquatic life and wildlife beneficial uses supported by natural water bodies in the region. Natural sources include such things as the contribution of birds to

fecal loading and the contribution of other wildlife in relatively undeveloped watersheds. The bacterial standards for Trancas Canyon Creek are shown on **Table 5.8-1** (Summary of Bacterial Standards 2004).

Table 5.8-1
Summary of Bacterial Standards[3]

	Parameter	30-Day Geometric Mean	Single Sample
Streams (freshwater)	Fecal	200	400
	E. Coli	126	235
Lagoon	Total	1,000	10,000
	Fecal	200	400
	Enerococcus	35	104
Source: TMDL for Bacteria – Malibu Creek Watershed, 2004, at http://www.epa.gov/waters/tmdldocs/MalibuBacti%20TMDL%20Staff%20Report.pdf			

In 2005, a report issued by the CDM Consultants to the County of Los Angeles Water Division (CLAWD) (CDM 2005) characterized the Trancas Canyon Creek watershed as having a 1% probability of exceeding bacteria water quality criteria for summer dry weather, a 5% chance during winter dry weather and a 31% chance of exceedance during wet weather. A nutrient TMDL does not exist for any waterbodies within the Trancas Canyon Creek watershed.

The Trancas Canyon watershed is a priority 4 on a 5-point scale according to the CDM report.[4]

Water quality in the Trancas Canyon watershed is monitored at the intersection of Trancas Canyon and Trancas (Broad) Beach, along the coast.[5] Trancas Canyon Creek has not been evaluated for inclusion in the 303(d) list, is not classified as "Impaired," and is considered a "low priority watershed" by the State and Regional Water Boards.

While the creek is not listed as impaired, the ocean waters at the creek's mouth, in the Trancas Lagoon, do exceed selected criteria for fish consumption and an advisory is in place for PCBs.[6] DDT and coliform counts have led to beach closures at Broad (Trancas) Beach.

A conceptual plan prepared in 1993 for stabilizing the hydrologic regime at the mouth of Trancas Canyon Creek is intended to provide for tidal circulation and restoration of floodplain vegetation. It was adopted as part of the Santa Monica Bay Restoration Project but it has not been implemented. Nonetheless, reduction of point and non-point pollution in the Trancas Canyon watershed remains a goal of the Regional Board.[7] To that end, the LARWQCB adopted the Trancas Canyon Implementation Plan in 2005 and includes phased-in BMPs that specifically target reduction of coliform bacteria (LARWQCB, 2005).[8]

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[3] TMDL for Bacteria – Malibu Creek Watershed, 2004, at http://www.epa.gov/waters/tmdldocs/MalibuBacti%20TMDL%20Staff%20Report.pdf, accessed 2/26/12.
[4] Utilizing the 5-point scale, 1 is the highest risk for pollution loading and 5 is the lowest risk.
[5] Technical Memorandum Task 3.1: Identification of Water Quality Areas of Concern North Santa Monica Bay Watershed Regional Watershed Implementation Plan and Malibu Creek TMDL, 2006.
[6] Polychlorinated biphenyls.
[7] CERES, Trancas Lagoon, http://ceres.ca.gov/wetlands/geo_info/so_cal/trancas_lagoon.html accessed 12/4/12.
[8] LARWQCB, North Santa Monica Bay Beaches Wet-Weather Bacterial Total Maximum Daily Load Implementation Plan for Jurisdictional Groups 1 and 4, Section 5.5 (Trancas Canyon), at http://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/2006-005/J1-4%20Final%20Implementation%20Plan.pdf, accessed 3/5/13.

Water Quality - Wastewater

One way to manage water quality is to manage the treatment and discharge of wastewater within a watershed. The Trancas Water Pollution Control Plant, operated by the County and located at 6338 Paseo Canyon Drive, Malibu, serves a small population located in two subdivisions near the coast. The plant overlies groundwater in a small alluvial basin of gravels and sands within Trancas Canyon. The balance of the Trancas Canyon Creek watershed relies on septic systems for wastewater disposal and treatment.

State Board Resolution No. 2012-0032 (*Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems* [OWTS Policy]) was adopted in 2012 and establishes a statewide, risk-based, tiered approach to the regulation and management of onsite wastewater treatment systems (OWTS), setting a level of performance and protection expected from such systems. Statewide, Regional Boards are required to incorporate the standards established the OWTS Policy into their Basin Plans by May 2014. Application of the OWTS Policy to the Trancas Canyon Creek watershed may occur following its inclusion in the Basin Plan.

Water Quality – Stormwater Runoff

The number of outfalls and the manner in which pollutants vary based on site characteristics and storm intensity make stormwater and urban runoff water quality difficult to monitor, model, and control. Site-specific best management practices (BMPs) are generally used to treat storm water runoff pollution. BMPs employed for this purpose are generally categorized into two types: structural (treatment) and nonstructural (source). Nonstructural BMPs prevent pollution at their source before contact with storm water or by treating storm water at its source without the use of constructed infrastructure. Source control BMPs may include, but are not limited to, institutional, educational, or pollution preventions practices including public education, land use planning, green roofs, material management, street and storm drain cleaning and maintenance, spill prevention and cleanup, prevention of illegal dumping, illicit connection control, and stormwater reuse (US EPA, 2002).

Structural BMPs are engineered and constructed systems that control the quantity and treat the quality of stormwater runoff. The performance of structural BMPs is dependent on site-specific factors including rainfall intensity, duration, volume, pollutant concentrations, and climate patterns. Local site control is implemented through treatment controls that include, but are not limited to, infiltration facilities, filtration systems such as sand filters, pervious pavement, biofilters, and detention facilities.[9]

In addition, the County requires implementation of Low-Impact Development (LID) strategies that utilize decentralized controls integrated with landscape. The County requires incorporation of LID requirements into the proposed remodeling of the Project site, in addition to source control and treatment BMPs under current regulations.

Surface Water Beneficial Uses – Trancas Canyon Creek, Trancas (Broad) Beach, and Lake Sherwood

The Basin Plan (1994) lists beneficial uses of major water bodies potentially affected by drainage from the Project site. The beneficial uses of Trancas Canyon Creek, Trancas (Broad) Beach, and Lake Sherwood are listed and defined below and defined by receiving water in **Table 5.8-2**:

- MUN: Community, military or individual water supply systems including, but not limited to, drinking water supply.
- GWR: Groundwater recharge for natural or artificial recharge of groundwater.

[9] Institute for the Environment/UCLA, *An Evaluation of the Effectiveness of Proposition O Projects for Water Quality Improvements*, 2007, at http://www.seas.ucla.edu/stenstro/r/r57, accessed 2/26/13.

- NAV: Waters used for shipping, travel, or other transportation by private, military or commercial vessels.
- REC1: Water contact recreation involving body contact with water and ingestion is reasonably possible.
- REC2: Non-contact water recreation for activities in proximity to water but not involving body contact.
- WARM: Warm freshwater habitat to support warm water ecosystems.
- WILD: Wildlife habitat waters that support terrestrial or wetland ecosystems.
- RARE: Waters that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.
- WET: Waters that may have wetland habitat associated with only a portion of the water's overall reach. Any regulatory action would require detailed analysis of wetland areas impacted by proposed development or other action.
- COMM: Water used for commercial or recreational collection of fish, shellfish, or other organisms including those intended for human consumption or bait.
- MAR: Waters supporting maritime ecosystems including preservation or enhancement of marine habitats, vegetation, or wildlife.
- SPWN: Waters that support high quality aquatic habitats suitable for reproduction and early development of fish.
- SHELL: Waters that support habitats of filter-feeding shellfish for human consumption or sports purposes.

Table 5.8-2
Beneficial Uses of Receiving Waters – Project Specific

	Beneficial Uses												
Water Body	**MUN**	**GWR**	**NAV**	**REC1**	**REC2**	**WARM**	**WILD**	**RARE**	**WET**	**COMM**	**MAR**	**SPWN**	**SHELL**
Trancas Canyon Creek (part of Los Angeles Coastal Streams) (Hydrologic Subarea 404.37)	E			E_m	E	E	E	E					
Lake Sherwood (Hydrologic Subarea 404.26)	P	E	E	E	E	E	E						
Trancas (Broad) Beach (Hydrologic Subarea 404.37)			E	E	E		E			E	E	P	E

Source: Geosyntec, Water Quality and Hydromodification Technical Report (2013) Table 2-2.
E – Existing Beneficial Use
P – Potential Beneficial Use
$_m$ – Access prohibited by Los Angeles County Department of Public Works in the concrete channeled areas.

Existing Regional and Project Site Groundwater Quality

As noted, the Project site does not overlay a designated regional groundwater basin but appears to overlay, at least in part, a lower water-producing aquifer that is not considered a groundwater basin but does, nonetheless, produce water that is currently pumped from six operating wells on the site. As noted,

the well depth ranges from 300 to 400 feet bgs. Based on what is known about the geology of the site, shallow alluviums overlay a thick layer of volcanic bedrock. The rock/soil composition of this "lower aquifer" is unknown and there is no evidence that a hydrologic connection between saturated surface soils and the lower aquifer from which well water is drawn exists.

In January 2013, American Environmental Testing Laboratory, Inc. tested samples drawn from two wells on the site identified as MW 1 (aka EW-1) and MW-2 (aka EW-5). As noted, the Basin Plan has stated that, with the exception of the Malibu Valley Groundwater Basin (DWR Basin No. 4-22), groundwater associated with shallow, saturated alluviums deposited along the southern slopes of the Santa Monica Mountains do not comprise a major basin and do not have a basin number. A hydrologic connection between unlined portions of lower Trancas Canyon Creek and the Malibu Valley Basin has been posited by some researchers, however, this hypothesis has not been proved and is not assumed for the analysis. Some beneficial uses may ultimately be identified for the "lower aquifer" that underlays a portion of the Project site, but none are presently listed in the Basin Plan.

A Water Sample Analysis Results Report from the Existing Groundwater Monitoring Wells was prepared by Kevin Poffenbarger of EPD (January 2013) and provided to Malibu Associates, LLC, on March 22, 2013. A copy of the report is included in Appendix E of this DEIR. The data was subsequently incorporated into the Final Water Quality and Hydromodification Report prepared by Geosyntec (2013) and is provided below in Table 5.8-3. Sampled wells were installed either prior to or concurrent with the development of the original golf course in the 1970's and have been used to supplement irrigation water for at least 40 years. During that same period, the lower aquifer has, if a connection exists, been receiving percolating surficial water from the irrigation of the golf course, which would have contained fertilizers, pesticides, herbicides, coliform bacteria, nitrates and nitrite, TDS, etc. Accordingly, the baseline results presented below reflect the effects, if any, of percolated surficial flows over a considerable period to time.

Table 5.8-3
Detected Results from Existing Ground Water Monitoring Wells at the Project Site: Standard and Metals

Constituents	Units	EW-1 Sample Results	EW-5 Sample Results
pH	pH Unit	8.85	8.95
Boron	mg/L	0.200	1.94
Chloride	mg/L	10.8	50.0
Ammonia-N	mg/L	0.414	0.435
Total Kjeldhal Nitrogen	mg/L	0.469	0.664
Nitrate – N	mg/L	0.150	0.050
Nitrite – N	mg/L	0.100	ND
Total Phosphorous	mg/L	ND	ND
Sulfate	mg/L	36.7	58.2
Total Dissolved Solids (TDD)	mg/L	531	591
Metals			
Zinc	mg/L	ND	0.0103

ND – Constituent was not detected in the sample at or above MDL.
MDL – Method Detection Limit is a statistically derived number, which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.
Sampling conducted January 17, 2013.
Source: Table 2-8, Geosyntec 2013

The State guideline for total nitrates is 10 mg/L for drinking water. This standard is not exceeded. As shown in **Table 5.8-3** no pesticides or PCBs are detectable in the lower aquifer groundwater in spite of 40 years of pesticide and fertilizer use above the aquifer. Lastly, fecal coliform and total coliform, which are POCs for the receiving waters of Trancas Canyon Creek, are not found at detectable levels in lower aquifer water. This would point to surface water flows as the source of traces of these POCs in receiving waters, rather than effects of groundwater. In all cases, the levels of POCs detected in groundwater at the Project site are below the *Water Quality Objectives for Selected Constituents in Regional Ground Waters* established in the Basin Plan.

Approximately 19 acres in the northern portion of the Project site, located outside of the development area and north of Mulholland Highway, contribute to the Hidden Valley groundwater basin (DWR Basin No. 4-16). Although very little of the Project site overlays the Hidden Valley Basin, surface runoff that infiltrates within the Carlisle Canyon watershed ultimately flows toward the Hidden Valley Basin.

The beneficial uses of the Hidden Valley Basin include the following:

- MUN: Community, military or individual water supply systems including, but not limited to, drinking water supply. [Existing beneficial use]
- IND: Industrial activities that do not depend primarily on water quality. [Potential beneficial use]
- AGR: Agricultural supply waters used for farming, horticulture, or ranching. [Existing beneficial use]

The Basin Plan lists Hidden Valley Basin groundwater water quality objectives for bacteria, chemical constituents, pesticides, radioactivity, salinity, tastes and odors, and toxicity. However, since the developed portion of the Project site is outside of the Hidden Valley Basin or any recharge area for that basin and no runoff from the development area of the Project site would enter the Carlisle watershed, groundwater quality objectives for this basin would not be affected by the Project and are not explored further in this analysis.

Existing Project Site Surface Drainage Characteristics

As previously noted, the Project site encompasses portions of two watersheds as illustrated in **Figure 5.8-2**. The headwaters of the main stem of Trancas Canyon Creek traverse through, and are to a large extent located on, the Project site. Steep drainages originating from the crest of the surrounding ridgelines pass through steep rockland and chaparral covered slopes and ultimately converge onto the artificial fill that covers the existing golf course within the south-central valley area of the Project site. Two original segments of the Trancas Canyon Creek blueline stream indicated on the Point Dume, California USGS Topographic Map (1950 edition) no longer exist in their natural condition across the golf course. Rather, they were truncated and contained in underground culverts during the construction of the golf course in 1979 and presently flow through a 66-inch storm drain from the golf course water feature to a point of discharge near the entrance to the golf course (Clubhouse Drive near Encinal Canyon Road) into the main stem of the creek, which subsequently passes under Encinal Canyon Road and continues downstream via a natural stream course.

A second tributary to the mainstem originates offsite to the west in an area characterized by rural residential developments along Mulholland Highway. This stream course flows along the southwestern boundary of the Project site and ultimately passes under Encinal Canyon Road. Approximately 1,000 feet downstream of the Encinal Canyon Road culvert the stream converges with the main stem of Trancas Canyon Creek.

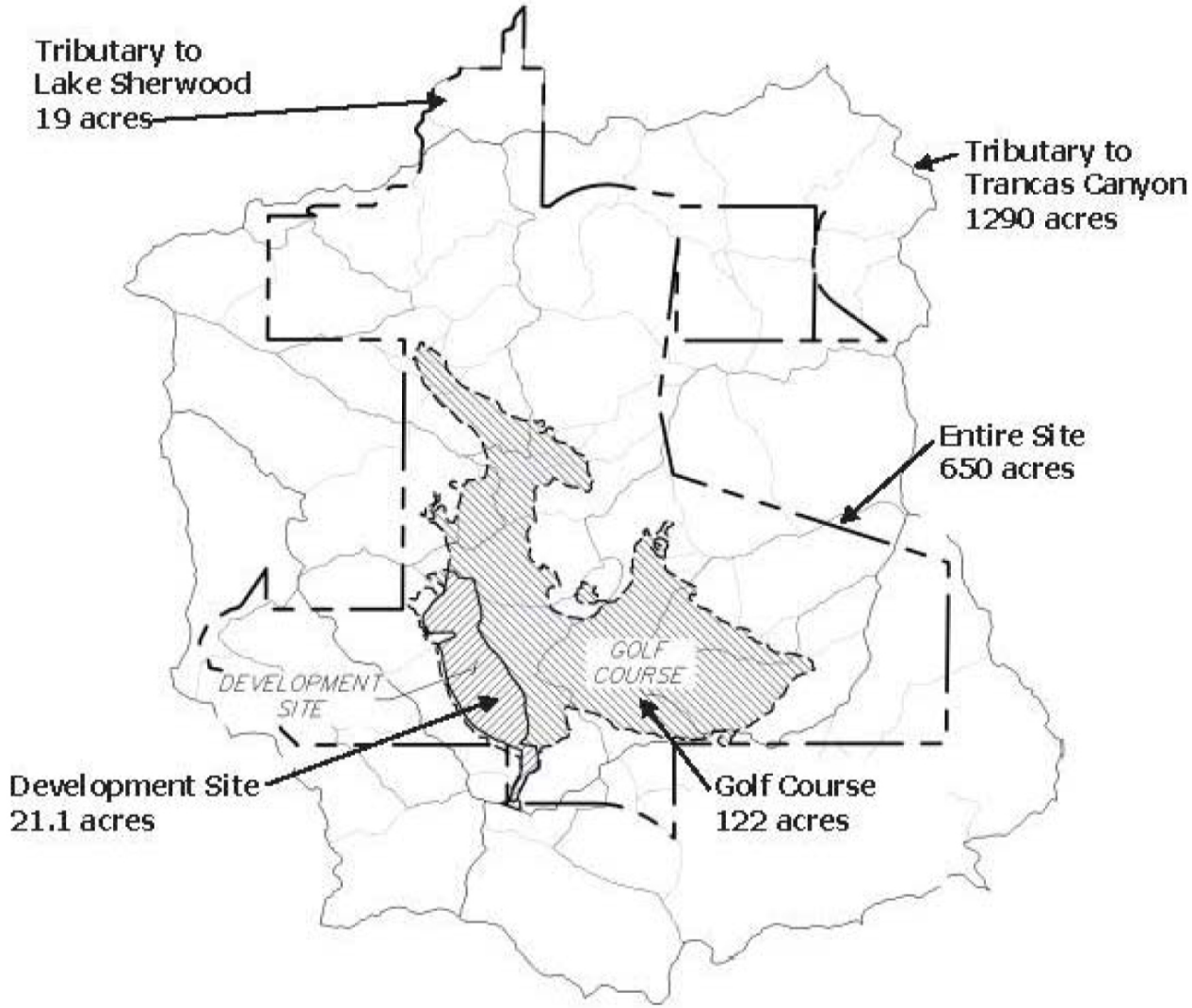


Image Reference: Triad/Holmes Assoicates, October 2012, revised October 2013. The Malibu Institute Drainage Concept/Hydrology Report for TR071735. Prepared for Malibu Associates, LLC.

Revised: Geosyntec Consultants, March 2013.

The northernmost 19 acres of the Project site that are tributary to the Carlisle Canyon watershed are comprised of open space that will remain in this condition subsequent to development of the Project. Lake Sherwood is located within the Carlisle Canyon watershed, approximately two miles north of the Project site's northerly property line in Ventura County, and is the receiving water for the Carlisle Canyon flows.

The area analyzed for runoff rates in the Project's drainage study includes the 1,290 acres tributary to Trancas Canyon Creek in its headwaters area. Of that area, approximately 636 acres are offsite and contain tributary drainages. Onsite, over 450 acres of native coastal scrub, chaparral, and oak woodland forest containing the extensions and mergers of these tributaries are undisturbed open space. These tributary branches ultimately converge on one of a number of small to mid-sized detention/siltation basins located around the edge of the golf course (See Jurisdictional Delineation in Section 5.3, Biology, and **Figure 5.8-3**, which illustrates the drainage system).

Stormwater generated by precipitation exceeding two- to five-year storm intensity historically has sheet-flowed through the golf course, where velocities drop below two cubic feet per second (cfs). At these low flow rates most sediments drop out onto the golf course fairway. Excess sheet flow that is not infiltrated into the alluvium and fill materials that overlay the impervious volcanic rock below reaches the existing golf course water feature and is ultimately conveyed through the 66-inch culvert to the above referenced point of discharge.

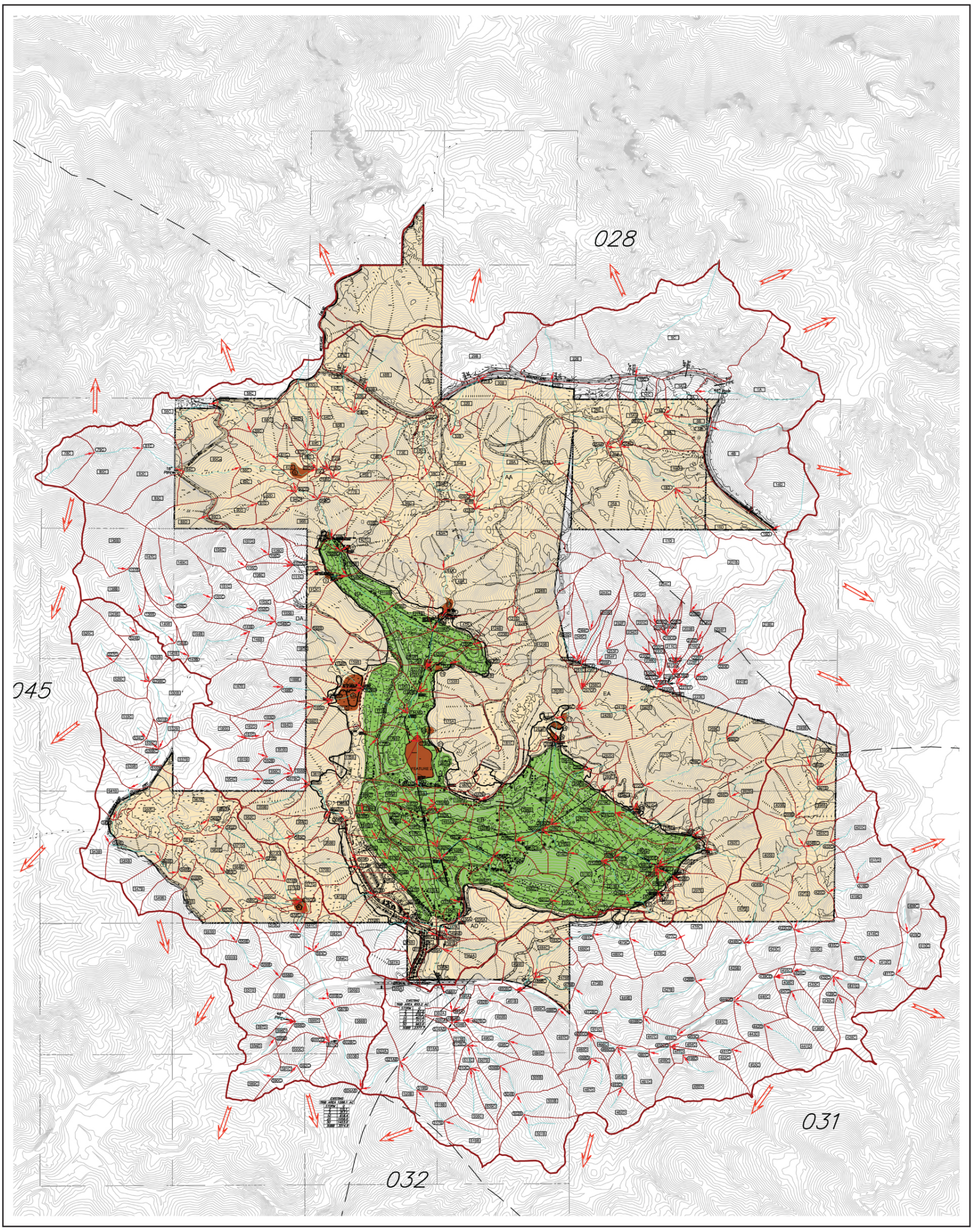
In 2012, Triad/Holmes (T/H) analyzed the entire 650-acre Project site for potential flood flows to and through the 8-foot wide by 10-foot tall culvert under Encinal Canyon Road that discharges into the main stem of the creek. The report was revised in October, 2013 and subsequently approved by the County of Los Angeles Department of Public Works (October 2013). The runoff quantity at this point for a 50-year storm is over 880 cfs. Based on the most current HecRAS analysis of the existing and projected conditions, this runoff exits through the Encinal Canyon Road culvert without overtopping the road at a velocity of approximately 14 cfs (Triad/Holmes revised 2013).

Project Site Water Quality

Fuji International, the former owner of the Project site, obtained the original Conditional Use Permit (CUP) in 1998 and agreed to its terms. The CUP was then transferred to MGC in 1999. The CUP requires an annual report regarding water quality monitoring and test results to enssure compliance with standards established by the Los Angeles County Department of Agricultural Commissioners/Weights and Measures Environmental Toxicology Laboratory (ETL), the Los Angeles County Department of Health Services, and the LARWQCB. Additionally, the Malibu Golf Club is required to achieve a 50 percent reduction of pesticides, herbicides, and fertilizer residues from the 1998 baseline within the first three years of the permit and continue to meet the reduced levels through the life of the permit. The Malibu Golf Club implemented the following BMPs:

- Conduct sampling and monitoring to ensure compliance; and
- Continue to reach reduced rates annual through the life of the permit.

Following a 2001 meeting between Malibu Associates' predecessor-in-interest, the National Park Service, and the Los Angeles County Department of Regional Planning (LACDRP), three entry points were selected to be sampled in addition to two previous sample locations. The four upland sampling sites are located in small ponded areas, which appear to receive runoff from within the Project site; however, it is questionable whether these four sites actually represent upstream (off-site) water quality entering the site. The downstream sampling site is located at the point where the Trancas Canyon Creek exits the Project



Revised: Triad/Holmes Associates Civil Engineering Land Surveying, October 2013.

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Existing Drainage Conditions

FEET 0 500 1,000

FIGURE 5.8-3

site. The locations of the sampling sites are shown on Figure 5 of the Final Geosyntec Water Quality and Hydromodification Technical Report (2013), included in Appendix G of the EIR. Conditions 23 through 26 of the CUP outline a water quality-monitoring program that began in the fall of 2000 and continued through the fall of 2002 to establish baseline water quality conditions within the Project site.

Condition 24.7 requires four tests to be performed annually following the initial two-year testing program, consisting of two tests during the wet season and two tests during the dry season. Initial wet season sampling must occur within 24 hours following the first rain event of the season that produces at least one-half inch of rain within a 24-hour period and causes the stream to flow.

Since acquiring the Project site, Malibu Associates has conducted sampling and monitoring pursuant to the CUP conditions. Water quality sampling analysis examined total phosphorous, nitrate, nitrite, ammonia, organic nitrogen, pH, specific conductivity, and a suite of organochlorine pesticides such as DDT, toxaphene, and dieldrin (Geosyntec, 2012) based on samples taken from four onsite inflow locations and one onsite outflow location, illustrated in **Figure 5.8-4**.

Selected General Constituents

Site runoff is tested for pH and specific conductivity. The pH of water affects the solubility and bioavailability of various chemical constituents such as nutrients and heavy metals and is, therefore, considered an indirect indicator of potential for aquatic toxicity. Specific conductivity is the measure of water's ability to conduct electricity, which is used as an indirect indicator of the concentrations of total dissolved solids (TDS) and salinity. When elevated in fresh water these constituents are considered contaminants. Pursuant to the Basin Plan, the pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. The pH of bays or estuaries shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Results for these constituents at the Project site intake and discharge points between 2002 and 2012 are summarized in **Table 5.8-4, below** and indicate conformance with the levels specified in the Basin Plan as noted above:

Table 5.8-4
Wet and Dry Weather Water Quality Monitoring Data for General and Conventional Parameters (2002-2012)

Constituent	CUP Required Level	Sample Location	No. of Samples	Minimum	Maximum	Average
pH	See note a	1	2	6.8	6.9	6.9
		2	2	6.9	7.1	7.0
		3	4	7.1	7.9	7.4
		4	3	6.5	7.0	6.7
		5[b]	29	6.5	7.9	7.4
Specific Conductivity	N/A	1	0	NA	NA	NA
		2	0	NA	NA	NA
		3	1	520	520	520
		4	0	NA	NA	NA
		5[b]	31	3	1980	1246

Geosyntec, Water Quality and Hydromodification Technical Report (2013) Table 2-3.

a. According to the MGC CUP (2009), "The pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be changed more than 0.5 units from natural conditions as a result of waste discharge. The pH of bays or estuaries shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be changed more than 0.2 units from natural conditions as a result of waste discharges.

b. Downstream compliance point.

Revised: Geosyntec Consultants, March 2013.

Image Reference: Geosyntec Consultants, 2012(a). DRAFT Water Quality Monitoring Plan for Malibu Golf Club Conditional Use Permit. Prepared for Malibu Associates, LLC.

ENVICOM CORPORATION

Sampling Sites

FEET 0 600 1,200

FIGURE 5.8-4

Selected Nutrients

The CUP requires monitoring of selected nutrients including total nitrogen (TN), organic nitrogen, ammonia (NH_3), and total phosphate (TP). Excessive nutrients in receiving waters can impair water quality by causing eutrophication (enrichment), which promotes the growth of algae. Excessive algae affect light penetration and causes dissolved oxygen depletion, which may kill fish and other aquatic species. In addition, some algae produce blooms that are toxic to other organisms. **Table 5.8-5** summarizes available nutrient monitoring data at the collection sites.

TP concentrations ranged from less than detection limits (i.e., non-detect) to 0.98 mg/L across all sampling sites and all samples collected, including baseline data, with an average concentration of 0.31 mg/L. TN concentrations ranged from 0.130 to 8.12 mg/L across all sampling sites, with an average concentration of 2.60 mg/L.

TP concentrations at Site 5, where runoff exits the Project site, exceeded the water quality criteria of 0.10 mg/L in 97 percent of the samples analyzed. TN concentrations at Site 5 exceeded the CUP required level of 1.0 mg/L in 74 percent of the samples analyzed (Geosyntec, 2013).

Table 5.8-5
Wet and Dry Weather Water Quality Monitoring Data for Nutrients (2002-2012)

Constituent	CUP Required Level	Site #	Number of Samples	Minimum	Maximum	Average
Total Phosphorous –P (mg/L)	0.1 (see note a)	1	8	0.126	0.440	0.262
		2	10	0.025	0.830	0.196
		3	15	0.025	0.870	0.267
		4	13	0.055	0.910	0.339
		5[b]	31	0.025	0.976	0.339
Total Nitrogen (mg/L)	See note b	1	8	1.518	4.475	3.315
		2	10	0.560	6.795	3.101
		3	15	0.435	5.062	2.281
		4	13	0.660	8.118	3.768
		5[b]	31	0.298	4.745	1.907
Organic Nitrogen (mg/L)	See note b	1	8	0.660	2.412	1.359
		2	10	0.400	3.054	1.220
		3	15	0.330	4.246	1.360
		4	13	0.500	4.300	1.875
		5[b]	31	0.050	3.090	1.177
Ammonia Nitrogen (mg/L)	See note b	1	8	0.050	0.227	0.105
		2	10	0.050	0.320	0.137
		3	15	0.050	0.285	0.114
		4	13	0.050	0.700	0.181
		5[b]	31	0.050	0.413	0.159
Nitrite Nitrogen (mg/L)	See note b	1	8	0.015	0.128	0.050
		2	10	0.015	0.128	0.026
		3	15	0.015	0.088	0.028
		4	13	0.015	0.080	0.022
		5[b]	31	0.015	1.320	0.096

Constituent	CUP Required Level	Site #	Number of Samples	Minimum	Maximum	Average
Nitrate Nitrogen (mg/L)	See note b	1	8	0.015	2.710	1.587
		2	10	0.015	5.080	1.932
		3	15	0.015	1.970	0.779
		4	13	0.015	6.661	1.691
		5[b]	31	0.015	2.140	0.475

Geosyntec, Water Quality and Hydromodification Technical Report (2013) Table 2-4

a. According to the MGC CUP (1999), "phosphate levels shall be less than 0.1 mg/L exiting the property. Phosphate levels shall be monitored through the measurement of total phosphorous."

b. According to the MGC CUP (1999), "Nitrogen levels shall be less than 1mg/L exiting the property. Nitrogen levels shall be monitored through the measurement of nitrate-N, nitrite-N, organic-N, and ammonia-N. The *combined* nitrogen levels from these sources shall not exceed 1 mg/L." However, while the Basin Plan has no waterbody specific objectives for the Trancas Canyon Creek Watershed, the most proximate watershed for which objectives are established (Malibu Creek Watershed) establishes a 10 mg/L standard. The same standard is used in the Basin Plan for regional groundwater.

Selected Pesticides, Herbicides, and Fungicides

Pursuant to Condition 25 of the CUP, select constituents to be tested include pesticides, herbicides, and/or fungicides. Of the pesticide, herbicide, and fungicide constituents tested between January 29, 2002 and August 3, 2012 (max n=18), only two analytes were detected - diazinon (1 of 18 samples, or 5.6% detection rate) and profenphos (3 of 18 samples, or 16.7% detection rate) as organophosphate (OP) insecticides. Analysis for organochlorine pesticides were conducted only for samples collected at Location 5, the downstream collection point. Organochlorine pesticides were not found at levels exceeding detection limits (Geosyntec, 2013)

5.8.2 Regulatory Framework

Federal

Clean Water Act

In 1972, the *Federal Water Pollution Control Act* (later referred to as the *Clean Water Act* [CWA]) was amended to require National Pollutant Discharge Elimination System (NPDES) permits for the discharge of pollutants to waters of the United States from any point source. In 1987, the CWA was amended again to require the United States Environmental Protection Agency (US EPA) to establish regulations for permitting of municipal and industrial stormwater discharges under the National Pollutant Discharge Elimination System (NPDES) permit program. Final regulations for stormwater discharges were published on November 16, 1990 and require regulation of municipal separate storm sewer system (MS4) discharges to surface waters through a NPDES permitting process.

Clean Water Act Section 303(d) – TMDLs

In addition to regulating discharges, the Clean Water Act provides water quality standards and criteria based on a water body's designated beneficial uses. Water quality standards indicate the goals for a water body by designating its uses, setting criteria to protect those uses, and establishing provisions to protect water bodies from pollutants. Water quality criteria are adopted to protect those designated uses.

When beneficial uses of a particular receiving water body are compromised by water quality issues, Section 303(d) of the CWA requires identification and listing of that water body as *impaired*. Once a water body has been listed, a Total Maximum Daily Load (TMDL) must be developed for the impairing pollutant(s).[10] The TMDL allocates the loads among current and future pollutant sources to the water

[10] A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (with a "factor of safety" included).

body. In addition to trash and debris, common pollutants of concern having the potential to affect water quality generally fall into one of the following seven categories: sediments, nutrients, bacteria/viruses, oil/grease, metals, organic compounds, and pesticides.

The US EPA approved a Wet Weather and Dry Weather Bacteria TMDL for the Santa Monica Beach area in 2003 (EPA 2003). In 2012 the US EPA approved two TMDLs for DDT/PCBs and Debris for the Santa Monica Bay (EPA 2012a, EPA 2012b). While U.S. production of both DDT and PCBs stopped in the 1970s, these chemicals still persist in the natural environment and have a high affinity to bind and settle with sediment particles. The highly urbanized areas that surround the Santa Monica Bay, and the high usage of the area's beaches, have also created significant trash and debris loading into the Bay, resulting in repeated listings on the federal 303(d) and issuance of a Debris TMDL.

California Toxics Rule (CTR)

The California Toxics Rule (CTR) is a federal regulation issued by the US EPA that provides water quality criteria for potentially toxic constituents in receiving waters with human health or aquatic life designated uses in the State of California. CTR criteria are applicable to the receiving water bodies. The CTR establishes acute (short term) and chronic (long term) standards to those receiving water bodies. Due to the intermittent nature of stormwater runoff in southern California, "acute" toxics criteria are considered more applicable to stormwater conditions than "chronic"[11] criteria and are typically used in assessing California project impacts.

Clean Water Act Sections 404 and 401- Discharge of Materials

Hydrologic conditions of concern for a project may include in-stream changes in sediment transport, erosion, sedimentation, and channel stability. There is a nexus between these conditions of concern and the stream, habitat and species protection programs administered by the United States Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS).

Section 404 of the Clean Water Act regulates the discharge of dredged and fill material into waters of the United States, including wetlands. Activities in waters of the United States regulated under this program include physical alterations to drainages to accommodate storm drainage, bank stabilization, other flood control improvements, water resource projects such as dams and levees, infrastructure development, and conversion of wetlands to uplands for farming and forestry. US EPA and the USACE have issued Section 404(b)(1) Guidelines (40 CFR 230) that regulate dredge and fill activities, including the water quality aspects of such activities. Among other topics, these guidelines address discharges that alter substrate elevation or contours, suspended particulates, water clarity, nutrients and chemical content, current patterns of water circulation, water fluctuations (including those that alter erosion or sediment rates), and salinity gradients.

Section 401 of the Clean Water Act requires state water quality certification for anyone applying for a federal permit or license that may result in a discharge of pollutants into waters of the United States, verifying that the activity complies with all applicable water quality standards, limitations, and restrictions. Subject to certain limitations, no license or permit is issued by a federal agency until the Section 401 certification has been granted. CWA Section 404 permits and authorizations are subject to prior Section 401 certification by the State's Regional Water Quality Control Boards (RWQCBs).

[11] Acute criteria represent the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time (one hour) without serious adverse effects; chronic criteria equal the highest concentration to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects.

The application of both CWA Sections 404 and 401 are discussed in greater detail in DEIR Section 5.3, Biological Resources.

State

California Porter-Cologne Water Quality Control Act

The federal CWA places the primary responsibility for the control of surface water pollution and planning for the development and use of water resources on the states. It establishes certain guidelines for the development of state programs and allows US EPA to withdraw control from states with inadequate implementation mechanisms.

California's primary statute governing water quality and water pollution for both surface waters and groundwater is the *Porter-Cologne Water Quality Control Act of 1970* (Porter-Cologne Act), codified in California Water Code Sections 13000-14958. The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and one of the nine Regional Water Quality Control Boards (RWQCBs) power to protect water quality through the adoption of appropriate plans and policies, the regulation of discharges of waste to surface and groundwater, regulation of waste disposal sites, and to the right to issue orders for the cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must develop and adopt a Water Quality Control Plan ("Basin Plan") for its region. The Basin Plan must conform to the policies of the Porter-Cologne Act and those established by the SWRCB. To implement state and federal law, the Basin Plan lists beneficial uses for surface water and groundwater in the region, and provides narrative and numeric water quality standards to protect those beneficial uses. The Porter-Cologne Act also allows a RWQCB to include water discharge prohibitions applicable to specific conditions, areas, or types of waste within its regional plan.

California Coastal Commission

In 1976, the *California Coastal Act* (CCA) made the California Coastal Commission (CCC) a permanent institution responsible for working with municipal and county governments to minimize environmental degradation that can result from near shore development throughout California's coastal areas. The CCC's jurisdiction extends to areas within the California Coastal Zone (CCZ).[12] Coastal cities and counties located either partially or completely within the designated CCZ must manage conservation and development of coastal areas by developing and approving of Local Coastal Programs (LCP).[13] The local LCP must be submitted to the CCC for approval. Once approved, the LCP supersedes the governing powers of the CCC.

Currently, the unincorporated areas of Los Angeles County east of Ventura County, west of the city of Los Angeles, north of Malibu and within the CCZ, also referred to as the Santa Monica Mountains Coastal Zone (SMMCZ), are regulated by the Malibu LCP of 1986 (CCC, 1986). The Project site is located within the SMMCZ. In 2007, the Los Angeles County Board of Supervisors approved a new LCP for the Malibu area, entitled the Santa Monica Mountains Local Coastal Program. The new LCP is currently pending certification by the Coastal Commission. Once certified by the CCC, the 2009 Santa

[12] The California Coastal Zone is loosely defined as any inland area ranging from hundreds of yards to five miles inland, in which development may have a deleterious effect on the environment.

[13] A planning and regulatory program that typically includes a Land Use Plan (LUP) as well as additional maps, zoning ordinances and documents necessary to implement the LCP.

Monica Mountains Local Coastal Program will replace the 1986 Malibu LCP; however, for purposes of this EIR, the Project must be shown to meet the requirements of the 1986 LCP.

LCPs contain special policies, ordinances and programs that establish BMPs during construction activities and throughout the life of a project for the protection of marine and coastal water quality. These requirements are similar to Municipal Separate Stormwater System Permit (MS4) new and redevelopment requirements; however, they are subject to interpretation by the CCC.

Construction General Permit

Pursuant to the CWA Section 402(p), the SWRCB issued a statewide general NPDES Permit for stormwater discharges from construction sites (Water Quality Order 2009-0009-DWQ, originally adopted by the SWRCB on September 2, 2009 and modified by 2010-0014-DWQ [NPDES No. CAS000002]).

Under this Construction General Permit (2010) discharges of stormwater from construction sites with a disturbed area of one or more acres are required to either obtain individual NPDES permits for stormwater discharges or to be covered by the Construction General Permit. Coverage under the Construction General Permit is accomplished by preparing a Stormwater Pollution Prevention Plan (SWPPP), a Construction Site Monitoring Program (CSMP), and sediment basin design calculations. For projects located outside of a Phase I or Phase II permit area, a post-construction water balance calculation for hydromodification controls must be prepared. In all cases, a Notice of Intent must be completed and filed.

The primary objective of the SWPPP is to identify and apply proper construction, implementation, and maintenance of BMPs to a project so as to reduce or eliminate pollutants in stormwater discharges as well as authorized non-stormwater discharges from the construction site during construction. The SWPPP also outlines the monitoring and sampling program required for a construction site.

Water Discharge Permits

A General Dewatering Permit governs construction-related dewatering discharges within project development areas. This permit addresses discharges from temporary dewatering operations associated with construction and permanent dewatering operations associated with development. The discharge requirements include provisions mandating notification, sampling and analysis, and reporting of dewatering and testing-related discharges. Compliance with the requirements of the General Dewatering Permit is used as one method to evaluate project construction-related impacts on surface water quality.

Currently, drainage from the Project site travels south via Trancas Canyon Creek and discharges in the Laguna Point to Latigo Point Area of Special Biological Significance (LPLP-ASBS). The LPLP-ASBS covers 11,842 acres of coastal land and extends from Ventura County through the western portion of Los Angeles County. The LPLP-ASBS was designated in 1974 and is referenced as index number 24. The status of stormwater management in ASBS watersheds is evolving as the State works on issues with ASBS requirements and stormwater management.

Lake or Streambed Alteration Permit

The California Department of Fish and Wildlife (CDFW) is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, State law requires the proponent of a project that may impact a river, stream, or lake to notify the CDFW before beginning the project.

Section 1602 of the Fish and Game Code requires notification to the CDFW prior to the beginning of a project if the project will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake or use materials from a streambed. Similarly, under Fish and Game Code Section1602, before any State or local governmental agency or public utility begins a construction project that would: 1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake; 2) use materials from a streambed; or 3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake, it must first notify the CDFW of the proposed project. If the CDFW determines the Project may adversely affect existing fish and wildlife resources, a Lake or Streambed Alteration Agreement (1602 Agreement) is required.

Areas of Special Biological Significance

Areas of Special Biological Significance (ASBS) are areas designated by the SWRCB for the protection of sensitive marine species or biological communities from undesirable alterations in natural water quality (SWRCB 1979). The SWRCB has developed regulations and procedures related specifically to ASBS.[14] These regulations and procedures contain certain prohibitions related to flows into ASBS.

Recycled Water Policy

On February 3, 2009 the State Water Board adopted a *Recycled Water Policy* in an effort to move towards a sustainable water future. In this Policy, the State Water Board declared its independence from reliance on "the vagaries of annual precipitation" and adopted policies intended to move the State toward sustainable management of surface waters and groundwater, together with enhanced water conservation, water reuse, and the use of stormwater.

Among the goals included in this policy are the following:

- Increase the use of recycled water over 2002 levels by at least one million acre-feet per year by 2020 and at least two million acre-feet per year by 2030.
- Increase the use of stormwater over 2007 levels by at least 500,000 acre-feet per year by 2020 and at least one million acre-feet per year by 2030.
- Increase the amount of water conserved in urban and industrial areas by comparison to 2007 levels by at least 20 percent by 2020. Included in these goals is the substitution of as much recycled water for potable water as possible by 2030.

The State Water Board also indicated the Board expected to develop additional policies to encourage use of stormwater, water conservation, and conjunctive use of surface and groundwater to improve the use of local water supplies.

The Recycled Water Policy (RWP) provides appropriate criteria to RWQCBs for the issuance of permits for recycled water projects. The Policy addresses the benefits of recycled water use and encourages other public agencies to exercise a presumption in favor of the use of recycled water in evaluating the impacts of recycled water projects on the environment pursuant to CEQA.

The State Water Board also recognizes the need manage salts and nutrients on a basin-wide or watershed-wide basis through development of regional or sub-regional management plans. The Board also addresses the control of incidental runoff from landscape irrigation projects, recycled water groundwater

[14] Water Quality Control Plan for the Ocean Waters of California [Ocean Plan], and Revised Procedures for the Designation of ASBS [1999].

recharge projects, anti-degradation, control of emerging constituents and chemicals of emerging concern and incentives for use of recycled water.

Pursuant to the RWP, the Board established a Constituents of Emerging Concerns (CEC) Advisory Panel to address of the use of recycled water. The Panel is charged with the provision of guidance for the development of monitoring programs that assess potential CEC threats from various water recycling practices, including groundwater recharge/reuse and urban landscape irrigation.

A draft amendment to the RWP, issued on May 7, 2012, provides direction to the Regional Water Boards on monitoring requirements for CECs in recycled water. The monitoring requirements apply to the production and use of recycled water for groundwater recharge reuse by surface and subsurface application methods, and for landscape irrigation.

Only Groundwater Recharge Reuse facilities will be required to monitor for CECs and surrogates. Surface application and subsurface application facilities will have different mandatory CECs and a different monitoring schedule. Landscape irrigators will only have to monitor for surrogates.

Municipal Recycled Water Landscape Irrigation Use Permit

The *General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water,* or Landscape Irrigation General Permit (LIGP), regulates landscape irrigation with recycled water. Specified uses of recycled landscape irrigation water include any of the following: (i) parks, greenbelts, and playgrounds; (ii) school yards; (iii) athletic fields; (iv) golf courses; (v) cemeteries; (vi) residential landscaping and common areas (not including individually owned residential areas); (vii) commercial landscaping, except eating areas; (viii) industrial landscaping, except eating areas; and (ix) freeway, highway, and street landscaping. A permit is not required for individual recycled water users and does not cover use of harvested stormwater for irrigation.

<u>Producer and Distributor Responsibilities</u>

Producers must produce disinfected tertiary recycled water as defined by California Code of Regulations (CCR) Title 22. An Operations and Maintenance (O&M) Plan must be prepared and submitted to the State Water Board. The plan is included as part of the permit, and includes operation and maintenance/management of transport facilities and associated infrastructure necessary to convey and distribute recycled water from the point of production to the point of use. The permit also addresses BMPs, including general operations and maintenance, which producers and distributors must apply to manage recycled water and prevent water quality impacts.

<u>Usage</u>

The permit establishes terms and conditions of discharge to ensure that there is no unreasonable affect on beneficial uses of groundwater and surface water. These terms include minimum setback distances, signage, application control, and use restrictions, along with other preventative measures, such as backflow prevention and cross-contamination programs.

Onsite Wastewater Treatment Systems Policy

On June 19, 2012, the State Water Board adopted the *Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems* (OWTS Policy). This Policy establishes a statewide, risk-based, tiered approach for the regulation and management of OWTS installations and replacements and sets the level of performance and protection expected from OWTS. The OWTS Policy becomes effective on May 13, 2013.

The Policy sets standards for OWTS that are constructed or replaced, that are subject to a major repair, that pool or discharge waste to the surface of the ground, and/or that have affected, or will affect, groundwater or surface water to a degree that makes it unfit for drinking water or other uses, or causes a health or other public nuisance condition. The Policy also includes minimum operating requirements for OWTS that may include siting, construction, and performance requirements; requirements for OWTS near certain waters listed as impaired under CWA Section 303(d); requirements authorizing local agency implementation of the requirements; corrective action requirements; minimum monitoring requirements; exemption criteria; requirements for determining when an existing OWTS is subject to major repair, and a conditional waiver of waste discharge requirements.

The RWQCBs are required to incorporate the standards established in the OWTS Policy, or standards that are more protective of the environment and public health, into their basin plans within 12 months of the effective date of the OWTS Policy (May, 2013). The State Water Board and the RWQCBs oversee implementation of the OWTS Policy and local agencies (e.g., the County) have the opportunity to implement local agency management programs if approved by the applicable RWQCB.

California Green Building Standards Codes (CALGreen Codes)

In August 2009, the State of California enacted The California Green Building Standards Code (CALGreen Code) as part of the California Building Standards Code (Title 24). CALGreen measures are designed to improve public health, safety, and general welfare by utilizing design and construction methods that reduce the negative environmental impact of development and encourage sustainable construction practices.

CALGreen provides mandatory direction to developers of all new construction and renovations of residential and non-residential structures with regard to all aspects of design and construction, including but not limited to site drainage design, stormwater management, and water use efficiency. Required measures are accompanied by a set of voluntary standards designed to encourage developers and cities to aim for a higher standard of development.

Under CALGreen, all residential and non-residential sites are required to be planned and developed to keep surface water from entering buildings and to incorporate efficient outdoor water use measures. Construction documents are required to show appropriate grading and surface water management methods such as swales, water collection and disposal systems, French drains, and rain gardens and should include outdoor water use plans that incorporate weather or soil moisture controlled irrigation systems. In addition to these requirements, non- residential structures are also required to develop:

- A Storm Water Pollution Prevention Plan (SWPPP);
- An irrigation water budget for landscapes greater than 2,500 sq. ft.; and
- A quantified plan to reduce wastewater by 20 percent through use of water efficient fixtures or non-potable water systems.

CALGreen also offers a tiered set of voluntary measures to encourage residential and non-residential development that goes beyond the mandatory standards for reduced soil erosion, rainwater capture and infiltration, and use of recycled and/or grey water systems. Nonresidential developers are further encouraged to integrate low impact development (LID) BMPs that result in zero net increase in runoff due to development and can treat runoff from the 85th percentile storms.

The County has incorporated the California Green Codes into its Building Codes and enforces its provisions at the local permit level.

Local

Los Angeles County MS4 Permit

In 2012, the LARWQCB issued a NPDES Permit and Waste Discharge Requirements (Order No. R4-2012-0175) under the CWA and the Porter-Cologne Act for discharges of urban runoff in public storm drains in Los Angeles County. The Permittees are the County and cities within the County (collectively "the Co-Permittees"). This permit regulates stormwater discharges from municipal separate storm sewer systems (MS4s) in the area of the Project site. The NPDES permit details requirements for new development and significant redevelopment, including specific sizing criteria for treatment BMPs and flow control requirements. To implement the requirements of the NPDES permit, the County established development planning guidance and control measures that control and mitigate stormwater quality and quantity impacts to receiving waters as a result of new development and redevelopment. The County also implements other source detection and elimination programs (i.e. hydromodification controls) as well as maintenance measures.

New development/redevelopment projects exempted from hydromodification controls include projects that do not increase effective impervious area within the watershed, and projects located within drainages to waterbodies that are not susceptible to channel erosion or other hydromodification effects or Hydromodification Control Criteria, whichever are more stringent.

Increased volume, velocity, and discharge duration of stormwater runoff from developed areas may potentially accelerate downstream erosion and impair habitat-related beneficial uses in natural drainage systems. For this reason, the Permit stipulates that Permittees shall implement hydrologic controls to minimize changes in post-development hydrologic stormwater runoff discharge rates, velocities, and durations by maintaining the project's pre-project stormwater runoff flow rates and durations.

The four options provided by the MS4 Permit for meeting the hydromodification controls are: 1) designing the project to retain the stormwater runoff from the 95th percentile, 24-hour storm; 2) ensuring the runoff flow rate, volume, velocity and duration does not exceed the pre-development condition for the 2-year, 24-hour rainfall event; 3) ensuring the Erosion Potential (Ep) in the receiving water channel approximates 1, indicating an equilibrium state for work done on the stream; or 4) implementing the hydromodification requirements in the LA County LID Manual (2009).

Water Quality-Based Effluent Limitations (WQBELs) consistent with the assumptions and requirements of all available TMDL waste load allocations assigned to discharges from the co-permittees' MS4s also have been issued.

The County of Los Angeles is a Permittee under the State of California Regional Water Quality Control Board Los Angeles Region Order No. 01-182 NPDES Permit No. CAS00400 Waste Discharge Requirements For Municipal Storm Water And Urban Runoff Discharges Within The County of Los Angeles, and the Incorporated Cities Therein, Except The City of Long Beach. Discharges from MS4 Systems, which flow into receiving waters of the Los Angeles Region, are covered under County-wide waste discharge requirements contained in Order No. 96-054, (1996).

Water Quality Control Plan – Los Angeles Region (Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties.

The Los Angeles Region Basin Plan was adopted by the LARWQCB in 1994 and approved by the State office of Administrative Law in February 1995. The Los Angeles Regional Board's Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters.

Specifically, the Basin Plan (i) designates beneficial uses for surface and ground waters, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's antidegradation policy, and (iii) describes implementation programs to protect all waters in the Region. The Basin Plan serves as a resource for the Regional Board and others who use water and/or discharge wastewater in the Los Angeles Region.

The Basin Plan is reviewed and updated as necessary. The CWA directs states to review water quality standards every three years and modify or adopt new standards. For planning purposes the Regional Board uses the classification system developed by the California Department of Water Resources, which divides surface waters into hydrologic units, areas, and subareas. The Project site is located within the Malibu Hydrologic Unit, as discussed under existing conditions.

Storm Water Quality Management Program

The currently applicable MS4 Permit (2001) contains the following provisions for implementation of the Stormwater Quality Management Program (SQMP) by the co-permittees. The 2001 version of the SQMP remains in effect until the County submits a Notice of Intent (NOI) for an Enhanced Watershed Management Plan (EWMP), which is a requirement of the new MS4 Permit.

- *General Requirements* – Each Permittee is required to implement the SQMP to comply with applicable stormwater program requirements and implement additional controls where necessary to reduce the discharge of pollutants in stormwater to the maximum extent practicable (MEP).
- *BMP Implementation* – Permittees are required to implement the most effective combination of BMPs for stormwater/urban runoff pollution control.
- *SQMP Revision* – Permittees are required to revise the SQMP to comply with regional, watershed specific requirements, and/or waste load allocations for implementation of TMDLs for impaired waterbodies.
- *Responsibilities of the Principal Permittee* – The responsibilities of the Los Angeles County Department of Public Works (as the Principal Permittee) include, but are not limited to, coordinating activities necessary to comply with the NPDES permit, providing personnel and fiscal resources for SQMP updates and annual reports and summaries of reports required under the SQMP, and implementing a County-wide Monitoring Program and evaluating results of the monitoring program.
- *Responsibilities of Permittees* – Each Permittee is required to comply with the requirements of the SQMP applicable to the discharges within its boundaries.
- *Watershed Management Committees (WMCs)* – WMCs are comprised of a voting representative from each Permittee within the Watershed Management Areas (WMAs). WMCs are required to facilitate efforts and exchange of information between Permittees, establish additional goals for WMAs, prioritize pollution control efforts, monitor implementation of tasks designated for the WMA, and assess the effectiveness of and recommend revisions to the SQMP.
- *Legal Authority* –Permittees are granted the necessary legal authority to prohibit non-storm water discharges to the storm drain system.

The objective of the SQMP is to reduce pollutants in urban stormwater discharges to the "maximum extent practicable" (i.e. MEP standard) in order to attain water quality objectives and to protect the beneficial uses of receiving waters in Los Angeles County. Special provisions are provided in the MS4 permit to facilitate implementation of the SQMP. These provisions include:

- *BMP Substitution* – Substitution of site-specific BMPs is allowed provided the alternative BMP will meet or exceed pollutant reduction of the original BMP, the fiscal burden of the original

BMP is substantially greater than the proposed alternative, and the alternative BMP will be implemented within a similar time period.

- *Public Information and Participation Program (PIPP)* – This program requires the permittee to identify how public education needs were determined, who is responsible for developing and implementing the program, and the method used to determine its effectiveness.
- *Industrial/Commercial Facilities Control Program* – This program requires the permittee to develop a plan for managing stormwater runoff from industrial and commercial facilities. This program will track, inspect, and ensure compliance at industrial and commercial facilities that are sources of pollutants in stormwater.
- *Development Planning Program* – This program requires the permittee to implement a development-planning program that requires new development and redevelopment projects to minimize impacts from stormwater and urban runoff.
- *Development Construction Program* – This program requires the permittee to implement a program to control runoff from construction activity to minimize erosion and transportation of sediment and prevent non-stormwater discharges from equipment and vehicle washing.
- *Public Agency Activities Program* – This program requires municipalities to evaluate existing public agency activities that have an impact on stormwater quality (e.g., vehicle maintenance, landscape maintenance and weed control, and construction and maintenance of streets, roads, and flood control systems) and to develop a program to reduce stormwater impacts with a schedule for implementation.
- *Illicit Connections and Illicit Discharges Elimination Program* – This program requires each permittee to have a plan for finding and preventing illegal connections and discharges and a mechanism for enforcing against illegal connections and discharges.

Los Angeles County Low Impact Development Ordinance and Manual

Chapter 12.84 of the Los Angeles County Code requires the use of low impact development (LID) standards in development projects. This chapter applies to all development within the unincorporated area of the County after January 1, 2009.

Chapter 12.84 requires applicable development projects to:

- Mimic undeveloped stormwater and urban runoff rates and volumes in any storm event up to and including the "50-year capital design storm event," as defined by LACDPW;
- Prevent pollutants of concern from leaving the development site in stormwater as the result of storms, up to and including a water quality design storm event; and
- Minimize hydromodification impacts to natural drainage systems. To meet these standards, development projects that consist of five or more residential units, or non-residential development, shall comply with the following:

  The excess volume (ΔV, defined as the post-developed runoff volume minus the pre-developed runoff volume for the 85th percentile storm event) from each lot upon which such development is occurring shall be infiltrated at the lot level, or in the alternative, the excess volume from the entire development site, including streets and public right-of-way, shall be infiltrated in sub-regional facilities. The tributary area of a sub-regional facility shall be limited to five acres, but may be exceeded with approval of the Director of LACDPW. When infiltration of all excess volume is not technically feasible, on-site storage, reuse, or other water conservation uses of the excess volume is required and shall be implemented as authorized by the Director of LACDPW.

LACDPW has developed a LID Standards Manual that outlines stormwater runoff quantity and quality control development principles, technologies, and design standards for achieving the LID Standards of Large scale residential and nonresidential development projects are required to prioritize the selection of BMPs to treat stormwater pollutants, reduce stormwater runoff volume, and promote groundwater infiltration and stormwater reuse in an integrated approach to protecting water quality and managing water resources. The Manual states BMPs should be implemented in the following order of preference:

- BMPs that promote infiltration;
- BMPs that store and beneficially use stormwater runoff; and
- BMPs that utilize the runoff for other water conservation uses, including but not limited to BMPs that incorporate vegetation to promote pollutant removal and runoff volume reduction and integrate multiple uses, and BMPs that percolate runoff through engineered soil and allow it to discharge downstream slowly.

If compliance with the above LID requirements is technically infeasible, the project must incorporate design features demonstrating compliance with the LID requirements to the MEP standard. The LID goals of increasing groundwater recharge, enhancing water quality, and preventing degradation to downstream natural drainage courses are considered by DPW in making a determination of infeasibility.

The LID Standards Manual outlines site conditions where infiltration may not be possible:

- Locations where seasonal high groundwater is within 10 feet of the surface;
- Locations within 100 feet of a groundwater well used for drinking water;
- Brownfield development sites or other locations where pollutant mobilization is a documented concern;
- Locations with potential geotechnical hazards as outlined in a report prepared and stamped by a licensed geotechnical engineer;
- Locations with natural, undisturbed soil infiltration rates of less than 0.5 inches per hour that do not support infiltration-based BMPs;
- Locations where infiltration could cause adverse impacts to biological resources;
- Development projects in which the use of infiltration BMPs would conflict with local, State or federal ordinances or building codes; and
- Locations where infiltration would cause health and safety concerns.

The LID Standards Manual outlines where storage and reuse of the ΔV may not be possible:

- Projects that would not provide sufficient irrigation or (where permitted) domestic grey water demand for use of stored runoff due to limited landscaping or extensive use of low water use plant palettes in landscaped areas;
- Projects that are required to use recycled water for irrigation of landscaping;
- Development projects in which the storage and reuse of stormwater runoff would conflict with local, State or federal ordinances or building codes;
- Locations where storage facilities would cause potential geotechnical hazards as outlined in a report prepared and stamped by a licensed geotechnical engineer; and
- Locations where storage facilities would cause health and safety concerns.

The LID Standards Manual also contains drainage analysis requirements for hydromodification impacts to off-site property. The LID Standards Manual provides for exemptions from conducting a full analysis for hydromodification impacts to projects that meet one or more of the following standards, although project

applicants must still demonstrate the project mitigates for hydromodification impacts to the satisfaction of the Director of Public Works:

1. Projects that disturb less than one acre;
2. Projects which have less than 10,000 square feet of new impervious area;
3. Projects that do not increase impervious area or decrease the infiltration capacity of pervious areas compared to pre-project conditions;
4. Projects that are replacement, maintenance, or repair of an existing permitted flood control facility;
5. Projects within a watershed or subwatershed where a geomorphically-based watershed study has been prepared that establishes that the potential for hydromodification impacts is not present based on appropriate assessment and evaluation of relevant factors, including runoff characteristics, soil conditions, watershed size and conditions, channel conditions, and proposed levels of development within the watershed;
6. Projects that discharge directly or via a storm drain into concrete or significantly hardened channels, which in turn discharge into a sump area under tidal influence, or other receiving water that is not susceptible to hydromodification impacts; and
7. Projects that have hydrologic control measures that include sufficient subregional, regional, in-stream control measures, or a combination thereof such that hydromodification will not occur.

The existing LID Ordinance and Manual remains in effect until the Ordinance is updated to meet the requirements of the new MS4 Permit. The updated version may be more stringent than the MS4 Permit requirements. A draft is anticipated by the end of June 2013.

5.8.3 Pollutants of Concern and Significance Criteria

Surface Water Quality Pollutants of Concern

Pollutants of Concern (POCs) were selected based on the Clean Water Act Section 303(d) listing of constituents potentially impacting the beneficial uses of a receiving water, constituents listed in the CUP, and constituents that are anticipated or potentially could be generated by the Project at concentrations or loads that could cause impairment of beneficial uses. All of the listed POCs also pertain to the Santa Monica Bay.

The POCs associated with the current Clean Water Act Section 303(d) list for Trancas (Broad) Beach include:

- DDT
- Fecal coliform (pathogens)
- PCBs.

The POCs not associated with the current Clean Water Act Section 303(d) list for Trancas (Broad) Beach, but addressed in the CUP include:

- pH;
- Water soluble pesticides, fungicides, and herbicides;
- Dissolved oxygen;
- NO3-N, NO2-N, organic-N, NH3-N; and
- TP.

The following constituents, although not contained in the Clean Water Act Section 303(d) list for Trancas (Broad) Beach or the CUP, are considered POCs because they are commonly found in urban runoff at levels of concern and have the potential to cause impairment to beneficial uses:

- Sediments (TSS and turbidity);
- Trash & debris;
- Heavy metals (copper, lead, and zinc);
- Organic compounds;
- Hydrocarbons (oil and grease, polycyclic aromatic hydrocarbons [PAHs]);
- Oxygen demanding substances; and
- Temperature.

Constituents That Are Not of Concern

This section lists other constituents that are listed in the Basin Plan (1994), but are either not considered to be pollutants of concern for the Project or they are covered by constituents already considered POCs.

- *Biostimulatory substances.* Biostimulatory substances are substances that promote growth of algae and nuisance vegetation and include nutrients from fertilizers and organic wastes. The Basin Plan (1994) states that these substances shall not be present in concentrations that "promote aquatic growths to the extent that such growths cause nuisance of adversely affect beneficial uses." Nutrients are POCs, and biostimulatory substances are being addressed as Nutrients.
- *Chemical constituents:* The Basin Plan (1994) objective for chemical constituents states: "At a minimum, water designated MUN shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs) specified in Title 22 of the California Code of Regulations." Trancas Canyon Creek and Lake Sherwood are designated 'MUN'. The chemical constituents include trace metals, bacteria, and nitrate and are either subsumed by the POC category above or are not usually detected in urban runoff.
- *Chlorine, total residual:* Chlorine and its reaction products are harmful to aquatic life and therefore should not be present in surface water discharges at concentrations that exceed 0.1 mg/L. Wastewater disinfection is a common source of chlorine; however, the project's OWTS will use U.V. rather than chemicals such as chlorine to achieve a tertiary standard of treatment.
- *Color, taste, and odor:* The Basin Plan states that waters "shall not contain substances which impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin".
- *Exotic vegetation*: According to the Basin Plan (1994), exotic plants "shall not be introduced around stream courses to the extent that such growth causes nuisance or adversely affects beneficial uses. The Project is removing exotic vegetation and replacing with native vegetation.
- *Floating material*: The Basin Plan (1994) states that water shall not contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses. This POC is subsumed by Trash and Debris, and by Total Suspended Solids pursuant to the CUP and the Basin Plan.

Groundwater Quality Pollutants of Concern

The Project site will not contribute to a major groundwater basin as listed in the Basin Plan. Therefore, there are no Basin Plan groundwater quality objectives to meet. The Project area is situated above areas of perched groundwater (Sladden Engineering, 2012), so potential for minor shallow groundwater contamination exists. A lower aquifer has been identified under the site at a depth of 300 to 400 feet or more based on the depth of wells operating on the site. Water quality testing of lower aquifer groundwater indicates no exceedence of any POC pursuant to the standards of the Basin Plan. This reflects findings made in January 2013 – approximately 35+ years after the Malibu Golf Course was

constructed and began operation. Given the timeframe, it is reasonable to assume that little if any surficial POCs that might exists on the site have any effect on the condition of groundwater.

Pollutants of Concern from Infiltration of Stormwater Runoff

Most bacteria are filtered out by soils. Metals tend to associate with particulate matter and, if metals are not in dissolved form, their potential for infiltrating to groundwater is reduced. When metals do exist in the dissolved form in runoff, they often adsorb to soil particles and are filtered out by the soils; removal in the soil column largely prevents infiltration to groundwater.

Pesticides have been found in urban runoff from residential areas, especially in dry weather flows associated with landscape irrigation runoff. Heavy repetitive use of mobile pesticides on irrigated and sandy soils may contaminate groundwater. For a variety of pesticides found in stormwater, the potential for groundwater contamination is low when sedimentation or filtration pretreatment is used. There is no evidence presented that pesticides have infiltrated into the groundwater beneath the site.

Pollutants of Concern from Application of Recycled Water

The Project's reclaimed water would meet California Code of Regulations Title 22 standards for tertiary treatment so it would be appropriate for unrestricted use. This would require a specific effluent quality for BOD, TSS, total coliform, and turbidity. TDS would be used as an indicator of salinity and the more mobile constituents in reclaimed water, such as nitrate. As noted above, the baseline established for the so-called "lower aquifer" from which water is currently pumped, shows little indication of presence in any appreciable quantity, if detectable at all, of POCs that could potentially be presented in recycled water proposed to be applied to the golf course for irrigation. The wastewater system would utilize UV rather than chemicals to ensure purification of water sufficient to achieve a tertiary level of treatment for recycled water used on the site.

Hydrologic Conditions of Concern (Hydromodification)

Urbanization modifies natural watershed and stream hydrologic and geomorphic processes by introducing increased volumes and duration of flow via increased runoff from impervious surfaces and drainage infrastructure. Several studies have evaluated effects of increased runoff associated with the introduction of impervious surfaces and drainage facilities on geomorphic processes (SCCWRP, 2005a; Geosyntec, 2002). Potential changes to the hydrologic regime may include increased runoff volumes, frequency of runoff events, long-term cumulative duration, as well as increased peak flows. Urbanization also may introduce dry weather flows where only wet weather flows existed prior to development. These changes are referred to as "hydromodification."

Hydromodification intensifies sediment transport and can lead to stream channel enlargement and loss of habitat and associated riparian species. Under some circumstances development also can cause a reduction in the amount of sediment supplied to the stream system from upland areas, which also can contribute to stream channel incision and widening beyond hydrologic changes alone. A project that increases runoff due to impervious surfaces and traps sediment from upland watershed sources creates compounding effects.

A change to the Project site's hydrologic regime would be considered a condition of concern if the change could have a significant impact on downstream natural channels and habitat integrity, alone or in conjunction with impacts of other projects.[15]

[15] Geosyntec, *Final Water Quality and Hydromodification Technical Report for the Malibu Institute Project, 2013, Section 4.3*.

5.8.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the County of Los Angeles Environmental Checklist Form (Initial Study), the Project would have a significant environmental impact if it would:

a. Violate any water quality standards or waste discharge requirements;
b. Substantially deplete groundwater supplies of interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of local groundwater table (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted;
c. Substantially alter the existing drainage patterns of the site or area, including through alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site;
d. Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off-site;
e. Create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
f. Generate construction or post-construction runoff that would violate applicable stormwater NPDES permits or otherwise significantly affect surface water or groundwater quality;
g. Conflict with the Los Angeles County Low Impact Development Ordinance (L.A. County Code, Title 12, Ch. 12.84 and Title 22, Ch. 22.52);
h. Result in point or non-point source pollutant discharges into State Water Resource Board-designated Areas of Special Biological Significance;
i. Use onsite wastewater treatment systems in area with known geological limitations (e.g. high groundwater) or in close proximity to surface water (including, but not limited to, streams, lakes and drainage sources);
j. Otherwise degrade water quality;
k. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, or within a floodway or floodplain;
l. Place structures, which would impede or redirect flood flows, within a 100-year flood hazard area, floodway, or floodplain;
m. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam;
n. Place structures in areas subject to inundation by seiche, tsunami, or mudflow.

The criteria that will be used for evaluating the significance of a potential impact for each pollutant of concern based on the thresholds for significance are summarized below. The application of the criteria discussed below to a decision regarding significance requires an integrated or "weight of evidence" approach, rather than a decision based on any one of the individual criterion.

<u>CEQA Standard</u>

In order to determine significance under CEQA potentially substantial increases to pollutant concentrations and/or loads resulting from development of the Project are evaluated for significant adverse impacts to receiving water quality by comparing pre-development and post-development water

quality concentrations and loads. Analysis of potential significant impacts is based on the results of water quality modeling and qualitative analysis that takes into account water quality controls or BMPs that will be selected consistent with the Phase II General Permit (Small Municipal Separate Storm Sewer System MS4) Program adopted by the RWCB in February 2013 and effective July 2013 (Order No. 2012-0001).

Water Quality Criteria

Comparison of post-development water quality concentrations in the runoff discharge with benchmark receiving water quality criteria as provided in the Basin Plan (1994) and the CTR would facilitate analysis of the potential for runoff to cause or contribute to exceedances of receiving water quality standards or adversely affect beneficial uses. The water quality criteria would be considered benchmarks for comparison purposes only, as such criteria apply within receiving waters as opposed to directly to runoff discharges. Because water quality criteria are established to protect beneficial uses of receiving waters, analyses that result in no violations of water quality criteria support a finding of less than significant impact.

MS4 Permit Requirements for New Development

Satisfaction of the MS4 Permit requirements for new development and redevelopment would establish compliance with water quality regulatory requirements applicable to stormwater runoff. Under the regulations in the permit, the effectiveness of stormwater treatment controls is demonstrated by the ability to infiltrate, harvest, and/or biotreat runoff from the 85th percentile rainfall event or the 0.75-inch event, with other types of treatment allowed if these measures are demonstrated to be infeasible onsite.

Construction General Permit Requirements

All development projects that disturb one or more acres are required to obtain coverage under the e Construction General Permit, which requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that describes erosion and sediment control BMPs, and specifies the material management/non-stormwater BMPs to be used during the construction phase of development. Compliance with these requirements during the construction phase of a project, including implementation of BMPs consistent with Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology (BAT/BCT) would be assessed as part of the impact determination.

Factors relating to the assessment of BCT include: (1) reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived; (2) comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources; (3) the age of the equipment and facilities involved; the process employed; (4) the engineering aspects of the application of various types of control techniques; process changes; (5) non-water quality environmental impact (including energy requirements); and (6) other factors as the Administrator deems appropriate. US EPA has not issued regulations specifying BAT or BCT for construction site discharges.

Significance Thresholds for Hydrologic Conditions of Concern

Pursuant to the CEQA Guidelines Appendix G, significant adverse impacts to natural drainage systems created by altered hydrologic conditions of concern are presumed to occur if the Project would substantially alter the existing drainage pattern of a natural drainage, stream, or river causing substantial erosion, siltation, or channel instability in a manner that adversely affects beneficial uses.

Cumulative Impacts

The cumulative impacts analysis for the Project focuses on the Project's incremental contribution to significant adverse water quality and hydrologic impacts to the Trancas Canyon and Carlisle Canyon watersheds, taking into account the reasonably foreseeable water quality and hydrologic impacts of other projects that may develop impervious surfaces and urban land uses within these watersheds pursuant to the adopted General Plan. The cumulative impacts analysis considers the significance of a project's incremental contribution to identified significant cumulative water quality and hydrologic impacts to affected watershed and receiving waters. In the case of this Project, those include Trancas Canyon Creek, Lake Sherwood, Trancas (Broad) Beach, and Santa Monica Bay watersheds. The significance of the Project's contribution to cumulative conditions is evaluated in light of the water quality and hydrology impact mitigations achieved by the LID and other BMPs. The analysis also considers whether the Project, including proposed or required BMPs, together with future projects will comply with the Basin Plan (1994), the CTR, the MS4 General Permit, the Construction General Permit, and the General Dewatering Permit. In most cases, to the extent that a project mitigates its own impacts to a less than significant level, its contribution to existing or potential future cumulative conditions would be considered less than cumulatively considerable even in those cases where the cumulative condition itself, without the project, would be considered significant and unavoidable.

5.8.5 Project Impacts

Methodology

Hydromodification Model Overview

The hydrology and hydraulics of 2-, 5-, 10-, 25-, and 50-year, 50 year burned, and a Capital Flood (50 year burned and bulked) storm events were analyzed by Triad/Holmes and Associates (2013). The depth of this design storm is based on LADPW Hydrology Manual methodology, outlined in Chapter 5 – Rainfall and Design Storm Characteristics. Modeling used the Modified Rational Method (Modrat) and StormCad/HEC-RAS pursuant to the requirements of the County's LID Manual hydromodification criteria. The LAR04 program was used to implement the Modrat (a modified version of the County Public Works Department's F0601 program). Additionally, the LID calculator was used to model the LID/SUSMP 85th percentile 24-hour design storm to predict the volume requiring mitigation as a result of the Project.

The hydrology of pre- and post-development conditions was modeled for all runoff discharging into Trancas Canyon Creek from the 650-acre Project site. The area tributary to the Project discharge point was divided into sub-catchments that vary in size and catchment characteristics, including area, soil type, imperviousness, rainfall depth, and time of concentration, were determined. Times of concentration for each catchment for each storm event analyzed were determined using the County Public Works TC Calculator. Stream segments hydrologically connect catchments.

The hydraulics of the pre- and post-development conditions were modeled for Trancas Canyon Creek in HEC-RAS for a reach extending through the Project site per the methodology outlined in the 1982 LA County Flood Control District Hydraulics Design Manual (LA County Flood Control District, 1982). Cross-sections were spaced at 5- to 10-foot intervals for the entire reach depending on reach slopes. The flow rates developed for the 2-, 5-, 10-, 25-, and 50-year storms based on the Modrat analysis discussed above were used as hydrologic input to the HEC-RAS model. Specific model inputs are described in more detail in the Triad/Holmes and Associates (2013) Malibu Institute Drainage Concept/Hydrology Report for TR071735 in Appendix G of this Draft EIR.

Project Design Feature and Regulatory Compliance Assumptions

Water quality and hydromodification BMPs described in detail in the Final Water Quality and Hydromodification Report (2013) were reflected in post-development hydrologic models performed by Triad/Homes Associates. It was not feasible to add hydrologic constraints within the LAR 04 model to represent the proposed detention basins as illustrated in **Figure 5.8-5**. However, because the detention basins were designed to produce flows equal to or less than the pre-development conditions, the pre-development hydrology conditions were used in these areas within the LAR 04 model. Separately, the detention basins were modeled to determine the size capable of reducing post-development peak flow rates, velocities, depth/width ratios, and storm volumes to pre-development conditions for the 2-, 5-, 10-, 25-, and 50-year, and Capital Flood storm level through the fourth day. The storm drains within the golf course running from the sediment basins that ring the site to the water feature within the golf course are considered undersized and therefore were not modeled, except for the existing 66" RCP storm drain. Therefore, the runoff on the golf course was modeled as surface flow except when conveyed through the above-referenced storm drain. Additional details and assumptions can be found in the Malibu Institute Drainage Concept/Hydrology Report for TR071735 prepared by Triad/Holmes Associates (Triad/Holmes Associates, 2013) in Appendix G of this Draft EIR.

Water Quality Model Overview

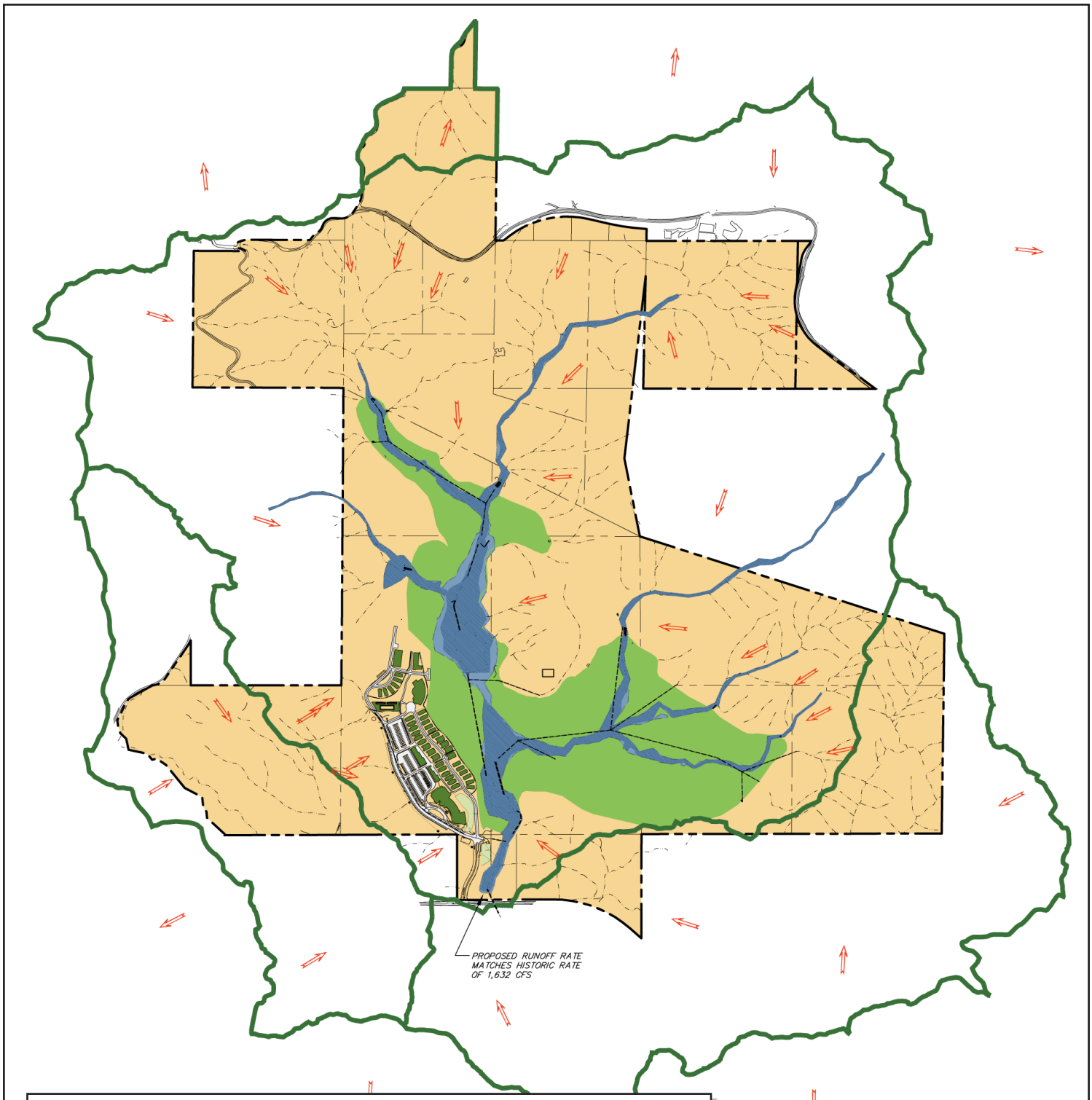
To estimate average stormwater runoff volumes as well as pollutant loads and concentrations, a spreadsheet-based pollutant loadings model was constructed. Inputs include Project land uses, percent imperviousness, average annual rainfall, drainage area boundaries and acreages, pollutant event mean concentrations (EMC) by land use type, BMP types, BMP effluent concentrations, BMP percent volume reduction, and BMP percent volume capture. The calculations were done for the existing, proposed without BMPs, and proposed with BMPs conditions.

Percent imperviousness values were computed for each of the 19.5-acre development area, the 629.2-acre remaining area, and the 650-acre total analysis area (See **Table 5.8-6**), based on the imperviousness data provided in the Water Quality and Hydromodification Technical Report (Geosyntec, 2013). The overall imperviousness rate for the existing site was determined to be 0.34. There is an overall decrease in imperviousness on the Project site under Project conditions despite the increase in development as a result of the addition of green roofs and pervious pavement, which are considered to be only partly impervious in the table below, covering the impervious building rooftops and replacing approximately half of the impervious pavement.

Table 5.8-6
Comparison of Impervious Areas within the Project Site in Pre- and Post-Development Conditions

Total Property Acreage		Unit	Development Area	Remaining Area	Total Site
		acres	20.8	629.2	650
Development Conditions					
Existing	Imperviousness	%	28%	0.3%	1.2%
	Impervious acreage	acres	5.8	2.0	7.8
Post-development	Imperviousness	%	12%	0%	0.6%
	Impervious acreage	acres	2.6	1.5	4.1
	Partly Pervious	%	51%	0.08%	1.7%
	Partly Pervious acreage	acres	10.5	0.5	11.0

Source: Geosyntec, Water Quality and Hydromodification Technical Report (2013).
Impervious: pavement, buildings, and impervious golf cart pathways.
Partly Pervious: green roofs, pervious pavement, pervious golf cart pathways.



Legend

- = PROJECT SITE AND BOUNDARY
- = PROPOSED GOLF COURSE
- = PROPOSED BUILDINGS WITH GREENROOFS
- = PROPOSED ROADS AND PARKING
- = MAIN TRIBUTARY BOUNDARY
- 4 = SEDIMENT BASIN AND NUMBER PER TERACOR PLATE 2
- = FLOW DIRECTION
- = PROPOSED 100 YEAR INUNDATION AREA
- = PROPOSED 25 YEAR INUNDATION AREA
- = PROPOSED 100 YEAR STORM LIMIT
- = PROPOSED 50 YEAR STORM LIMIT
- = PROPOSED 25 YEAR STORM LIMIT
- V_{100}=5.8 fps = 100 YEAR STORM WATER VELOCITY AND FLOW DIRECTION UNLESS NOTED AS 50 YEAR STORM WATER VELOCITY AND FLOW DIRECTION

Storm Frequency	2yr, 5yr, 10yr, 25yr, 50yr, 100yr
Rainfall Depth (Isohyet)	50yr 24 Hour = 8.8”
Soil Type	028, 031, 045
DPA Zone	04 Debris
Burn Factor	1
Bulking Factor	1
% Imperviousness	Varies

Revised: Triad/Holmes Associates Civil Engineering Land Surveying, March 2013.

THE MALIBU INSTITUTE PROJECT EIR

ENVICOM CORPORATION

Drainage Project Site

FEET 0 600 1,200

FIGURE 5.8-5

Average annual pollutant loads were computed for each land use by multiplying average annual runoff volumes by the corresponding geometric mean pollutant event mean concentration (EMC), based on local land use runoff monitoring data from the County. Runoff coefficients were provided by Triad/Holmes Associates for each type of land cover (impervious pavement, buildings, landscape areas, bioretention, pervious and impervious pavement, green roof, undeveloped, and golf course) which were then weighted and redistributed based on the broader land use categories assigned to the Project site, as shown in **Table 5.8-7**.

Table 5.8-7
Runoff Coefficients (C) Assigned to Each Land Use

Land Use	Existing Condition		Proposed Condition	
	Acres	C	Acres	C
HDSF Residential	0.0	N/A	9.6	0.25
Commercial	12.8	0.50	11.3	0.47
Open	522.2	0.02	522.2	0.02
Golf Course	115.1	0.114	107.0	0.109
Total	650	0.046	650	0.046
Source: Geosyntec, Water Quality and Hydromodification Technical Report (2013) Table 6-2.				

For this modeling effort, recent regional EMC data from the County were applied (LACDPW, 2001). These data were used because the sampling location was relatively close to the development area of the Project site and because the monitored land uses were representative of the proposed development (except the golf course). Data from developed land uses that were similar to the uses anticipated for this Project were selected to the extent possible.

BMP/LID Performance

The proposed LID and treatment control BMPs for the Project are described in both the Triad/Holmes Drainage Concept/Hydrology Report for TR071735 (2013) and the Geosyntec Water Quality and Hydromodification Report (2013). They include:

> ***Pervious Pavement**:* For the purpose of LID calculations, the rates for areas of pervious pavement were assumed to be 0.95 imperviousness, in order to not duplicate the advantages of the pervious storage capacities (i.e., conservative assumption in that the imperviousness would actually be expected to be lower). There are no freeze issues in this area, so storage is located directly under the pervious pavement. None of the pervious paved surfaces exceed 10% maximum (recommended by the LID manual).
>
> ***Bioswales**:* The bioswales have been designed to include bioretention. A void factor of 0.4 is assumed for the rock bioretention [volume (area of gravels beneath under drains)]. Storm drainage pipes are included for collection of other runoff and to limit velocities in the bioswales.
>
> ***Green Roofs**:* Green roofs are used to intercept rain that falls directly on the green roof area. For the purpose of the LID calculations, these areas have an assumed 0.95 impervious coefficient, (which is much higher than how a green roof will behave, unless the soils are saturated).

***Infiltration Basins**:* At the outer edges of the Project area, there are impervious paved surfaces. The runoff from these is directed to infiltration basins to treat the final runoff from the site.

Runoff from each of six drainage areas within the development area enters some combination of the BMPs listed above, with all runoff ultimately being directed into the infiltration and detention basins before leaving the Project site. The detention basin is designed to retain approximately 4,500 cf, infiltrating approximately 1.5 inches of water. The balance of the prescribed detention amount required to meet the historic rate standard (or an additional 28,854 cf) will be detained and infiltrated by the storage capacity provided by a combination of the balance of the LID BMPs cited above, the sand cap installed on the golf course, the holding capacity of the golf course itself and the capacity of the 66-inch storm drain. Consistent with existing conditions, sediment will continue to be collected in existing sediment basins located along the perimeter of the golf course, as well as in areas of the golf course where velocities drop below two feet per second. (Triad/Holmes 2013; Geosyntec 2013).

Hydromodification controls, which include preservation to the extent feasible of hydrologic conditions through the preservation of the natural condition of 514 acres of the 650 acre site, site design BMPs that route stormwater flows to vegetated areas, the previously described LID BMPs and detention facilities in have been selected and applied to the Project such that all off-site drainage impacts caused by changes in peak flow rates, velocities, depth/width ratios, and storm volumes are fully mitigated for the SUSMP, LID, 2, 5, 10, 25, and 50-year storm events. The sand cap underlying the golf course would be sized to meet or exceed the County's flow and volume-based BMP design requirements as described in the MS4 Permit. An assumption of 80 percent volume capture is considered reasonable and conservative. Thirty percent volume reduction was conservatively estimated for the Project's infiltration basins. The SUSMP and LID design storm events are assumed to be the equivalent of the 85th percentile 24-hour runoff event (County of Los Angeles, 2009). Flow control facilities that result in post-development peak flow rates, velocities, depth/width ratios, and storm volumes less than or equal to existing conditions are considered to comply with this performance standard.

Average annual pollutant concentrations were determined by dividing average annual total pollutant loads by average annual runoff volumes for each pollutant and for the existing and proposed Project site condition – see **Tables 5.8-8** and **5.8-9,** below.

Table 5.8-8
Predicted Average Annual Runoff Volume and Pollutant Loads for the Project

Parameter	Units	Existing Conditions	Proposed Conditions w/o BMPs	Proposed Conditions with BMPs	Percentage Change Existing vs. Proposed w/BMPs
Volume	Acre feet	53.7	53.4	44.6	-17%
TSS	lb/year	15,508	16,333	13,876	-11%
Total Nitrogen	lb/year	375	381	270	-28%
NO3-N	lb-N/year	104	107	95	-9%
TKN	lb/year	271	274	175	-35%
Total Phosphorus	lb/year	39.0	39.2	25.6	-34%
Total Copper	lb/year	2.192	2.168	1,348	-38%
Total Lead	lb/year	0.731	0.776	0.573	-22%
Total Zinc	lb/year	10.391	9.788	4.752	-54%
Source: Geosyntec, Water Quality and Hydromodification Technical Report (2013) Table 7-1.					

Table 5.8-9
Comparison of Predicted Pollutant Concentrations with Water Quality Criteria

Parameter	Units	Predicted Average Annual Project Stormwater Discharge Concentrations	MGC CUP (1999) Required Levels	CTR Benchmarks[b]
TSS	mg/L	115	narrative	NA
Total Nitrogen[c]	mg/L	2.22	1.00	NA
NO3-N	mg-N/L	0.78	-	NA
TKN	mg/L	1.44	-	NA
Total Phosphorus	mg/L	0.21	0.10	NA
Total Copper	mg/L	0.011	NA	0.020
Total Lead	mg/L	0.005	NA	0.128
Total Zinc	mg/L	0.039	NA	0.161

Source: Geosyntec, Water Quality and Hydromodification Technical Report (2013) Table 7-3

a. "Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses."

b. CTR freshwater acute CMC limits for metals (assume 10th percentile hardness, 142 mg/L as CaCO3

c. Nitrogen levels shall be monitored through the measurement of Nitrate-N, nitrite-N, organic-N, and ammonia-N. The combined nitrogen levels from these sources shall not exceed 1 mg per liter.

5.8.6 Project Impacts

Water Quality

Threshold: Would the project violate any water quality standards or waste discharge requirements?

Water quality and waste discharge standards of concerns potentially associated with the Project were modeled and then applied to the Project as follows:

Impact Assessment for Modeled Pollutants of Concern

In this section, model results for each pollutant are evaluated in relation to the significance criteria contained in the LARWQCB Basin Plan and BMPs were modeled pursuant the Los Angeles Countywide Structural BMP Prioritization Methodology (2006):

(1) Comparison of post-development and pre-development stormwater quality concentrations and loads;

(2) Comparison with MS4 Permit, Construction General Permit, and General Dewatering Permit requirements for new development; and

(3) Evaluation in light of receiving water benchmarks.

Pursuant to the third criterion, predicted runoff pollutant concentrations in the post-development condition with runoff treatment BMPs are compared with benchmark receiving water quality criteria as provided in the Basin Plan (1994) and the CTR. A weight of evidence approach is employed in this analysis considering the various significance criteria.

Results from the water quality model for significance criterion 1 are reported in Tables 5.8-7 and 5.8-8, which show predicted mean annual pollutant loads (lbs/yr) and mean annual concentrations, respectively,

for the modeled pollutants of concern for the Project. Projections are reported for three Project conditions:

(1) Existing condition,
(2) Proposed conditions without BMPs, and
(3) Proposed conditions with BMPs.

The Project has incorporated numerous Best Management Practices (BMPs) into its design in order to insure that the Project would meet water quality and waste discharge requirements. These include green roofs, a sand cap under the turf of the golf course, the use of pervious pavement over 51 percent of the paved area of the site, bioretention basins and swales, and the installation of subsurface detention basins (2) with treatment capacity and the ability to retard flows to ensure measured storm flow release.

Tables 5.8-8 and 5.8-9 show that for all modeled pollutants, the proposed site conditions with BMPs included would yield lower pollutant loads and concentrations than the proposed site with no BMPs and the existing site conditions. These results occur because the Project would primarily redevelop areas that currently do not receive BMP treatment, and the overall imperiousness of the Project site would decrease because of the green roofs, pervious pavement, and bioretention, which are taken into account in the runoff coefficients of each land use and factor into load and volume reductions. However, the aforementioned BMPs are not taken into account in the concentration reductions of the modeled constituents and only reductions due to the detention basin were modeled as treatment for the Project site. Actual concentration reductions likely would be greater than shown in the model results with consideration of upstream BMP effects.

Total Suspended Solids

The TSS concentration would be expected to increase marginally from 106 mg/L in the existing condition to 115 mg/L in the proposed condition (with BMPs), while the average annual TSS load would be expected to decrease by 11% in Project stormwater runoff due to volume loss and treatment capabilities of the proposed BMPs. The slight increase in TSS concentration only would be partly attributed to the introduction of HDSF Residential land use[16] (TSS EMC = 124 mg/L), which has a higher EMC value than the golf course land use (TSS EMC = 38 mg/L) it is replacing and by the volume reduction achieved by the detention basins, which could increase concentration levels. When the 20.8-acre development area is analyzed separately, however, the concentration would decrease from 63 mg/L in the existing condition to 45 mg/L in the proposed condition (with BMPs), illustrating the development would not cause the increase in TSS concentrations.

The water quality criterion for TSS is narrative, and the predicted average annual TSS concentration in stormwater runoff from the Project site with implementation of BMPs could not be quantitatively assessed relative to a quantitative water quality criterion. With implementation of measures such as the Project's comprehensive site design, source control, and treatment control strategy, and the low predicted Project concentration, and compliance with the County Code and regulations, the TSS in stormwater runoff from the Project would not be expected to "cause a nuisance or adversely affect beneficial uses in the receiving waters," consistent with the Basin Plan's (1994) narrative objective, reducing the Project's impacts on beneficial uses to a less than significant level. (**Class III**)

[16] The proposed Project does not include residential uses; however, this category is used for the purpose of estimating the bungalows.

Nutrients

Average annual loads for TKN and TP are predicted to decrease with implementation of the Project by 35% and 34%, respectively. Average annual concentrations are similarly predicted to decrease through implementation of treatment BMPs by 22% and 21%, respectively. Although the nitrate concentration is expected to increase by 10%, the nitrate load is expected to decrease by 9% due to volume loss through implementation of BMPs. Also, the total nitrogen load (sum of TKN and nitrate loads) is predicted to decrease, from 375 lb/yr to 269 lb/yr (28% decrease).

The Basin Plan (1994) contains biostimulatory-based desired goals for total nitrogen. The combined predicted average annual concentration for nitrate and TKN is higher than the desired goal for total nitrogen of 1.0 mg/L. The predicted average annual concentration for TP is also higher than the desired goal of 0.1 mg/L. However, if no BMPs were implemented at the site, the proposed conditions would increase these pollutant concentrations above the concentrations estimated for the existing conditions and land uses; with the BMPs, the Project would improve nutrient loadings as compared to current conditions for TKN and TP. Nitrate concentration also would increase according to the model because the largest source and highest concentration of nitrate would be from open space under the existing and proposed conditions. However, in the proposed condition, there would be less runoff from the development area than in the existing condition, which would have the effect of providing less "dilution" for the runoff from open space and would explain the increase in concentration.

Source control BMPs target nutrients and include the use of integrated pest management practices for golf courses and common area landscape management, the development of a Golf Course Water Quality Management Plan (including plans for optimized fertilizer application practices) , the use of native and/or non-invasive vegetation, and the use of efficient irrigation systems in common and golf course areas, all consistent with the County's LID requirements.

Implementation of comprehensive site design, source control, and treatment control BMPs would achieve a significant overall reduction in nutrient loads as compared to the existing condition but would not achieve results consistent with the targets established by the CUP. However, with consideration for the type of use proposed and the current available technology and material available, the Project would meet the Best Available Technology (BAT) standard of EPA and the MEP standard of the County and, on that basis, Project impacts would be less than significant (**Class III**).

Metals

Average annual loads for total copper, total lead, and total zinc are predicted to decrease by 38%, 22%, and 54%, respectively, from the existing to proposed condition, based on changes in land use, volume reduction, and treatment within BMPs. Average annual concentrations of these metals are also predicted to decrease by 26%, 6%, and 45%, respectively. Specific source controls that would be implemented to minimize increases in trace metals include directing drainage from impervious areas to vegetated BMPs. Source controls that target metals include education and training for site operators and information for guests, as well as proper maintenance of BMPs.

The CTR criteria are the applicable water quality objectives for protection of aquatic life and are expressed for acute (1 hour) and chronic (4-day average) conditions; however, only acute conditions were considered to be applicable for Project stormwater discharges because the duration of stormwater discharge is consistently less than 4 days. The comparison of the predicted average annual stormwater discharge concentrations for the proposed condition to the benchmark CTR values shows that total lead, copper, and zinc concentrations would be less than the benchmark water quality criteria. With implementation of previously described water quality BMPs, the Project's impacts on surface water

quality resulting from the discharge of metals impacts would be reduced to a less than significant level (**Class III**).

Impact Assessment for Pollutants of Concern Addressed Without Modeling

The following pollutants of concern were analyzed *qualitatively* because limited storm water monitoring data was available, the constituents are more difficult to measure (and therefore sufficient monitoring data is not available or is not statistically reliable), available data indicates levels of the pollutants below detection limits, and/or meaningful determinations about the effect of the pollutants on water quality could not be made from a quantitative analysis:

- Pesticides;
- Pathogens;
- Hydrocarbons;
- Trash and debris;
- Oxygen demanding substances;
- Temperature; and
- pH.

<u>Pesticides</u>

Pesticides would be of concern where maintenance practices involved the application of persistent organochlorine pesticides on the Project's golf course. In the developed condition, pesticides would be applied to common landscaped areas, residential lawns and gardens, and the golf course.

Diazinon and chlorpyrifos are two pesticides of concern due to their potential toxicity in receiving waters. The EPA has banned all indoor uses of diazinon in 2002 and stopped all sales for all outdoor non-agricultural use in 2003 (EPA, June, 2002). With no agricultural uses planned for the Project, diazinon would not be used. The EPA also has phased out most indoor and outdoor residential uses of chlorpyrifos and has stopped all non-residential uses where children may be exposed. For these reasons, the use of chlorpyrifos on the Project site would not occur, with the possible exception of emergency fire ant eradications until such time as reasonable alternative products become available and only with appropriate application practices in accordance with the golf course and landscape pesticide management program.

Source control measures such as education programs for owners, occupants, and employees in the proper application, storage, and disposal of pesticides would be used post-development. Structural treatment controls are less practical because of the variety of pesticides and wide range of chemical properties that affect the ability to treat these compounds. However, most pesticides, including historical pesticides that may still be present on the site, are relatively insoluble in water and therefore would tend to adsorb to the surfaces of sediment, which would be stabilized with development or, if eroded, would be settled or filtered out of the water column by the Project's water quality treatment BMPs. Treatment in the bioretention areas, vegetated swales, media filtration areas, and detention basins would achieve some removal of pesticides from stormwater and TSS would be reduced. Careful selection, storage and application of these chemicals in common areas would help reduce adverse water quality impacts. Removal of sediments using the treatment and source control BMPs also would remove sediment-adsorbed pesticides. Based on the incorporation of previously described site design, source control, and treatment control BMPs and compliance with County Code and regulations, potential post-development impacts associated with pesticides would be less than significant (**Class III**).

Pathogens

Pathogens are viruses, bacteria, and protozoa that can cause illness in humans. Identifying pathogens in water is difficult as the number of pathogens is exceedingly small, requiring sampling and filtering large volumes of water. Traditionally water managers have relied on measuring "pathogen indicators", such as total and fecal coliform, as an indirect measure of the presence of pathogens. Although such indicators were considered reliable for sewage samples, indicator organisms are not necessarily reliable indicators of viable pathogenic viruses, bacteria, or protozoa in stormwater because coliform bacteria, in addition to being found in the digestive systems of warm-blooded animals, are also found in plants and soil. There are numerous sources of pathogen indicators, including birds and other wildlife, as well as domesticated animals and pets, soils, and plant matter. Anthropogenic sources, which would be the focus of the Project BMPs, may include poorly functioning septic systems, cross-connections between sewer and storm drains, and the utilization of outdoor areas for human waste disposal by people without access to indoor sanitary facilities.

EPA has compiled an extensive database on stormwater (Pitt, et al, 2003). These data were drawn from 65 programs in 17 states throughout the United States and indicate that median fecal concentrations range from about 4,500 to 7,700 MPN/100 mL for a range of commercial and residential land uses, compared to a median value of around 3,000 MPN/100 mL for open space and vacant land.

The primary sources of fecal coliform from the Project site would be sediment, wildlife, and growth in the storm drain system itself. Other sources of pathogens and pathogen indicators, such as cross-connections between sanitary and storm sewers, would be unlikely given the proposed modern wastewater treatment facilities proposed for the Project and inspection and maintenance practices following the facility's construction.

The treatment processes that would be used at the Project site in bioswales would involve sunlight (ultraviolet light) degradation, sedimentation, and infiltration, all of which would reduce pathogen concentrations and loads. The proposed swales would be located on relatively infiltrative soils. Pathogen removal by filtration is a common and effective practice in wastewater treatment. In addition to removal/treatment by vegetated swales, sand caps would be proposed for the Project's golf course. Data derived from a study in Dallas, Texas, measuring effects of four sand filters, indicated a range of removals from 37 percent to 83 percent for fecal coliform, and 25 percent to 81 percent for fecal streptococci. The Southwest Florida Water Management District also conducted research on the use of filtration to remove bacteria and found significant ($p<0.05$) reductions in total and fecal coliform bacteria and the other indicators were observed between inflow and outflow samples for sand filtration.

As previously noted, the Project would include a comprehensive set of source and treatment control BMPs selected to manage pathogen indicators and to reduce their loadings. With implementation of these BMPs and compliance with County Code and regulations, potential post-development impacts from pathogens would be less than significant (**Class III**).

Hydrocarbons

Various forms of hydrocarbons (oil and grease) are common constituents associated with urban runoff; however, these constituents are difficult to measure and are typically measured with grab samples, making it difficult to develop reliable EMCs for modeling. Based on this consideration, hydrocarbons were not modeled but are addressed qualitatively.

The concentration of hydrocarbons in runoff would be expected to decrease under post-development conditions due to the treatment BMPs that would be installed with development of the Project. In

addition, source control BMPs that address petroleum hydrocarbons would include educational materials on used oil programs, carpooling, and public transportation alternatives to driving, BMP maintenance, and street sweeping private streets. The parking lot site design, source controls, treatment BMPs and vegetation and soils within the treatment control BMPs would adsorb the low anticipated levels of emulsified oils in the Project's stormwater runoff, significantly reducing discharge of hydrocarbons and visible film in the discharge or the coating of objects in the receiving water. Hydrocarbon concentrations in post-development runoff discharges would be a less than significant level of impact on receiving waters (**Class III**).

During the construction phase of the Project, hydrocarbons in site runoff could result from construction equipment/vehicle fueling or spills. Pursuant to the Construction General Permit, the Construction Stormwater Pollution Prevention Plan (SWPPP) must include BMPs that address proper handling of petroleum products on the construction site, and those BMPs must effectively prevent the release of hydrocarbons to runoff based on the Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology standards. PAH that are adsorbed to sediment during the construction phase would be effectively controlled through the use of the erosion and sediment control BMPs previously described. With these BMPs in place, construction-related impacts to water quality due to hydrocarbons would be reduced to a less than significant level (**Class III**).

Trash and Debris

Trash refers to any human-derived materials including paper, plastics, metals, glass and cloth. Debris is defined as any organic material transported by stormwater, including leaves, twigs, and grass clippings (DLWC, 1996). Trash and debris is often characterized as material retained on a 5-mm mesh screen. It contributes to the degradation of receiving waters by imposing an oxygen demand, attracting pests, disturbing physical habitats, clogging storm drains and conveyance culverts and mobilizing nutrients, pathogens, metals, and other pollutants that may be attached to the surface. During wet weather events, gross debris deposited on paved surfaces could be transported to storm drains, where it could be eventually discharged to receiving waters. Trash and debris also could be mobilized by wind and transported directly into waterways. Trash and debris could impose an oxygen demand on the water body as organic matter decomposes.

During the Project's operational phase, BMPs including source control and treatment BMPs would minimize the adverse impacts of trash and debris and would reduce them as compared to existing conditions. Proposed source controls include public education and storm drain stenciling, which would be effective in reducing the amount of trash and debris that would be available for mobilization during wet and dry weather events. Other mitigation would include implementation of common area litter control practices that would include a litter patrol, covered trash receptacles, and emptying of trash receptacles in a timely fashion. Catch basin inserts would be provided for parking lot inlets when stormwater is routed to a below ground inlet. These BMPs would remove or prevent the release of floating materials, including solids, liquids, foam, or scum, from runoff discharges and would prevent impacts on dissolved oxygen in the receiving water. With implementation of source control and treatment BMPs and compliance with County Code and regulations, the Project's post- development trash and debris impacts on receiving waters would be less than significant (**Class III**).

During the construction phase, there would be potential for an increase in trash and debris loads due to lack of good housekeeping practices on the part of contractor and construction workers. As required by the Construction General Permit, the SWPPP prepared for the Project site would include BMPs for trash control (catch basin inserts, good housekeeping practices, etc.) that would monitored by the County and the RWQCB. Compliance with SWPPP requirements that meet the BAT/BCT standard would reduce impacts from trash and debris during the construction phase to a less than significant level (**Class III).**

Oxygen Demanding Substances

Concentrations of the oxygen demanding substances, including TN and TP, in stormwater runoff, are expected to decrease after Project construction. BMPs for application, use, and management of fertilizers during the pre- and post-construction periods would be a part of the integrated Fertilizer and Pest Management Program required by the County. Structural controls such as proper covering of trash/food service areas and landscape maintenance storage areas would be employed by the Project to reduce the amount of rainfall that would come in contact with refuse, oil, grease, and other organic matter such as grass clippings. Project compliance with the provisions of the Fertilizer and Pest Management Program and compliance with the requirements of the MS4 Permit and implementation plans would serve to reduce Project water quality impacts and reduce release and downstream loading of Project-generated oxygen demanding substances to a less than significant level (**Class III**).

Temperature

Infiltration basins, pervious pavement, green roofs, bioretention, sand caps, and bioswales sized to meet or exceed regulatory requirements would be used to treat stormwater from the Project site and reduce potential water quality impacts. These BMPs would reduce water temperature by slowing down runoff, increasing infiltration, increasing base flows, and reducing the total amount of water discharging to the creek. Beneficial uses for the Project's receiving waters include warm freshwater habitat. Accordingly, warm water runoff resulting from post-development BMPs would be less than significant even without implementation of the proposed BMPs (**Class III**).

pH

The Basin Plan (1994) does not consider reduction of the pH of inland surface waters 6.5 or the increase of the pH above 8.5 as a result of waste discharges either desirable or adversely impactful. The Basin Plan provides for ambient pH levels that do not change more than 0. 5 units from natural conditions as a result of waste discharge. Existing data from the Project site's Sample Site 5 near the culvert under Encinal Canyon Road demonstrates the existing average pH level at the most downstream point of the site is 7.35. These results provide consistent supporting evidence that effluent pH from the Project site would fall within the acceptable pH range as defined by the Basin Plan and would be less than significant (**Class III**).

Dry Weather Related Impacts to Water Quality

Water quality effects during dry weather conditions may be considered significant pursuant to existing standards. Pollutants that tend to be associated with suspended solids (e.g., phosphorus, most trace metals, and some pesticides) are typically found in very low concentrations in dry weather flows from golf courses. Therefore, this discussion focuses on constituents that tend to be dissolved, (e.g., nitrate) or constituents that are so small as to be effectively transported, (e.g., pathogen indicators). A combination of efficient irrigation practices as a source control BMP and the use of infiltration-type treatment control BMPs such as those incorporated into this Project would ensure that dry weather flows from pervious Project site areas are captured to the maximum extent practicable. The redesigned golf course would be constructed with water conservation features that would reduce irrigation demands by approximately 33 percent as compared to the existing condition. The Project would control landscape watering with advanced metering systems. Moreover, any dry weather flows would be routed to the above referenced LID BMPs, which would completely contain them. reducing the Project's dry weather water quality impacts to a less than significant level (**Class III**).

The incorporation of County-approved LID and hydromodification BMPs as identified and discussed in this analysis would ensure that the Project will not violate any water quality or waste discharge requirements.

Groundwater

Threshold: Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planning uses for which permits have been granted)?

All or a portion of the Project site overlies a lower and an upper aquifer that is not considered a groundwater basin. Nonetheless, the lower aquifer is the source of groundwater pumped by six working wells on the Project site. The wells are approximately 300 to 400 feet in depth, which is thought to be the probable depth of the lower aquifer. As noted in Section 5.8-1 (Existing Conditions – Regional and Site Groundwater), little is known about the hydrogeological characteristics of the lower aquifer and there is no known estimate of its capacity or recharge. The lower aquifer is overlain by volcanic bedrock, which may allow surface flows to percolate into the aquifer through cracks and other formations. What is known is that the groundwater quality is significantly better than the quality of surface water at the site.

The wells pumping water at the Project site have been in use at least since the original golf course was constructed in the 1970's and water has been pumped from the wells and used to help irrigate the golf course. The Project will reduce both the size of the golf course greens and the amount of groundwater required for golf course irrigation by including recycled wastewater treated to a tertiary standard as part of the mix of irrigation water sources. Accordingly it is unlikely that that Project will result in a net deficit in aquifer volume or a drop in the local groundwater table. The production rate capacity of the onsite well is expected to remain the same, although the level of production required is likely to decline. Overall, the development of the Project would have a beneficial impact on the lower aquifer and its net capacity (**Class IV**).

Approximately 19 acres of the northern portion of the Project site, located outside of the development area, contribute to the Hidden Valley groundwater basin, as defined in the Basin Plan (1994). Although the majority of this portion of the Project site does not overlie the Hidden Valley Basin, surface runoff that infiltrates within the Carlisle Canyon watershed ultimately recharges the Hidden Valley Basin.

The Basin Plan (1994) lists Hidden Valley groundwater basin water quality objectives for bacteria, chemical constituents, pesticides, radioactivity, salinity, tastes and odors, and toxicity. These water quality objectives are applicable to all groundwater basins, regardless of beneficial use. However, the development area of the Project site is located within the Trancas Canyon Creek watershed and, , therefore, would not interfere with recharge of the Hidden Valley groundwater basin nor contribute anything other than naturally occurring constituents to it. There is no proven hydrologic connection between Trancas Canyon Creek and the Malibu Valley Groundwater Basin, the only other known groundwater basin in the general area of the Project. Therefore, development of the Project would neither deplete groundwater supplies nor interfere with groundwater recharge in either known groundwater basin in its vicinity and would have no impact as regards this threshold (**Class III**).

Drainage Pattern Alteration

Threshold: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would (a) result in substantial erosion or siltation? or (b) result in flooding on- or off-site?

Hydromodification

Development typically increases impervious surfaces on formerly undeveloped (or less developed) landscapes, reducing the capture and infiltration of rainfall. The development results in a larger percentage of rainfall becoming runoff during any given storm. In addition, runoff reaches the stream channel more efficiently due to the development of storm drain systems, so the peak discharge rates for rainfall events and floods are higher for an equivalent event than they were prior to development. Further, the introduction of irrigation and other dry weather flows can change the seasonality of runoff reaching natural receiving waters. These changes, in turn, affect the stability and habitat of natural drainages, including the physical and biological character of these drainages. This process, termed "hydromodification" (SCCWRP, 2005) is addressed in this section.

Significant adverse hydromodification impacts are presumed to occur if the Project would substantially alter the existing drainage pattern of a natural drainage, stream, or river causing substantial erosion, siltation, or channel instability in a manner that adversely affects beneficial uses.

Three strategies would be used by the Project to prevent and control hydromodification impacts to the natural drainage:

- Preservation of natural hydrologic conditions;
- Project-based hydrologic source control; and
- Project-based flow control.

BMPs for control of hydromodification would protect the Project's receiving water from hydromodification. As a result, the flow rates, velocities, depth/width ratios, and total storm volumes at 2-, 5-, 10-, 25-, and 50-year and the Capital Flood storm levels would not be expected to increase over existing conditions. Hydromodification controls would include:

- Preservation of 81% of the site's current natural hydrologic features;
- No increase in overall project site imperviousness;
- Incorporation of LID BMPs which cumulatively infiltrate the LID/SUSMP 85th percentile 24-hour storm; and
- Inclusion of two outlet controlled detention basins, which control flows associated with storm events exceeding the 85th percentile 24-hour storm event up to the 50-year 24-hour storm event, as shown in **Table 5.8-10.**

Table 5.8-10
LID BMP Mitigation Potential Compared to Predicted Site Runoff Volume

Runoff Volume from the 85th Percentile – 24 Hour Storm LID/SUSMP Design Storm			Mitigation Potential of LID BMPs (ft^3)	% of Site Volume Mitigated
Predevelopment (ft^3)	Post-Development (ft^3)	Change in Runoff Volume (ft^3)		
7,563	37,188	26,625	81,444	100
Source: Geosyntec, Water Quality and Hydromodification Technical Report (2013) Table 7-4.				

The entire volume from the 85th percentile 24-hour storm would be mitigated with implementation of the BMPs required or proposed for the Project site, resulting in post-developed peak flows, velocities, and depth/width ratios that are lower than existing conditions and, therefore, consistent with this performance standard. The proposed runoff rates were modeled based on inclusion of the detention facilities, which are designed to maintain the undeveloped flow rate.

Because sediment has historically been deposited and trapped on the golf course, post-development sediment delivery would continue to be very low. Project development would not result in an increase in the impervious area of the Project site when compared to the existing condition and landscape would provide additional slope stabilization, limiting any increase in sediment delivery from that source. Since onsite hydromodification control BMPs are designed to meet the Project's hydromodification control performance standard they would protect the Project's receiving waters from excessive erosion and degradation caused by discharges from the Project. In this manner hydromodification impacts resulting from the Project would be less than significant (**Class III**).

Off-site and On-site Flooding

Within the development area, proposed storm drainage facilities would be designed up to a level of a Capital Flood event to convey runoff at levels that would not interfere with operations and would be conveyed to the detention basins. These proposed storm drainage facilities include curbs, gutters, swales, bioswales, inlets, pipes, and outlets.

The maximum runoff developed in the site area is 38.2 cfs, developed in a 50-year storm as controlled by an outflow device after detention.[17] As there would be no change in the characteristics of flow to the offsite runoff downstream of the site, the Project's development would not be the cause of any downstream flooding (**Class III**).

Storm Water Drainage Systems

Threshold: Would the project create or contribute runoff water that would exceed the capacity of existing of planned stormwater drainage systems or provided substantial additional sources of polluted runoff?

With implementation of the proposed BMPs, average annual runoff volume would be expected to decrease from 53.7 ac-ft./year in the existing condition to 44.6 acre-feet per year, or approximately 17 percent. This volume reduction would be attributable to a decrease in imperviousness due to implementation of Project design features including green roofs, bioretention, pervious pavement, and the volume reduction achieved within the infiltration basins and golf course sand caps**.**

Because onsite runoff can exceed the on-site storm drainage facility capacity, Triad/Holmes performed hydraulic analysis to determine the potential flood elevations onsite in overland sheet flow conditions on-site. Most of the existing storm drain facilities have the capacity for 2- to 5-year intensity storms, with the exception of the 66-inch culvert between the water feature and its point of discharge, which can handle a 50-year storm. A Capital Flood event would exceed all of the existing on-site storm drainage facility capacities, either existing or planned. However, nearly all flows in excess of existing and/or planned storm drain facilities would be retained onsite within and on the golf course greens, would release slowly or percolate into the underlying soil and sand cap, and would not threaten downstream

[17] Triad/Holmes, *The Malibu Institute Drainage Concept/Hydrology Report for TR071735*, "Site Detention Calculations and Summary Information", October 18, 2013 Revision, page 236.

properties. In a Capital Flood event, the culvert under Encinal Canyon Road would not be overtopped. Sediment carried by flows would be deposited on the golf course.

Requirements for continuing onsite maintenance and storage of potentially polluting chemicals, trash and debris, should ensure that runoff water would not provide additional sources of polluted water. Use of pesticides, herbicides, and fertilizer as well as other pollutants of concern would be reduced through compliance with NPDES permit conditions and County LID Ordinance requirements, and the implementation the BMPs previously cited, resulting in a less than significant impact (**Class III**).

NPDES

Threshold: Would the project generate construction or post-construction runoff that would violate applicable stormwater NPDES permits or otherwise significant affect surface water or groundwater quality?

Construction General Permit

Construction phase impacts to site hydrology would be minimized through compliance with the regulatory requirements of the Construction General Permit as provided for by the Project's SWPPP. Current regulations require inclusion of effective erosion and sediment control BMPs that would at least meet and potentially exceed the Project's determined risk level pursuant to the Construction General Permit, in addition to any BMPs that would control the other potential construction-related pollutants. A Construction Site Monitoring Program that identifies monitoring and sampling requirements during construction would be a required component of the SWPPP. Most construction projects are categorized as a Risk Level 2. BMPs contemplated for the Project and reflected in the Construction General Permit SWPPP would be developed assuming this level of risk. In the event analysis of the Project's final design analysis indicates that the Project would fall under Risk Level 3, additional Level 3 permit requirements would be implemented as part of the SWPPP pursuant to existing regulations. Implementation of the requirements of the Project's RWQCB-approved SWPPP, and implementation of mitigation measure MM 5.8-1would reduce potential construction phase impacts to water quality due to erosion and sediments to a less than significant level (**Class II**).

Dewatering

Implementation of the regulatory requirements contained in the General Order for Dewatering would minimize impacts from construction dewatering and other non-stormwater discharges to the extent feasible. Construction on the Project site would not, for the most part, penetrate below the water table and dewatering would not be required.

One portion of the site has evidence of perched water at a depth of 13 feet bgs. This location also is proposed as the location of one of the subsurface detention facilities and/or the wastewater treatment facility. The depth of excavation required for facility installation may require dewatering. Trenching required for installation of sewer lines to the treatment facility also may require construction dewatering. In the event dewatering is required during construction, effluent would be screened for priority pollutants prior to discharge to ensure no pollutants of concern are present that would preclude coverage under the General Order. The Project would comply with numeric effluent limitations, conduct effluent and receiving water monitoring during the discharge, and submit a discharge report to the Los Angeles Regional Water Board for every discharge. Implementation of these requirements and compliance with all other provisions of the General Order for Dewatering would reduce Project impacts associated with potential discharge of priority pollutants as a result of construction phase dewatering to a less than significant level (**Class III**).

MS4 Related Impacts

The Project would be required by existing regulations to meet the water quality performance criteria of the County's MS4 NPDES Permit. As previously noted, the Project's hydrologist used the Nomograph Method, presented in the Orange County Technical Guidance Document (OCPW, 2011) used to determine the percent capture (treatment) volume of the detention basins in the development area. In this analysis, no upstream hydrologic source controls (i.e. swales, biofilters, green roofs, etc.) were considered as part of the capture efficiency of the Project area.

The sand cap underlying the golf course would be sized to meet or exceed the County's flow and volume-based BMP design requirements as described in the MS4 Permit. An assumption of 80 percent volume capture is considered reasonable and conservative. Thirty percent volume reduction was conservatively estimated for the Project's infiltration basins.

Average annual pollutant concentrations were determined by dividing average annual total pollutant loads by average annual runoff volumes for each pollutant and for the existing and proposed Project site condition**.**

As noted in the Methodology portion of the Analysis section, satisfaction of the MS4 Permit requirements for new development and redevelopment would establish compliance with water quality regulatory requirements applicable to stormwater runoff. Under the regulations in the permit, the effectiveness of stormwater treatment controls is demonstrated by the ability to infiltrate, harvest, and/or biotreat runoff from the 85th percentile rainfall event or the 0.75-inch event, with other types of treatment allowed if these measures are demonstrated to be infeasible onsite. As indicated above, the BMPs proposed for incorporation into the Project design will accomplish the level of reduction required pursuant to the MS4 Permit, achieving a less than significant impact (**Class III**).

LID Development Requirements

Threshold: Would the project conflict with the Los Angeles County Low Impact Development Ordinance (L.A. County Code, Title 12, Ch. 12.84 and Title 22, Ch. 22.52)?

LID Ordinance Related Impacts

Chapter 12.84 of the Los Angeles County Code requires the use of low impact development (LID) standards in development projects. This chapter applies to all development within the unincorporated area of the County after January 1, 2009.

LACDPW has developed a LID Standards Manual that outlines stormwater runoff quantity and quality control development principles, technologies, and design standards for achieving the LID Standards of Large Scale Residential and Nonresidential Development projects, which are required to prioritize the selection of BMPs to treat stormwater pollutants, reduce stormwater runoff volume, and promote groundwater infiltration and stormwater reuse in an integrated approach to protecting water quality and managing water resources. The Manual states BMPs should be implemented in the following order of preference:

- BMPs that promote infiltration;
- BMPs that store and beneficially use stormwater runoff; and
- BMPs that utilize runoff for other water conservation uses including, but not limited to BMPs that incorporated vegetation to promote pollutant removal and runoff volume reduction and integrated

multiple uses, and BMPs that percolate runoff through engineered soil and allow is to discharge downstream slowly.

The Project employs are a variety of LID BMPs that achieve the LID Standards for projects of its size. This includes the use of bioswales, a sand cap under the golf course greens, green roofs and extensive undisturbed and/or vegetated open space to reduce stormwater runoff volume through the infiltration of storm flows. The storm flows thus captured and infiltrated reduce the need for mechanical irrigation and support the re-establishment of native vegetation, allowing for an integrated approach to the protection of water quality and the reuse of water resources. In addition, the Project incorporates detention basins that also provide a treatment function for first flows, assuring that storm flows downstream are maintained onsite to avoid flooding. Since a lower aquifer is known to existing under some portion of the site, the use of both mechanical and non-mechanical retention and infiltration BMPs permits percolation of storm flows into the aquifer over time, ensuring its replenishment. This groundwater pumped by six working wells is used to supplement water supplied by LVMWD for use in landscape irrigation. Irrigation water would be further supplemented by recycled water from the Project's onsite wastewater treatment facility. Pervious paving will replace over 50 percent of currently paved areas that are now impervious, increasing the amount of infiltration available on the site, consistent with County LID requirements. All site BMPs would be designed in accordance with the provisions and guidance provided by the County LID Standards Manual (2009). Compliance with LID Ordinance requirements would ensure less than significant impacts associated with design and implementation of LID BMPs (**Class III**).

Areas of Special Biological Significance

Threshold: Would the project result in point or nonpoint source pollutant discharges into State Water Resources Control Board-designated Areas of Special Biological Significance?

Areas of Special Biological Significance (ASBS) are areas designated by the SWRCB for the protection of sensitive marine species or biological communities from undesirable alterations in natural water quality (SWRCB 1979). The SWRCB has developed regulations and procedures related specifically to ASBS[18] and contain certain prohibitions related to flows into ASBS. The standard for water quality protection in an ASBS is "natural water quality."

Currently, drainage from the Project site travels south via Trancas Canyon Creek and discharges in the Laguna Point to Latigo Point Area of Special Biological Significance (LPLP-ASBS – Index No. 24), designated in 1974. The LPLP-ASBS covers 11,842 acres of coastal land and extends from Ventura County through the western portion of Los Angeles County. The study found that differences from natural water quality were relatively infrequent at ASBS discharge sites and significant toxicity was not observed.

Regional sampling efforts were undertaken in 2008 and 2011.[19] Among the areas sampled for discharge related changes between dry and post-storm discharges was Board Beach (Trancas Beach) near the mouth of Trancas Canyon Creek. As previously noted, Trancas Canyon Creek is not considered impaired and studies of pollutants impacting the Trancas Lagoon and Board (Trancas) Beach have been generally traced to near-coastal development rather than discharges originating from the Creek. The Project site, located approximately 4 miles from the coast, discharges into Trancas Canyon Creek and therefore does

[18] Water Quality Control Plan for the Ocean Waters of California [Ocean Plan], and Revised Procedures for the Designation of ASBS [1999].

[19] 'Southern California Bright 2008 Regional Monitoring Program Vol II – Areas of Special Biological Significance, 2011, jointly sponsored by the Southern California Coastal Water Research Project, the State Water Resources Control Board and Westson Solutions.

not contribute pollutants to an impaired water body that discharges either point or non-point source pollutants into the Laguna Point to Latigo Point Area of Special Biological Significance. Compliance with all applicable permits, regulatory requirements and hydrology mitigation measure MM 5.8-1 would maintain that status (**Class II**).

Onsite Wastewater Treatment

Threshold: Would the Project use onsite wastewater treatment systems in areas with known geological limitations (e.g. high groundwater) or in close proximity to surface waters (including, but not limited to streams, lakes, and drainage courses)?

The Project will use an onsite wastewater treatment system that allows the collection of wastewater water and provides for its treatment to tertiary standards and subsequent use as recycled water for irrigation. Solids are held in tanks located in close proximity to generating structures. All portions of the system maintain a minimum 100-foot setback from any groundwater well. Groundwater at the Project site is generally found at considerable depth. Perched water was found in only one boring at a depth of 15 feet in an area where alluvium deposits over volcanic bedrock was at its deepest (approximately 24 feet), in proximity to the southeastern edge of the bungalows. Gravity lines carrying effluent to the treatment plant are located approximately 100 feet from the location of the borehole and with appropriate maintenance, there should be no interaction between perching groundwater and piped effluent.

Trancas Canyon Creek's mainstem began on the Project site prior to its original development, but is now confined to a subsurface culvert. Given the type of onsite wastewater system, and the depth to the actual underlying aquifer the Project's wastewater system would be appropriate to the site's geology and would not result in any adverse consequences to either surface flows or groundwater.

Permits for the construction of the wastewater treatment facilities must be obtained from the Regional Water Quality Control Board and the system would be operated pursuant to the conditions and requirements imposed by the RWQCB. Mitigation measure MM 5.8-2 requires removal of all existing septic systems on the site with the exception of the septic system serving the caretaker's residence and their replacement with the proposed OWTS and recycled water system in a manner compliant with Title 22. Compliance with MM 5.8-2 and applicable regulatory requirements would reduce the impacts of the proposed system on water quality to less than significant (**Class II**).

Degrade Water Quality

Threshold: Would the Project otherwise degrade water quality?

As shown in Tables 5.8-1 through 5.8-12 and in the responses to prior threshold questions, the Project would not degrade either surface or groundwater quality. In every instance, the Project's development would result in either no change or a beneficial change in discharges and/or pollutants of concern associated with the construction and operation of the Project. Even with the Best Available Technology (BAT) combined nitrogen will exceed the CUP target standard of 1 mg/L; however, that standard is not used as a target standard by the State or local government in any other location and the more common standard of 10 mg/L is not exceeded. Mitigation measure MM 5.8-1 would contribute to the mitigation of water quality impacts to a less than significant level, as will compliance with existing regulations, laws, policies, and ordinances. There is nothing in the available Project data that would support any finding that the Project would in any way result in the degradation of water quality as compared to the existing condition (**Class II**).

Flood Hazards

Threshold: Would the Project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, or within a floodway or floodplain?

The only housing on the Project site is overnight accommodations in a group of bungalows set back from and above the grade of the golf course. The Project site is not located within a 100-year flood hazard area as mapped on any federal Flood Hazard Boundary Map (FHBM) or Flood Insurance Rate Map (FIRM) or other flood hazard delineation map. A flood hazard analysis was performed for the Capital Flood event to determine flood hazard limits. Based on the preliminary site plan design elevations for buildings, shown on Tentative Tract Map 71735 and illustrated in **Figure 5.8-6** (Development Area Capital Flood event storm boundaries), the finished floor of all buildings, including the bungalows, would be a minimum of two feet above the golf course flood level elevations and approximately 50 horizontal feet from the nearest building. Based on the drainage study, the Project would not place housing or other structures within the Capital Flood hazard limits. No obstructions that would impede or redirect flood flows would be created (Triad/Holmes, 2013). Neither people nor structures would be exposed to loss, injury or death as a result of onsite flooding within the golf course, as illustrated and no additional mitigation measures are required (**Class III**).

Threshold: Would the Project place structures, which would impede or redirect flood flows, within a 100-year flood hazard area, floodway, or flood plain?

As indicated in the response to Threshold 10, the finished floor of all buildings were located outside of the highest maximum water elevation line within the golf course; therefore, no structures would be located within a Capital Flood event storm hazard area, which is the County's standards and more conservative than the 100-year flood mentioned above, or in any location where they might impede or redirect flood flows. No mitigation measures are required and there are no significant impacts (**Class III**).

Threshold: Would the Project expose people or structure to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

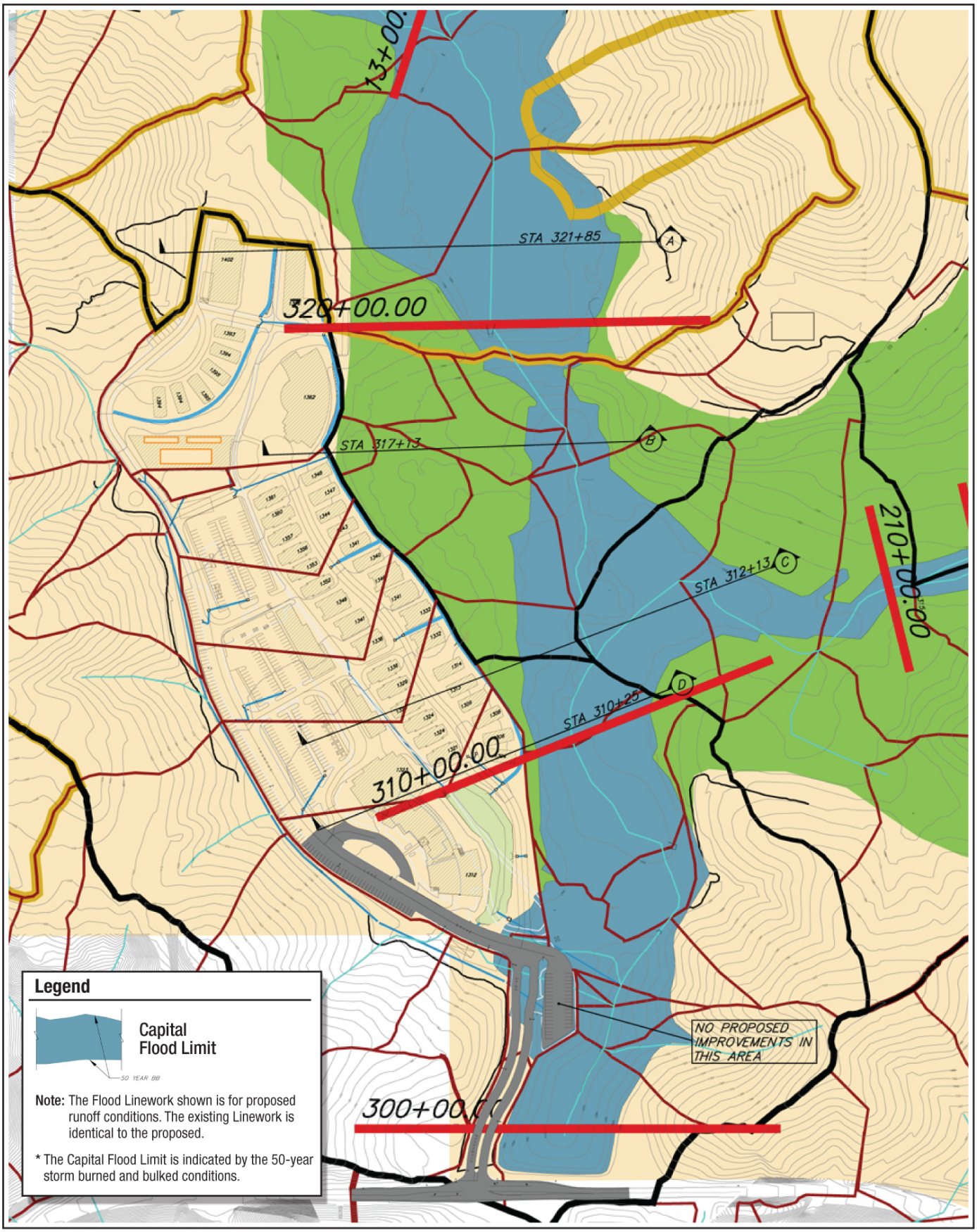
As stated in the responses to Thresholds 10 and 11 above, persons and structures would not be exposed to significant risk of loss, injury, or death involving flooding. In a Capital Flood precipitation event the golf course would be closed to use. The Project is not located within the inundation area of any levee or dam. No mitigation measures are required and there are no significant impacts (**Class III**).

Seiche, Tsunami, and Mudflow

Threshold: Would the Project place structures in areas subject to inundation by seiche, tsunami, or mudflow.

The Project site is located within the area covered by the Local Coastal Plan; however, the site itself is approximately 4 miles from the coastline with a minimum elevation of 1,300 feet above mean sea level. For this reason it would not be affected by a tsunami (**Class III**).

The Project site would contain at least one aboveground water reservoir tank, the golf course would include a water feature, a treated effluent pond, and the overnight accommodations and clubhouse would include a swimming pool. Strong ground motion could result in seiche conditions in any one or all of these facilities. None, however, would result in any danger or damage to structures or persons. Were the



Revised: Triad/Holmes Associates Civil Engineering Land Surveying, October 2013.

THE MALIBU INSTITUTE PROJECT EIR

ENVICOM CORPORATION

Development Area Capital Flood Boundaries

FEET 0 150 300

FIGURE 5.8-6

above ground reservoir to fail or overtop, water would flow onto the golf course and water feature. A seiche-induced overtopping of the water feature would also affect only the golf course. Seiche conditions in the swimming pool would be too shallow to create damage or danger. Accordingly, a seiche would not adversely impact the proposed Project (**Class III**).

The Project site is located within a valley surrounded by steep slopes and ridgelines that rise as much as 1,000 feet above the valley floor, where development would occur. Small streams and rills traverse the steep slopes and carry flows that are tributary to Trancas Canyon Creek, located on the Project site. The majority of these small tributaries converge at relatively small detention and/or sediment basins located around the boundary of the golf course. There is potential for any of these small drainages to carry mudflows in heavy precipitation events, since the area traversed is undeveloped. However, the onsite drainage pattern would direct such flows onto the golf course and away from buildings. That is the existing condition and would remain unaltered subsequent to development. Therefore, buildings and structures on the Project site would not be adversely impacted by mudflows (**Class III**).

5.8.7 Cumulative Impacts

Cumulative Surface Water and Hydromodification Impacts

Urban development in the Trancas Canyon Creek area has contributed to pollution of the Trancas (Broad) Beach area and the Trancas Lagoon. As discussed above, the anticipated quality of effluent expected from the Project site would contribute concentrations of pollutants of concern, primarily nitrates/nutrients, that could cause or contribute to a violation of the water quality standards in the Project's surface receiving waters; however, with the implementation of appropriate regulatory requirements including the County's LID BMPs, the Project's contribution would be reduced to the maximum extent practicable (MEP Standard) and would, therefore, be less than cumulatively considerable and less than significant (**Class III**).

The Project's proposed infiltration BMPs would be sized to meet hydromodification control standards; therefore the Project's incremental effects on hydromodification would not be cumulative considerable. With reduced runoff as compared to existing conditions, the Project would improve hydromodification conditions over the existing condition and, therefore, the Project's contribution to the cumulative condition would be beneficial (**Class IV**).

The Project's surface runoff water quality, after implementation of BMPs, during construction and post-development would comply with adopted regulatory requirements designed by the State Water Board and Los Angeles Regional Water Quality Control Board to assure that regional development does not adversely affect water quality and hydromodification in receiving streams, including the provisions of the MS4 General Permit, the Construction General Permit, and the General Dewatering Permit requirements, and benchmark Basin Plan water quality objectives, CTR criteria, and CWA Section 303(d) listings. The Project would comply with these regulatory requirements designed to protect beneficial uses, which would mitigate adverse impacts to cumulative water quality and hydromodification to a level that would be less than significant. Therefore, the Project's contribution to any existing water quality or hydromodification impacts within the watershed would be less than cumulatively considerable. Any future urban development occurring in the Trancas Canyon Creek and Carlisle Canyon Watersheds also would be required to comply with these requirements (**Class III**).

Runoff from the Project site under the proposed condition, inclusive of BMPs, would yield lower pollutant loads and concentrations for most of the modeled constituents (TSS, NO3-N, TKN, total nitrogen, TP, total copper, total lead, and total zinc) than in the existing and proposed conditions without BMPs. Additionally, in the context of the proposed site design, source controls, and treatment control

BMPs, the Project's contribution to potential cumulative impacts associated with the qualitatively analyzed POCs would not be cumulatively considerable and would be less than cumulatively significant. The model results, which show an overall improvement in stormwater runoff quality and a reduction in runoff volume and the impacts from the qualitatively assessed POCs, demonstrate that the Project's contribution to any existing adverse water quality issue would be less than cumulatively considerable and less than significant (**Class III**).

Cumulative Groundwater Impacts

The anticipated quality of stormwater runoff discharges from the Project's development area, reclaimed water used for irrigation, and discharges from septic systems would not contribute pollutants of concern that would be expected to cause or contribute to a violation of the groundwater quality standards. While a productive "lower aquifer" underlays all or a portion of the Project site, baseline testing in 2013, over 35 years after the golf course began operation, indicated that to the extent that surface flows percolate into the lower aquifer, the depth of the water table and the nature of the soils and bedrock through which water percolates are effective in removing pollutants of concerns from groundwater at depth. BMPs incorporated into the Project in the form of LID BMPs would result in no adverse effects on groundwater recharge. Rather, they would put in place another layer of infiltration and treatment that would effectively remove POCs, including those that may impact saturated near surface alluviums that may perch water to the surface as it flows downstream. The Project's incremental contribution of the Project to any degradation of groundwater quality would be less than cumulatively considerable (**Class III**).

The Project's discharges to groundwater, after BMPs, during construction and post-development, would comply with adopted regulatory requirements that are designed by the Los Angeles Regional Water Quality Control Board and State Water Board to assure that regional development does not adversely affect water quality, including MS4 General Permit requirements and Construction General Permit requirements. In addition, per the State Water Board's Recycled Water Policy, cumulative groundwater impacts shall be managed under a regional Salt and Nutrient Management Plan that also addresses CECs. The Project would comply with these requirements designed to protect beneficial uses; therefore, the Project's contribution to cumulative groundwater quality impacts would be mitigated and its contribution would be less than cumulatively considerable and less than significant (**Class III**).

Cumulative Flood Impacts

The Project would be designed with flood control facilities that would contain any incremental increase above existing conditions and therefore, the Project would make a less than cumulatively considerable contribution to any downstream cumulative flooding impacts. (**Class III**).

Flood flows within the golf course during Capital Flood storm events would remain at least two feet below the finished floor elevation of any building or structure constructed on the Project site at a 50-foot horizontal distance from retention storage on the Project site. Flows held on the site would infiltrate within 3.5 days following a peak storm event. Accordingly, the Project would not make a cumulatively considerable contribution to any regional flood problem within the watershed, and its cumulative impact would be less than significant (**Class III**).

Other Impacts

The Project is too distant from the shoreline and at too high an elevation to be threatened by tsunami and would make a less than cumulatively consider contribution to any regional impacts created by coastal development within tsunami-prone areas of the coast (**Class III**).

The Project may be subject to mudflow generated by intense precipitation events generating mud and debris flows that would be carried to the Project development site by creeks and rills located in the upland areas of the Project site and beyond. However, such mudflows would be directed by the existing (and unchanged) drainage pattern onto the golf course where it would do no damage to persons or structures and would not make a cumulatively considerable contribution to regional or watershed impacts associated with mudflows/landslides (**Class III**).

The Project contains facilities capable of producing seiche conditions when disturbed by strong ground motion; however, any overtopping of contained water would be directed onto the golf course and would not endanger either persons or structure, nor would it affect downstream properties. Therefore, the Project would not make a cumulatively considerable contribution to any watershed-wide cumulative impacts associated with seiche conditions (**Class III**).

5.8.8 Mitigation Measures

BMPs incorporated into the Project to address surface water quality and hydromodification impacts include erosion and sediment control BMPs during the construction phase of the Project and site design, source controls, LID, and hydromodification control BMPs during the post-construction (operational) phase. Effective management of construction phase runoff would require protecting bare areas from erosion and keeping sediment and other pollutants associated with construction activities (e.g., trash, paint, solvents, sanitary waste from portable restrooms, and concrete curing compounds) from discharging from the site. Effective management of post-development wet and dry weather runoff water quality would limit increases in runoff pollutants and flows at the source. Site design, source control, and LID BMPs would minimize runoff and the introduction of pollutants into runoff. Hydromodification control BMPs would control increases in post-development runoff flows, volumes, and/or durations to protect stream channel geomorphology and habitat. The BMPs included in these mitigation measures would be incorporated into the Project design or the Project's SWPPP.

Compliance with existing regulatory requirements is assumed. Regulatory requirements are not listed as mitigation measures, however, the mitigation effect of such requirements is considered in the analysis of Project impacts in the preceding Section.

Erosion and Sediment Control Mitigation Measures – Construction Phase

MM5.8-1 All grading associated with the implementation of the Project shall take place within the previously disturbed areas of the existing Malibu Golf Club, including the fairways, tee boxes, and greens.

Septic Removal and Wastewater Treatment and Disinfection

MM5.8-2 The Project shall remove all septic tanks throughout the Project site with the exception of the septic tank serving the caretaker's house in the northern portion of the Project site, and shall install an on-site wastewater treatment system with effluent meeting Title 22 standards for reuse as irrigation for the remodeled golf course

5.8.9 Residual Impacts

The Project would comply with all regulatory requirements and feasible mitigation measures, which would reduce the Project's impacts to a less than significant level (**Class III**).

5.9 LAND USE

This section assesses the Project's compatibility with existing land uses and its consistency with applicable land use plans and policies. The methodologies used for this analysis include field investigations to confirm existing land use conditions, interpretation of current aerial photographs, and review of the existing and proposed zoning and land use plans for the Project site. The Project's consistency with applicable County of Los Angeles General Plan (1980) and the Malibu Local Coastal Plan (1986) land use policies and associated zoning ordinance requirements also is assessed. The conclusions reached in the course of assessing other topical issues addressed in this DEIR also are considered in determining land use compatibility and policy consistency issues. Pursuant to the request of the National Park Service (NPS) in its January 21, 2013 letter to the County Department of Regional Planning, this section also addresses the Project's consistency with the planning goals and objectives for the site contained in the NPS's 1984 Land Protection Plan and related 2003 Santa Monica Mountain National Recreation Area (SMMNRA) General Management Plan (GMP); however, the management zone policies designated in the GMP are advisory only for lands not under NPS ownership.[1]

5.9.1 Existing Conditions

Existing Land Use Setting

Location

The Project site is located at 901 Encinal Canyon Road, northwest of the City of Malibu and south of the cities of Thousand Oaks and Westlake Village in an unincorporated rural area of Los Angeles County in the Santa Monica Mountains, south of its primary east-west ridgeline. Most of the 650-acre Project site is located south of Mulholland Highway, falls within the Coastal Zone as defined by the California Coastal Act, and is subject to the goals and policies of the 1986 Malibu Local Coastal Program Land Use Plan in addition to the applicable policies of the existing 1980 County of Los Angeles General Plan.

Malibu Golf Club

Approximately 118 acres of the Project site were developed in the 1970s as a golf course and currently are operated as the Malibu Golf Club, which includes an 18-hole golf course with surface parking lots, a clubhouse, a restaurant/bar, a snack shop, a pro-shop, maintenance facilities, and other ancillary structures including detention and desilting basins, golf cart paths and other landscaped areas. All existing development is located in the central and southern regions of the Project site. Approximately two-thirds of the Project site (approximately 450 acres) consists of undeveloped mountainous open space that buffers the developed golf course and its ancillary facilities to the west, northwest, north, northeast and east.

The Project site is regulated by the Malibu Local Coastal Plan land use designations listed in **Table 5.9-1.**

[1] National Park Service letter to the Los Angeles County Department of Regional Planning. January 21, 2013. See "Land Use" subheading.

Table 5.9-1
Current Project Site Land Use Designations and Zoning[2]

Current Zoning	Local Coastal Plan Land Use Designation & Figure Number	Land Use Designation Density
A-1-1 or RPD-5-0.2-DP or R-R-1 or A-1-20	Mountain Land (M2)	1 dwelling unit per 20 acres
R-R-1 or A-1-1	Rural Land I (3)	1 dwelling unit per 10 acres
R-R-1	Rural Land II (4)	1 dwelling unit per 5 acres
R-1-1 or A-1-1 or RPD-5-0.2-DP	Rural Land III (5)	1 dwelling unit per 2 acres

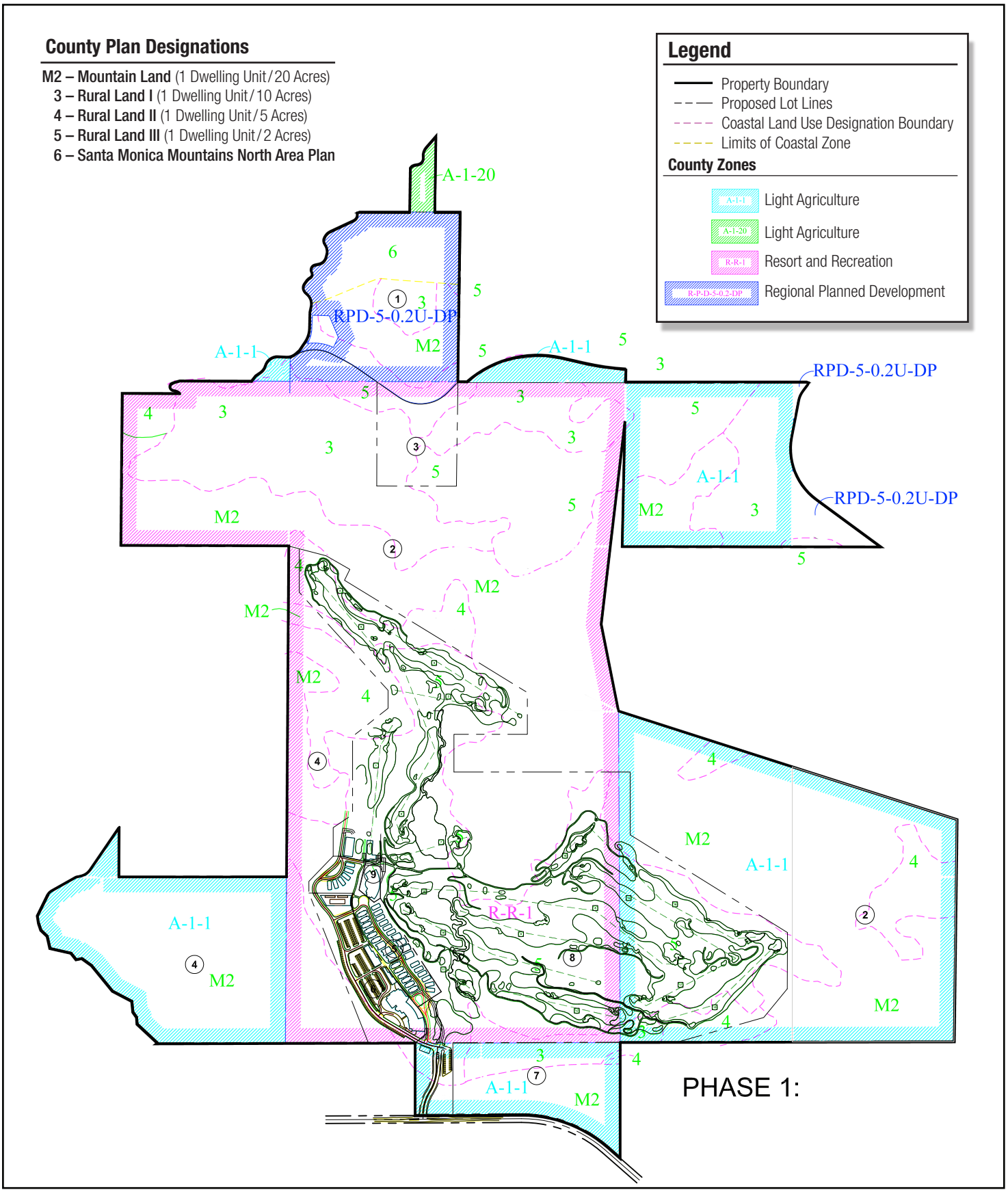
Approximately 330.5 acres of the Project site is zoned R-R-1 (Resort and Recreation – 1 acre minimum lot size). Small periphery areas to the north, west, east, southeast, and south are zoned either A-1-1 (Light Agricultural – 1 acre minimum lot size) or A-1-20 (Light Agricultural – 20 acres minimum lot size). A portion of the Project site north of Mulholland Drive and a portion of the Project site northeast of the golf course are zoned RPD-5-0.2U-DP (Residential Planned Development – 5 acres minimum lot size – 0.2 dwelling units per acre – Development Program). **Figure 5.9-1** illustrates the current land use designations and zoning of the site relative to the Project. As Figure 5.9-1 and Table 5.9-1 illustrate, a given land use designation may underlay several different zones. **Table 5.9-2** lists the existing structures at the Project site.

Table 5.9-2
Summary of Existing Structures

Component	Square Footage
Golf clubhouse and restaurant	12,475 square feet
Maintenance structures, sheds	7,000 square feet
Residential – caretaker's cabin	875 square feet
Residential – abandoned lodge	4,160 square feet
Total	**24,510 square feet**
Water Tank	100,000 gallon capacity

Shortly after the Santa Monica Mountains National Recreation Area (SMMNRA) was established, the National Park Service prepared the 1984 Land Protection Plan (LPP), which has been used since that time to identify land protection methods to protect SMMNRA resources. The LPP recognized existing private visitor-serving recreational venues under the category of "Compatible Private Recreation Land." The LPP designates the Project site under this category. The NPS 2003 SMMNRA General Management Plan (GMP) locates the Project site within the "Moderate Intensity Zone," which, though advisory only for private property, states: "Facility development would harmonize with the natural setting and be based on the principles of sustainable development. Moderate use areas would act as an insulating buffer around urban development."

[2] Table Source – Conditional Use Permit 98-059-(3), Finding 10.



Source: LRS Architects, Inc., 2012.

Land Use Designations and Zoning

FEET 0 500 1,000

FIGURE 5.9-1

Adjacent Land Uses

Adjacent land uses are primarily undeveloped private and public lands with some large lot rural residential uses along the site's northern and western boundaries. These residential uses are separated from the recreational activities on the Project site by the rugged surrounding terrain and often steep sloping hillsides and are approximately one-half mile from the Project's development area. **Figure 5.9-2** illustrates the surrounding uses by type of use or type of ownership.

As noted above, the Project site lies within the SMMNRA, a unit of the National Park System. The Backbone Trail, established in the 1980s by the California Department of Parks and Recreation, the National Park Service, and the Santa Monica Mountains Conservancy, has been developed in increments across a patchwork of public lands. When finished, it will extend more than 65 miles, unifying parklands in the SMMNRA. The physical construction of the Backbone Trail through Trancas Canyon is completed and crosses Encinal Canyon Road approximately 0.3 to 0.4 mile to the west of the Project site, though the Project site is not within the trail's viewshed due to the intervening topography.

Entitlement History

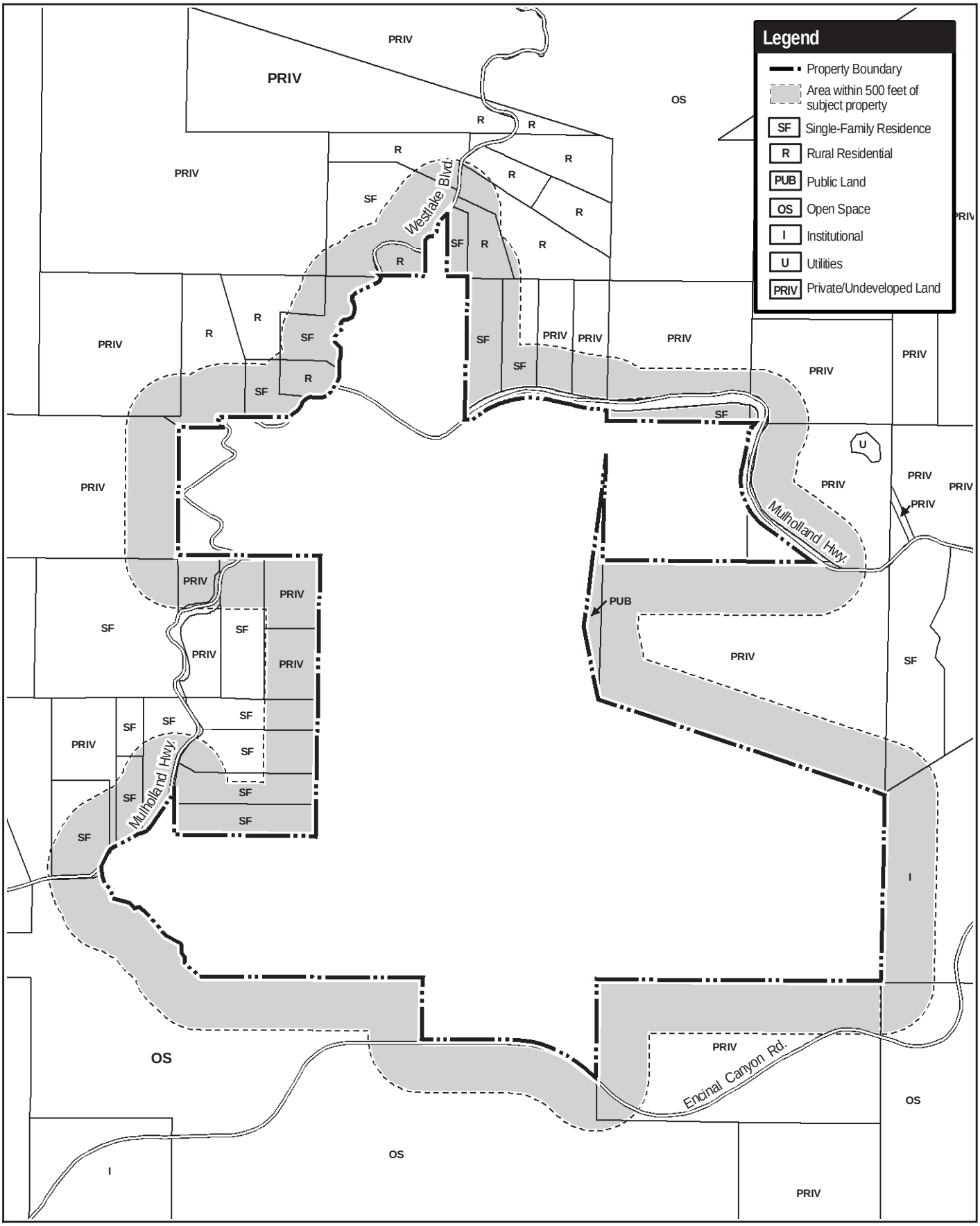
In 1982, the County issued Conditional Use Permit ("CUP") No. 1453 to authorize the use of a private golf course on the Project site, which was initially developed as an appurtenant use to a residential development approved on August 31, 1982. The residential development was never constructed because subsequent litigation set aside Zoning Cases 5844 and 5867 and rolled back the density and zoning in the area to A-1-1 and R-R-1. The original CUP expired on November 11, 1999.

In 1999, the County approved CUP No. 98-059 to authorize the continued use of the Project site for the operation of an 18-hole golf course, clubhouse and appurtenant facilities, including three caretaker's residences for a period of 20 years, expiring on November 14, 2019. CUP No. 98-059 limits golf course hours from 6:00 a.m. to dusk daily, prohibits night golfing, regulates outdoor lighting, requires implementation of feasible water conservation measures and integrated pest management, and requires the inclusion of local native plant species in the golf course open space perimeter buffer areas and within the Project site's natural open space areas that are located within the riparian corridor of Trancas Canyon Creek. Water quality monitoring and testing also are required. The CUP set specific performance goals in the areas of pesticide, herbicide, and fertilizer use and requires an annual report to the Regional Planning Department, the National Park Service, the Department of Health Services, and the Resource Conservation District of the Santa Monica Mountains and an annual meeting with the National Park Service to discuss watershed issues.

The existing configuration of the 29 legal parcels is the result of three Lot Line Adjustments approved by the County.

Malibu Institute Development Proposed

The Project would allow development of the Malibu Institute, a sports-oriented educational retreat, on the 650-acre property currently operated as the Malibu Golf Club. The Project would provide for the development of educational and meeting facilities, overnight visitor-serving accommodations in 40 bungalows (160 total bedrooms), a warehouse, a cart storage building, a clubhouse with a spa and pool, a pro shop, and a maintenance building. The Project would also include the reconfiguration and continued operation of the existing golf course.



Source: Ventura County Land Use, 2007.

THE MALIBU INSTITUTE PROJECT EIR

ENVICOM CORPORATION

500-Foot Land Use Radius Map

0 625 1,250 Feet

FIGURE 5.9-2

The Project's proposed development area would be confined to the existing developed area of the Project site with slope gradients of less than 15 percent. This area consists of lower interior hills and the relatively flat portions of the interior valley floor areas of the Project site that were previously graded when the golf course was constructed in the 1970s. The Project would allow the continued public use of a remodeled 18-hole golf course, improved with an environmentally superior design to decrease irrigation requirements and remove non-native vegetation.

By clustering development of the buildings and accommodations on approximately 20 acres and the remodeled golf course on 107 acres in the southern portion of the 650-acre Project site, over 450 acres of native coastal scrub and chaparral, including oak woodland forest, would be left undisturbed and become permanently dedicated open space.

Entitlements Requested

The Project requires the following Lead Agency approvals:

- Certification of an Environmental Impact Report;
- Approval of Vesting Tentative Tract Map No. 71735 to reconfigure lot lines of 29 existing parcels into seven lots. Two of the lots would contain the Project development and the remaining lots would be dedicated as permanent open space, including the caretaker's residence;
- Approval of Conditional Use Permit No. 201100122 to authorize the following:
    - Development of the Malibu Institute Project and operation of a sports-oriented educational retreat on the 650-acre Project site currently operated as the Malibu Golf Club as described in the Project Description with the facilities indicated above, inclusive of a remodeled 18-hole public golf course;
    - On-site accessory live entertainment in the clubhouse and conference facility;
    - On-site grading of 120,000 cubic yards of cut and 120,000 cubic yards of fill balanced on site;
    - The continued sale of alcoholic beverages for on-site consumption;
    - Continued use and operation of a helipad (to be relocated) in a R-R-1 zone; and
    - Reconfiguration, continued operation, and maintenance of the existing golf course.
- Approval of a Parking Permit to authorize the use of shared parking of 387 parking spaces on-site; and
- Approval of a Fuel Modification Plan by the Los Angeles County Fire Department.

Responsible agency approvals also are requested and include (but are not necessarily limited to):

- Approval of a Coastal Development Permit from the California Coastal Commission for the development of the Project in the California Coastal Zone unless the Coastal Commission certifies the pending Santa Monica Mountains Local Coastal Plan prior to the end of the entitlement period for the Project. In that event the County of Los Angeles would approve the Coastal Development Permit;
- Issuance of a Streambed Alteration Agreement from the California Department of Fish and Wildlife pursuant to Fish and Game Code Section 1602;
- Issuance of a U.S. Army Corps of Engineers Nationwide Permit pursuant to Clean Water Act Section 404;
- Issuance of a Water Quality Certification from the Regional Water Quality Control Board pursuant to Clean Water Act Section 401;
- Issuance of Waste Discharge Requirements and Waste Reclamation Requirements from the Regional Water Quality Control Board for operation of an onsite wastewater treatment system; and

- Approval of annexation of the Project's Onsite Wastewater Treatment System into the Ventura Regional Sanitation District and other related actions by the Ventura County Local Agency Formation Commission and the Los Angeles County Local Agency Formation Commission.

5.9.2 Regulatory Setting

State

California Coastal Act

The California Coastal Commission was established by voter initiative in 1972 (Proposition 20) and made permanent by the California Legislature through adoption of the *California Coastal Act of 1976* (Coastal Act). The Coastal Commission, in partnership with coastal cities and counties, plans and regulates the use of land and water in the coastal zone. Development activities, which are broadly defined by the Coastal Act to include construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters, generally require a coastal development permit from either the local government, if it has a certified local coastal program, or the Coastal Commission.

The Coastal Act includes specific policies that address such issues as shoreline public access and recreation, lower-cost visitor accommodations, terrestrial and marine habitat protections, visual resources, landform alteration, water quality, transportation, development design, and public works. The policies of the Coastal Act are the statutory standards applied to planning and regulatory decisions made by the Coastal Commission and/or by local governments pursuant to the Coastal Act.

California's coastal management program is carried out through a partnership between state and local governments. Implementation of Coastal Act policies is accomplished primarily through the preparation of local coastal programs (LCPs), which must be completed by each of the State's 15 counties and 61 cities located in whole or in part in the coastal zone. A LCP includes a land use plan (LUP), which may be the relevant portion of the local general plan, related maps, zoning ordinances, zoning district maps, and a local implementation plan (LIP), which includes any special instruments necessary to implement the LUP. Coastal Act policies are the standards by which the Commission evaluates the adequacy of LCPs.

Development within the coastal zone may not commence until after the Coastal Commission or local government possessing a Commission-certified LCP has issued a coastal development permit. For the Project area, the Coastal Commission certified the Malibu Local Coastal Program Land Use Plan; however, it never certified a LIP for the Malibu Local Coastal Program. For this reason the Coastal Commission remains the agency responsible for issuing the Project's coastal development permit.

Los Angeles Regional Water Quality Control Board (Region 4)

The Los Angeles Region is the most densely populated Region in the state. It encompasses all the coastal watersheds of Los Angeles and Ventura Counties, along with portions of Kern and Santa Barbara Counties. The stated mission of the Los Angeles Regional Water Quality Control Board (LARWQCB) is to, "Preserve and enhance water quality in the Los Angeles Region for the benefit of present and future generations."[3] To accomplish its mission, the Regional Board conducts a broad range of activities to protect ground and surface waters in its jurisdiction. These activities include periodic updates of the Water Quality Control Plan (Basin Plan) for the Los Angeles Region, preparation, monitoring compliance

[3] Mission Statement of the Los Angeles Regional Water Quality Control Board

with, and enforcement of Waste Discharge Requirements, including NPDES Permits, implementation and enforcement of local storm water control efforts, regulation of the cleanup of contaminated sites, and enforcement of water quality laws, regulations, and waste discharge requirements. The activities of the Enforcement and Special Projects Unit, together with a strong enforcement effort, have been a primary focus of the Regional Board in recent years.[4] The Hydrology and Water Quality Section of this DEIR (Section 5.8) fully addresses stormwater treatment, surface water and groundwater quality issues and assesses the Project's consistency with applicable plans and standards of the Regional Board, among others.

South Coast Air Quality Management District and Air Quality Management Plan

The South Coast Air Quality Management District (AQMD) is the air pollution control agency for all of Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties. The Project site falls under its jurisdiction. The AQMD develops plans and regulations designed to achieve the public health air quality standards established by the EPA and Cal EPA by reducing emissions from business and industry. By law, the AQMD has jurisdiction only over businesses and other stationary sources, while the California Air Resources Board is responsible for reducing emissions from mobile sources, such as cars and trucks. Every three years, the AQMD prepares an Air Quality Management Plan (AQMP) for air quality improvement. The most current AQMP was adopted on December 7, 2012. The AQMD is currently initiating an early development process for the 2015 AQMP, which plan will incorporate the most current scientific and technical information and planning assumptions for the region, including the latest applicable growth assumptions and the Regional Transportation Plan/Sustainable Communities Strategies.[5] A description of the content and regulations contained in the current Air Quality Management Plan (AQMP) is provided in the Air Quality section of this DEIR (Section 5.2), and fully addresses Project-related air quality impacts and assesses the consistency of the Project with applicable plans and standards.

Santa Monica Mountains National Recreation Area/Santa Monica Mountains Conservancy

The Project site is within and surrounded by the Santa Monica Mountains National Recreation Area (SMMNRA). Following the establishment of the SMMNRA in 1978, the National Park Service (NPS) prepared the 1984 Land Protection Plan (LPP), which has been used since that time to identify land protection methods to protect SMMNRA resources. The LPP recognized existing private visitor-serving recreational venues under the category of "Compatible Private Recreation Land," and designates the Project site under this category. The NPS 2003 SMMNRA General Management Plan (GMP) locates the Project site within the "Moderate Intensity Zone." Though advisory only for private property, the GMP states: "Facility development would harmonize with the natural setting and be based on the principles of sustainable development."

Local

County of Los Angeles General Plan

The majority of the Elements of the County of Los Angeles General Plan were adopted on November 25, 1980, with various elements added and amended since 1986. It consists of Countywide Elements mandated by the California Government Code and a series of Community-wide Area Plans that set forth

[4] The Mission of the Regional Board at http://www.waterboards.ca.gov/losangeles/about_us/mission.shtml, accessed 5/15/13 and Fact Sheet of the Los Angeles Regional Water Quality Control Board – Key Issues at http://www.waterboards.ca.gov/losangeles/about_us/reg4.pdf, accessed 5/15/13

[5] South Coast Air Quality Management District, Frequently Asked Questions and Air Quality Management Plans at http://www.aqmd.gov/pubinfo/freqask.html, accessed 5/15/13

more detailed growth and development policies for specific unincorporated communities. The Elements of the current General Plan include: (1) Conservation and Open Space (1980); (2) Land Use (1980); (3) Housing (2008); (4) Transportation (1980); (5) Bicycle Master Plan/Bicycle Network (2012); (6) Water and Waste Management (1980); (7) Economic Development; (8) Safety/Safety Technical Appendix (1990); (9) Noise (1975); (10) Scenic Highway (1974); (11) Regional Recreation Area Plans (1965). The Elements of the General Plan are supplemented by General Goals and Policies, Technical Supplements, Policy Maps, and the conclusions and mitigation measures contained in the Plan's FEIR. Taken as a whole, the Los Angeles County General Plan is a comprehensive compendium of goals, objectives, and policies designed to provide a framework for growth and development within the County. The General Plan has not been comprehensively updated since its adoption; however, the County is currently processing a General Plan update. The Revised Draft May 2012 version of General Plan 2035 is available for public review online.[6] While the update may be referenced in a CEQA document, it is remains tangential to the Plan consistency analysis required in the Land Use section of the DEIR until it is formally adopted. Project applications filed and deemed complete prior to the effective date of the General Plan 2035 update are reviewed for consistency with the goals and policies of the current adopted General Plan. The entitlement applications for this Project were deemed complete on January 22, 2013. Accordingly, the Project is reviewed for consistency with the current General Plan.

Since the individual sections of this EIR do not include topic-specific General Plan consistency analyses, this Land Use section assesses the Project's consistency with applicable policies from every Element of the General Plan that may apply to any topical area covered by this DEIR.

The Land Use Policy Map designates the Project site, inclusive of its development area, as R - Non-Urban (Hillside).[7] Areas covered by the R - Non-Urban Hillside designation are defined as mountainous and foothill areas, generally developed at low densities and without typical urban facilities, such as streetlights and sidewalks, traffic signals, and sewers. The intent of this classification is to maintain the character of dispersed non-urban settlements and communities; provide for agricultural and mineral production; preserve areas of significant natural and scenic resources; and avoid intensive development of areas subject to severe natural hazards or lacking essential services and facilities. Within non-urban areas, a wide variety of uses and activities may be appropriate. These land uses include local and highway-oriented commercial and industrial uses, some manufacturing uses, various public facilities, and other generally compatible specialized uses.

Malibu Local Coastal Program Land Use Plan

Los Angeles County adopted the Malibu Local Coastal Program Land Use Plan in 1986 to serve as the General Plan's local coastal plan and satisfy the requirements of California State Planning Law (California Government Code Section 65300, *et. seq.*). Table 5.9-1 provides a list of the land use designations that currently apply to the Project site. In granting CUP 98-059-(3), the County found the existing golf course use consistent with the Countywide General Plan, the Malibu Local Coastal Program, and zoning.[8] The County is currently preparing an update to the 1986 Malibu Land Use Plan and a complete Local Coastal Program for this area. The proposed plan includes some of the policies of the 1986 Malibu Land Use Plan, new policies, and many policies from the Santa Monica Mountains North Area Plan.[9] The proposed Local Coastal Program is still in draft form and has not been adopted by the County. Therefore, the 1986 Malibu Local Coastal Program Land Use Plan and the Coastal Act are still

[6] At http://planning.lacounty.gov/generalplan/draft2012
[7] Land Use Policy Map, at http://planning.lacounty.gov/assets/upl/project/gp_web80-land-use-policy-map-5.pdf accessed March 1, 2013
[8] Conditional Use Permit 98-059-(3), Finding 19
[9] Los Angeles County Department of Regional Planning, at http://planning.lacounty.gov/coastal, accessed on May 28, 2009.

the governing document for this analysis.[10] Specific policies contained within the current adopted Malibu Land Use Plan that apply to the Project are listed in **Table 5.9-4** in the analysis of impacts and Project consistency is evaluated in the Table.

Santa Monica Mountains North Area Plan

The Santa Monica Mountains North Area Plan (North Area Plan) is a component of the Los Angeles County General Plan. The North Area Plan replaces in its entirety the Malibu/Santa Monica Mountains Interim Area Plan, which previously served as the basic planning tool for the unincorporated Santa Monica Mountains and related coastal area. The North Area Plan's primary role is to provide more focused policy for the regulation of development within the unincorporated area of the Santa Monica Mountains west of the City of Los Angeles and north of the Coastal Zone boundary. A small portion of the Project site is located within area covered by the North Area Plan and is designated Mountain Lands 10 and 20 (N-10 and N-20), which would allow a minimum lot size of 10 or 20 acres, respectively. None of the Project site located within the North Area Plan area would be developed as part of the Project and would remain as permanent open space.[11]

County of Los Angeles Planning and Zoning Code

The County of Los Angeles Planning and Zoning Code is contained in Title 22 of the County Code. The Planning and Zoning Code specifies the permitted land uses and associated development requirements for each specific zoning designation. Additional sections of the Planning and Zoning Code provide additional development standards and address such issues as setbacks, parking requirements, signage, and lot area. The development area of the Project site is zoned either R-R (Resort and Recreation), R-R-1 (Resort and Recreation – one acre minimum lot size) or A-1-1 (Light Agricultural – one acre minimum lot size). Analysis of the specific zoning required for each of the land uses proposed as part of the Project is provided in subsection 5.9.4 (Impact Analysis).

5.9.3 Thresholds of Significance

Based on the County's Environmental Checklist Form (Initial Study) and Appendix G of the CEQA Guidelines, implementation of the Project would result in significant Land Use impacts if:

- The Project would physically divide an established community;
- The Project would be inconsistent with the plan designations of the subject property. Applicable plans include: the County General Plan, County specific plans, County local coastal plans, County area plans, County community/neighborhood plans, or Community Standards Districts;
- The Project would be inconsistent with the zoning designation of the subject property;
- The Project would conflict with Hillside Management Criteria, SEA Conformance Criteria, or other applicable criteria.
- The Project would conflict with any applicable habitat conservation plan or natural community conservation plan.

[10] Telephone communication between Envicom Corporation and Jarod Nygren, County of Los Angeles Department of Regional Planning, Calabasas/Malibu Office on May 27, 2009.

[11] County of os Angeles North Area Plan Land Use Map (2003) at http://planning.lacounty.gov/assets/upl/project/smmnap_gr-landuse.pdf, accessed April 4, 2013.

5.9.4 Project Impacts

Implementation of the Project would result in the remodel of an existing golf course, the replacement or remodeling of certain existing appurtenant facilities, and the construction of new facilities, including the educational meeting building and 40 guest bungalows for overnight use. The following identifies potential land use impacts attributable to this development.

Threshold: Would the Project physically divide an established community?

The Project site contains an existing public golf course and appurtenant facilities, including clubhouse, cart barn, surface parking lots, and storage facilities. Large lot single-family residential uses are located to the west and north of the Project site but are separated from it by rugged topography. Mulholland Highway, a County-designated scenic route, traverses the northern portion of the Project site. Primary access to the site is via Encinal Canyon Road from Pacific Coast Highway or Kanan Road, although several additional routes from Pacific Coast Highway and from the Conejo Valley are available. All of the proposed development would occur within the footprint of the already disturbed and graded area of the Project site. No development is proposed outside the Project site as part of the Project, development would not involve acquisition of additional properties outside of the boundaries of the Project site, and no incursion into, or division of, existing surrounding land uses, including public open space, would occur as a result of Project implementation. Therefore, implementation of the Project would not involve the expansion of the Project into an established community beyond existing conditions and no impact associated with division of an established community would occur. (**Class III**)

Threshold: Would the Project be inconsistent with the plan designations of the subject property? Applicable plans include: the County General Plan, County specific plans, County local coastal plans, County area plans, County community/neighborhood plans, or Community Standards Districts.

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The County's General Plan land use designation for the proposed development area on the Project site is Rural, Non-Urban Hillside. This designation generally allows development at rural and low urban intensities, and future development is encouraged to be of an infill nature and/or consistent with existing community character and service levels.

Table 5.9-3 identifies applicable Los Angeles County General Plan policies and assesses the Project's consistency with each.[12] This discussion identifies whether or not the Project would conflict with policy and thereby result in an environmental impact or prevent the avoidance or mitigation of environmental effects intended by the policy. As discussed in detail in **Table 5.9-3**, the Project would be consistent with all applicable General Plan policies and Project impacts would be considered less than significant with adherence to existing Codes and regulatory requirements and the implementation of appropriate mitigation measures provided for in the various sections of this DEIR.

[12] Policies not included in the Plan Consistency Analysis are not applicable to the Project.

Table 5.9-3
Los Angeles County General Plan Consistency Analysis

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GENERAL GOALS AND POLICIES (GG)	
GG Policy 10: Protect areas that have significant natural resources and scenic values, including significant ecological areas (SEA), the coastal zone and prime agricultural lands.	**Consistent:** The Project would preserve approximately 450 acres of open space consisting of ridgelines and slopes in excess of 25 percent grade and inclusive of all ESHAs located on the Project site. The Project would not impact designated SEAs, all of which are located offsite, thus preserving scenic values and significant ecological areas in compliance with this policy. The Project is in compliance with the provisions of the Malibu Coastal Plan. The Project's consistency with the specific policies of the MCP is provided in Table 5.9-4. There are no prime agricultural lands on the Project site.
GG Policy 23: Ensure that development in nonurban areas is compatible with rural lifestyles, does not necessitate the expansion of urban service systems, and does not cause significant negative environmental impacts or subject people and property to serious hazards.	**Consistent:** The Project is considered compatible with rural lifestyles as it provides recreational facilities that are consistent with the site's General Plan designation and zoning. The Project would not require the expansion of urban service systems beyond those already present. Development would not result in significant unmitigated environmental hazards nor would it expose people of property to serious hazards, as discussed in detail in Section 5.7, Hazards/Hazardous Materials, of this DEIR. In all respects, the Project would be consistent with this policy with the implementation of all regulatory requirements and mitigation measures.
GG Policy 38: Protect and enhance the visual uniqueness of natural edges and encourage superior design of major entryways.	**Consistent:** The Project would be separated from Encinal Canyon Road by vegetation and topography. Topography also would provide visual separation between this scenic corridor and developed portions of the site, with few exceptions. Therefore, the Project would protect the visual uniqueness of natural edges. The design of the major entryway from Encinal Canyon Road would replace ornamental landscape with natural vegetation in keeping with the surrounding natural environment, resulting in an improvement to the entry, consistent with the intent of this policy.
LAND USE ELEMENT (LU)	
Policy Statement: Ensure Compatibility of Development	
LU Policy 7: Assure that new development is compatible with the natural and manmade environment by implementing appropriate locational	**Consistent:** The Project includes a remodel of an existing golf course and clubhouse, construction of new appurtenant facilities, and reconfiguration of

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controls and high quality design standards.	surface parking. All development, including the remodeled golf course, would be located within the already disturbed footprint of the existing golf club. All structures would be clustered in the southern portion of the Project's development area and would be designed to be compatible with the surrounding natural environment (see elevations in Project Description) and with each another. Accordingly, the Project is consistent with this Policy.
LU Policy 13: Prevent inappropriate development in areas that are environmentally sensitive or subject to severe natural hazards, and in areas where essential services and facilities do not exist and are not planned.	**Consistent**: The Project site is located in the Santa Monica Mountains. Two areas of the Project site, located outside of the proposed development area, are designated Environmentally Sensitive Habitat Areas (ESHAs) and these ultimately would be dedicated as permanent open space. Sensitive Environmental Area (SEA) 3 (Zuma Canyon), SEA Buffer 3A, and the Trancas Canyon Significant Watershed Area (SWA) are located in proximity to the Project site (See Figure 5.3-3), but do not intrude into the Project site and would not be adversely affected by the Project. (See Section 5.3, Biological Resources, for a complete assessment). The Project site is located in an area subject to Very High Fire Hazard; however, the Project would provide adequate fire flow for the defense of its structures, open sources of water that could be used by the Fire Department, and a helipad and large areas of irrigated open space and parking lots available for staging. The Project would create and maintain appropriate Fuel Modification Zones around each structure as required by the County Fire Department, consistent with this policy. The Las Virgenes Municipal Water District would continue to provide potable water to the Project site. Public sewers are not available to the Project site; however, an onsite wastewater treatment facility would replace existing septic tanks, except at the caretaker's residence, and may also provide recycled water for onsite irrigation use that would supplement potable water supplies from Las Virgenes Municipal Water District. All other utility services are available to the Project site. Accordingly, the Project is consistent with the various requirements of this Policy.

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LU Policy 14: Establish and implement regulatory controls that ensure compatibility of development adjacent to or within major public open space and recreation areas including National Forests, the National Recreation Area, and State and regional parks.	**Consistent:** The Project site is located within the Santa Monica Mountains National Recreation Area, established a year after the County granted the initial approval for the golf course. In 1984, the National Park Service prepared a Land Protection Plan (LPP), which has been used since that time to identify methods to protect SMMNRA resources. The 1984 LPP recognized existing private visitor-serving recreational venues such as the Malibu Golf Club under the category of "Compatible Private Recreation Land" and designates the Project site under this category. The NPS 2003 SMMNRA General Management Plan (GMP) locates the Project site within the "Moderate Intensity Zone." Though advisory only for private property, the GMP states: "Facility development should harmonize with the natural setting and be based on the principles of sustainable development." The Project would harmonize with the natural setting, would result in the dedication of the majority of the site as permanent natural open space, and would incorporate principles of sustainable development including: water quality improvements, onsite wastewater treatment, the preferred option to use recycled water to reduce water consumption, the incorporation of solar energy to power facilities, the replacement of existing ornamental landscape with drought tolerant native vegetation, and the use of green roofs. These and other measures are consistent with the County's Low Impact Development (LID) requirements and would ensure Project consistency with this Policy.
LU Policy 15: Require that new developments in non-urban areas have adequate accessibility to paved roads and water lines of adequate capacity.	**Consistent:** The Project would remodel an existing public golf course and would add new buildings and reconfigure parking. The site is accessed from Encinal Canyon Road, a paved two-lane public street, via a paved private driveway (Clubhouse Drive). Paved public access to this portion of Encinal Canyon Road is available from Decker Canyon Road (via Lechusa Road connector), Mulholland Highway and Kanan Dume Road. Water is supplied through an existing 12-inch water line, which is considered adequate to provide water service and fire flow for the Project as discussed in Section 5.14.1, Public Utilities – Water Supply. Accordingly, the Project would be consistent with this Policy.

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LU Policy 18: Ensure that future land division activity within Los Angeles County occurs in strict compliance with State and local laws.	**Consistent:** The Applicant has requested approval of a Vesting Tentative Tract Map, approval of a new Conditional Use Permit and other County development approvals, and a Coastal Development Permit from the Coastal Commission. Applications for each County discretionary action have been filed and were deemed complete by Regional Planning in January 2013. The EIR is being processed concurrently with these requested entitlements. Therefore, the Project's land division activity would fully conform with local and State laws and regulations and would be consistent with this Policy.
Policy Statement: Take effective measures to conserve and enhance valuable natural assets.	
LU Policy 20: Establish land use controls that afford effective protection of significant ecological and habitat resources, and lands of major scenic value.	**Consistent**: The Project is not located within a County-designated significant ecological area (SEA); however two SEAs are located east of the Project site. Two Environmentally Sensitive Habitat Areas (ESHAs) are located on the Project site, but are outside of the proposed development area and would be protected in perpetuity by the permanent dedication of the pristine, undeveloped areas of the Project site as permanent open space. The Project is located at the headwaters of Trancas Canyon Creek, a State-designated Significant Watershed Area (SWA). The Project would implement approved water quality BMPs during its construction and operational phases. The Project would: (1) drain and dredge on-site water features to remove non-native aquatic species that have potential to migrate off-site into the downstream creek area; (2) install and maintain two new detention basins with water quality functions to help filter debris and potential contaminants washed off of the parking lot and other paved areas by first flush precipitation; (3) install a sand cap over the golf course to filter nuisance runoff and precipitation-generated sheet flow; (4) reduce amount and toxicity of pesticides, herbicides and fertilizers used at the site and expand the use of organic alternatives to control pests and weeds: (5) install green roofs where feasible to reduce potentially polluted wash-off from building roof areas; (6) and utilize pervious pavement in parking lots and golf cart paths to allow percolation and filtration of rain and irrigation water and reduce potential contaminant wash-off. See Section 5.8, Hydrology and Water Quality.

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	Mulholland Highway, a designated scenic corridor, traverses the Project site near its northern boundary; however, the development area would not be substantially visible from the corridor. Residential uses in proximity to the Project site are visually separated from the development area by rugged terrain and ridgelines that block views. For these reasons, the Project would be consistent with this Policy.
LU Policy 24: Promote compatible land use arrangements that reduce reliance on the private automobile in order to minimize related social, economic, and environmental costs.	**Consistent:** The Project would provide transportation to/from LAX and other nearby airports and pick-up/drop-off service for large local groups via privately operated shuttle service to reduce the number of trips made by Institute visitors. The provision of onsite overnight accommodations for guests, as well as a restaurant, snack bar, and other visitor-serving facilities would reduce the number of off-site vehicle trips that visitors would be required to make, ensuring consistency with this Policy.
LU Policy 25: Promote land use arrangements that will maximize energy conservation.	**Consistent:** The Project would include solar arrays, which would supply approximately 50 percent of the Project's energy needs. The Project would incorporate energy efficiency features with the goal of achieving LEED™ Platinum certification or equivalent, which is the highest rating for sustainability. Efficiency features such as green roofs, building orientation, and window shielding would help provide passive cooling and reduce energy consumption in compliance with this Policy.
Policy Statement: Address cumulative social, economic, and environmental effects and ensure opportunities for citizen participation.	
LU Policy 27: Provide a land use mix at the countywide, area-wide, and community levels based on projected need and supported by evaluation of social, economic, and environmental impacts.	**Consistent:** The Project would remodel an existing public golf course, which would continue to operate as an important public recreational resource, while adding visitor-serving accommodations and amenities to enhance its facilities. The availability of overnight accommodations would encourage and facilitate guest visitation and utilization of existing off-site recreational opportunities including the use of the Backbone trail system in the Santa Monica Mountains National Recreation Area. The DEIR addresses the Project's environmental effects in Sections 5.1 – 5.14 and establishes consistency with this Policy.
LU Policy 28: Ensure continuing opportunity for citizen involvement in the land use decision-making process.	**Consistent:** The entitlement process for the Project included a public scoping meeting held on December 10, 2012 to facilitate input into the evaluation of the Project's environmental impacts analyzed in this

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	document. Future review and comment periods would include public hearings and other opportunities for public input, including the ability to provide written comments during the public circulation periods mandated for this DEIR, consistent with this Policy.
Policy Statement: Improve inter-jurisdictional coordination in land use planning.	
LU Policy 30: Promote improved inter-jurisdictional coordination of land use policy matters between the County, cities, adjacent counties, special districts, and regional and sub regional agencies.	**Consistent:** The entitlement process for the Project included the circulation of the Project's Initial Study and Notice of Preparation as well as the publication and circulation of the DEIR to adjacent cities, special districts, and regional agencies, providing opportunities for substantive input in the land use entitlement process for trustee and responsible agencies as well as the general public. Public hearings held as part of the Project entitlement process would provide additional opportunities for inter-agency coordination. The Project would also require a Coastal Development Permit and various permits from other responsible agencies that rely on the Project's certified Final EIR. Both the County and the Applicant have and would continue to engage in early and frequent coordination with other responsible agencies, in compliance with this Policy.
General Conditions and Standards for Development	
Non-Urban Hillside Development	
General Conditions and Standards for Development: It is the intent of the General Plan to permit uses that are compatible with hillside factors and suitability factors, that do not create demand for public investment in urban services and facilities, and that do not cause significant adverse environmental impacts. Uses compatible within non-urban hillside management areas include recreation and public uses, which by their nature can be appropriately located in remote hillside areas.	**Consistent:** The Project would remodel, and expand the facilities and services provided at the location of an approved and operating public golf course within the existing development footprint. Approval of the Project would permit the removal of existing non-native vegetation and its replacement with drought-tolerant native species. As a recreational use incorporating native vegetation and maintaining the majority of the site in natural open space, the Project would be compatible with its hillside surroundings. As a remodel of an existing use served by existing roads and utilities, the Project would not create a new demand for public investment in urban services and facilities. Implementation of mitigation measures, Conditions of Approval for the proposed Vesting Tentative Tract Map (VTTM) and Conditional Use Permit (CUP), compliance with the conditions of various required jurisdictional agency permits, and other existing regulatory requirements would ensure the reduction of any potentially adverse environmental impacts associated with the Project's development to

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	a less than significant level while also ensuring that Project development is evaluated and conditioned consistent with its location within hillside areas, consistent with this Policy.
General Conditions of Development: Non-urban hillside management areas are defined as lands characterized by natural slopes of 25 percent or greater, not designated for future urban use nor scheduled to receive urban level of services as designated in the Conservation and Open Space Element Maps. Many non-residential uses may be appropriately located in non-urban hillside management areas. Certain uses, by their nature, require remote hillside locations. Nevertheless, for public safety, resource protection, and general land suitability, safeguards are necessary to discourage intensive development and to minimize environmental disruption and the loss of scenic and open lands. Where it is determined that specific uses may appropriately be located in hillside environs, they shall be reviewed for compliance with applicable performance criteria. Additional factors, such as the presence of significant ecological resources, may also impose special review requirements. Subject to the above conditions, the following uses may be appropriate: (5) commercial resort and recreational uses, including visitor accommodations, services and facilities, when designed in a manner compatible with and sensitive to natural resources and scenic amenities. Performance Review Criteria include: (1) Geologic, Seismic and Slope Stability; (2) Fire, Flood and Erosion; (3) Resource Projection – Drainage Networks; (4) Biotic Resources; (5) Cultural Resources; (6) Scenic Resources; (7) Suitability for Development; (8) Water Supply and Waste Disposal; (9) Road Capacity; (10) Quality of Design and Grading; (11) Building Placement and Design; (12) Landscaping; (13) Utility Lines; (14) Signage.	**Consistent:** While the Project site includes areas of slope in excess of 25 percent, these areas are located outside of, or along the edges of the proposed Project development area. The Project site is not designated or designed for future urban use. The proposed uses (golf course, overnight accommodations, educational facilities, clubhouse, restaurants, and related ancillary facilities) are consistent with the uses permitted in Non-Urban Hillside Management Areas and are additionally permitted with a conditional use permit under the existing zoning. This DEIR includes review and analysis of potential adverse impacts that could be associated with Project implementation and imposes mitigation measures where needed to ensure reduction of potentially significant to less than significant levels. Section 5.5, Geology and Soils, assesses geologic, seismic, grading design, and slope stability issues and imposes mitigation measures as needed to ensure less than significant impacts; (2) Section 5.8, Hydrology and Water Quality, addresses flood, drainage networks, and erosion issues and imposes mitigation measures where necessary to ensure less than significant impacts. Erosion is also addressed in Section 5.5, Geology and Soils, and in Section 5.2, Air Quality; (3) Wildfire and issues associated with wildland/urban interface, including the provision of adequate fire suppression services, are addressed in Section 5.11.1, Fire Protection Services, and in Section 5.7, Hazards/Hazardous Materials; (4) Section 5.3, Biological Resources, addresses the protection of natural biotic resources including habitat preservation and enhancement. Section 5.8, Hydrology and Water Quality, addresses the preservation and protection of surface water and ground water resources both on and off-site; (5) Section 5.4, Cultural Resources, addresses the protection of any cultural resources associated with the Project site; (6) the quality of design, building place, landscaping, signage, and the protection of scenic resources are addressed in Section 5.1, Aesthetics and Visual Resources; (7) Sections 5.14.1

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	and 5.14.2, Utilities/Water Supply and Utilities/Wastewater Treatment, address water supply and waste disposal as well as the location and adequacy of utility lines; and (9) Section 5.13, Traffic and Access, addresses the issue of road capacity. Each discussion and analysis is supported by technical studies and/or other CEQA-acceptable technical data. Compliance with existing regulations and mitigation measures would reduce any adverse impacts associated with the development of the Project to a less than significant level.
Open Space Easements and Dedications	
General Conditions and Standards for Development: For purposes of the General Plan, open space dedications are defined as privately owned lands, which have been set aside for permanent open space as part of a larger land development proposal that is typically assured through deed restrictions or dedication secured at the time of development permits.	**Consistent:** The Project would result in the permanent preservation as open space of over 450 acres of the Project site.
Scenic Highways	
General Conditions and Standards for Development: Scenic highways are identified in the Countywide Scenic Highway Element and include adopted State Scenic Highways as well as locally designated scenic resources and routes that have potential for future designation as a State- or local scenic route. Proposed development within all adopted and proposed scenic corridors shall be reviewed for consistency with specific design criteria including: (1) creation of a consistent visual relationship with surround development and the natural terrain and vegetation; (2) structures and landscape should complement and enhance scenic views; (3) potentially unsightly features should be located in areas not visible from the highway or screened; (4) grading should result in final contours that are compatible with existing terrain; (5) access from the scenic highway should be minimized; (6) watercourses should be preserved; (7) outdoor advertising shall be prohibited.	**Consistent:** The State has designed western Mulholland Highway as a County-designated scenic corridor. Encinal Canyon Road is proposed for designation as a scenic corridor in the 2013 Scenic Highway Element of the General Plan. The development area of the Project site is intermittently visible from the Mulholland scenic corridor where intervening topography permits. Views from Encinal Canyon Road are also intermittent and in large part blocked by intervening terrain and roadside landscape and vegetation. Dedication of undeveloped portions of the Project site, including areas adjacent to these existing and potential scenic corridors, would preserve their natural character, consistent with the intent of this Policy. The replacement of existing non-native vegetation on the site with native, drought tolerant species would enhance visual character and compatibility as would the preservation of existing natural drainage courses located within the dedicated open space area. Access to scenic corridors is limited to a single point of access at Encinal Canyon Road. With the exception of a monument sign identifying the Institute and well-designed way-finding signage within the Project site, no outdoor advertising or signage would be permitted.

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Archaeological and Paleontological Resources	
General Conditions of Development: (1) A literature search for valid archeological or paleontological surveys shall be conducted for each initial study of a public or private project; (2) if the literature search indicates a strong likelihood that an archaeological or paleontological resource would be impacted by the proposed project, a study of the project site shall be made by a qualified archaeologist or paleontologist; (3) prior to approving a project, the approving agency shall make a determination based on the above report as to the conditions necessary to preserve the archaeological or paleontological resources.	**Consistent:** A Phase I Cultural Resources and Paleontological Resources literature search was conducted for the Project and considered in the Initial Study. Two potentially significant sites were identified. One could not be located and the second was a potential historic resource addressed below. Section 5.4, Cultural Resources, of this DEIR addresses these sites in detail and identified mitigation measures that would be implemented in the event previously unidentified resources were uncovered in the course of construction of the Project. These mitigation measures, including the presence of cultural resource monitors during grading in sensitive areas, would reduce any potential Project impact to unknown archaeological or paleontological resources to a less than significant level, consistent with the requirements of this Policy.
Historic Resources	
General Conditions of Development: Historic sites and structures include all places, structures or objects currently identified or to be identified in the National Register of Historic Places, the State Department of Parks and Recreation Inventory and the Los Angeles County Historic Landmarks Inventory. These sites and structures are considered to be of countrywide significance and require preservation to the most feasible extent. It is recognized that there may be other sites and structures which are not on the above lists but which may have importance to local communities, and in such cases a community or areawide plan may designate these sites of structures for special land use regulations.	**Consistent:** A Phase I Cultural Resources study was conducted for the Project site and considered in the Initial Study and in Section 5.4, Cultural Resources, of this DEIR. The study indicates the two old structures (circa 1920) located on the Project site are not resources of historic significance and are not identified as such in the Malibu Local Coastal Program Land Use Plan. Neither of these resources is listed, or eligible for listing, in the National Register of Historic Places pursuant to Secretary of the Interior Standards, is eligible for listing on the California Register of Historic Resources based on the State's criteria (Technical Resource Bulletin 8), or been nominated or considered for placement by the Los Angeles Conservancy or recommended for consideration for landmark status by the Los Angeles County Historical Landmarks and Records Commission.
CONSERVATION AND OPEN SPACE ELEMENT (COS)	
Policy Statement: In the face of scarce fuel resources and rising fuel costs, energy must be conserved and new sources of energy found.	
COS Policy 2: Support conservation of energy and encourage the development and utilization of new energy sources including geothermal, thermal waste, solar, wind, and ocean-related sources.	**Consistent:** Inclusion of sustainability features that would minimize consumption of gas and other carbon-based fuels is a central development concept of the Project. Internal site circulation would be via electric vehicles, bicycles, or walking via pedestrian walkways and golf cart paths. Installation of photovoltaic panels above the parking lot shade structures and on the roofs of selected buildings

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	would generate electricity to help power the Project. The Project also would include energy efficient design features including green walls, use of color and shade structures to reduce heat island effect, and the use of green roofs for passive cooling. All of these efforts are consistent with this General Plan Policy.
COS Policy 3: Promote the use of solar energy to the maximum extent possible.	**Consistent:** Installation of photovoltaic panels above the parking lot shade structures and on the roofs of selected structures would generate electricity to help power the Project and would promote the use of solar energy, consistent with this Policy.
Policy Statement: Conserve and protect the supply and quality of local water.	
COS Policy 4: Protect ground water recharge and watershed areas, conserve storm and reclaimed water and promote water conservation programs.	**Consistent:** Water conservation would be accomplished through reduction of the golf course footprint, reducing the amount of turf requiring irrigation. Drought tolerant native species would be incorporated for landscaping, over 1,500 non-native trees with high water requirements would be removed, and turf grass would be replaced with varieties that have lower water demands. The existing golf course irrigation system, consisting of older, less efficient components, would be replaced with "smart irrigation" systems with features that further reduce water use. Wastewater generated on the Project site would be treated in the site's wastewater treatment facility to a tertiary level appropriate for use as irrigation water for the public golf course and other landscaped areas, reducing use of potable water on the Project site as a preferred option. In the event that recycled water is not used for irrigation, the tertiary treatment level is appropriate for use in subsurface infiltration. Surface water quality would be enhanced by the use of circulation pumps within the golf course water features to reduce stagnation. Water quality BMPs incorporated into the Project's design, including the installation of two detention basins and bioswales, would improve the quality of water discharged downstream from the site as compared to the existing condition. Additional water quality improvement measures would include sand-capping of the golf course, use of pervious paving in the parking lot, use of green roofs, reduction in the level of pesticide, herbicide and fertilizer use and the use of non-chemical alternatives, consistent with the Policy.

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COS Policy 5: Encourage the maintenance, management, and improvement of the quality of imported water, groundwater supplies, natural runoff, and ocean water.	**Consistent:** The Project is located at the headwaters of Trancas Canyon Creek, a Significant Watershed Area (SWA). See response regarding water quality measures consistent with this Policy under COS 4 and General Standards.
Policy Statement: Conserve natural areas.	
COS Policy 7: Preserve significant ecological areas and habitat management areas by appropriate measures including preservation, mitigation, and enhancement.	**Consistent:** The Project would conserve existing ESHAs within the Project site through dedication of these areas as permanent open space. The Trancas Canyon Creek SWA would be improved through implementation of water quality measures in compliance with this Policy.
COS Policy 8: Protect the quality of the coastal environment. Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resource conservation principles.	**Consistent:** The Project would protect the quality of the coastal environment by dedicating over 450 acres as permanent open space within the coastal zone and by preserving and enhancing an existing recreational resource in a manner consistent with sound resource conservation principles consistent with this Policy.
COS Policy 12: Protect watershed, streams, and riparian vegetation to minimize water pollution, soil erosion and sedimentation, maintain natural habitats, and aid in ground water recharge.	**Consistent:** The Project would implement water quality BMPs during its construction and operational phases that would minimize water pollution using the best available technology (BAT standard). Onsite extant natural drainages, rills and other ephemeral features of the Trancas Canyon Creek headwaters area would be preserved as part of the conservation and dedication of over 450 acres of open space. Erosion control BMPs would be implemented during the construction and operational phases of the Project to control erosion and downstream sedimentation including landscape of slopes and golf course greens over a sand cap. These measures would protect against soil erosion and downstream sedimentation, and protect downstream habitat consistent with this Policy. Incorporation of pervious paving materials and onsite bioswales would aid in groundwater recharge.
COS Policy 13: Encourage open space easements and dedication as a means of meeting scenic, recreational, and conservation needs.	Consistent: The Project would result in the dedication of over 450 acres as pristine open space within the SMMNRA. This dedication would help to conserve scenic resources, add to the recreational resources available within the SMMNRA, and help to meet conservation needs as provided in the NPS SMMNRA General Management Plan, consistent with the goals of this Policy.
Policy Statement: Protect scenic resources from unsightly development and urban sprawl.	
COS Policy 16: Protect the visual quality of scenic areas including ridgelines and scenic views from public roads, trails and key vantage points.	**Consistent:** Mulholland Highway is a State-designated scenic Highway and the Encinal Canyon Road is identified as a potential scenic route in the

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	Scenic Highway Element of the General Plan. The Project site is intermittently visible from these roads. Hiking and biking trails also offer public views of the Project site. However, analysis in Section 5.1, Aesthetics, of this DEIR has determined that significant ridgelines block most views of the development area. Rather, the ridgelines and undeveloped peaks are the areas of the Project site that are visible from public viewpoints. Roadside landscape and native vegetation and intervening ridgelines also screen the golf course from Encinal Canyon Road. Visual simulations provided in Section 5.1 of this DEIR illustrate the visual impact of the Project and demonstrate that the proposed structures would not interfere with views of ridgelines or other designated scenic resources. Mitigation measures also are proposed in Section 5.1 to further reduce any potential visual effects so that the Project would be fully consistent with this Policy.
Policy Statement: Protect cultural heritage resources.	
COS Policy 17: Protect cultural heritage resources, including historical, archaeological, paleontological, and geological sites, and significant architectural structures.	**Consistent:** Two potential cultural resources were identified on the Project site and are discussed at length in Section 5.4, Cultural Resources, of this DEIR. As documented in the analysis provided in Section 5.4, the Project would not have a significant impact on historic or archaeological resources with implementation of mitigation measures. A potential impact on paleontological resources at the southern end of the parking lot area may exist due to the depth of the alluvium in this location and the potential depth of excavation required to install a detention basin; however, Mitigation Measure 5.4-6 would require the presence of a paleontological monitor during earth disturbing activities in areas with potential to yield such resources. The presence of the monitor and the implementation of all other mitigation measures provided in Section 5.4 of this DEIR would ensure compliance with this Policy.
Policy Statement: Protect public safety by restricting development in areas subject to fire, floods, seismic and geologic hazards.	
COS Policy 21: Restrict urban development in areas subject to seismic and geologic hazards	**Consistent:** All areas of southern California are subject to seismic hazard due to the underlying geology. Section 5.5, Geology and Soils, of this DEIR provides a full evaluation of the Project site's geologic and seismic setting, the suitability of the site for development from a geotechnical perspective, and discusses Code requirements which would reduce any potential adverse impacts to a less

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	than significant level. The Project site is not subject to liquefaction. No known faults traverse any portion of the site. Landslides do not pose a danger for the proposed development areas of the Project site. All soils stability issues would be addressed through appropriate soils engineering, pad preparation, and foundation design consistent with existing County building codes and standards. Compliance with existing ordinances, regulations, and policies provided in Section 5.5 would ensure the Project's consistency with this Policy.
COS Policy 22: Restrict urban development in flood prone areas. Maintain natural watershed processes by regulating development in tributary watershed. Minimize increased runoff, erosion, and siltation of streambeds that would limit the uses of streams for recreation and other beneficial uses.	**Consistent:** The Project is not located in a mapped flood hazard area. Flows from 25, 50, and 100-year storms entering the Project site would be retained within the golf course below and at considerable distance from any occupied structure. Nuisance runoff from the Project site and first flush storm flows would be detained and treated on-site in detention basins and any incremental flow would be detained up to 72 hours to ensure downstream flows and velocities do not increase above the natural condition. Siltation is not identified as a downstream problem. Section 5.8, Hydrology and Water Quality, of this DEIR provides a full analysis of the Project's water quality and downstream watershed impacts and demonstrates the Project's consistency with this Policy.
COS Policy 24: Manage development in hillside areas to protect their natural and scenic character and to reduce risks from fire, flood, mudslide, erosion, and landslides.	**Consistent:** The proposed development area of the Project site is located in a bowl created by prior grading and the topographic conditions of the surrounding hillsides, steep slopes and ridgelines. The issues of wildland/urban interface and the measures required by current ordinance and regulations to protect structures located in high fire hazard areas are discussed in Section 5.7, Hazards/Wildfire, and 5.11.1, Public Services/Fire Suppression, of this DEIR. Current regulations and building codes require maintenance of an appropriate fuel modification zone in the vicinity of occupied structures, fire-retardant roofing, boxed eaves, and the installation of both interior and exterior sprinkler systems for structures such as those proposed. The large area of paved parking and irrigated golf course separates the fire-prone natural areas and occupied structures. These open areas would provide a measure of protection from wildfire impacts. The area is not subject to floods or mudslide, would not create erosion impacts, and landslide hazards are not

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	present in the proposed development area of the Project site, making the Project consistent with this Policy.
COS Policy 25: Discourage isolated development in wildfire hazards areas and develop stricter brush clearance ordinances to protect existing structures.	**Consistent:** The Project would remodel an existing golf club, would adhere to appropriate levels of fuel modification in the area around occupied structures pursuant to the requirements of the LACFD, and would therefore be consistent with this Policy.
Policy Statement: Provide additional outdoor recreation areas.	
COS Policy 26: Actively participate in the planning for acquisition and development of the Santa Monica Mountains National Recreation Area.	**Consistent:** The Project is located within the Santa Monica Mountains National Recreation Area and is developed with a recreational use that is consistent with the SMMNRA's Management Plan. The Project would preserve over 450 acres of open space. Development of the Project would, therefore, be consistent with this Policy
COS Policy 27: Provide low intensity outdoor recreation in areas of scenic and ecological value compatible with protection of these natural resources.	**Consistent:** The Project would cluster development within the already disturbed footprint of the existing Malibu Golf Club and would preserve over 450 acres of undisturbed hillside and ridgeline with scenic and ecological value, including areas that meet the definition of ESHAs. Water quality improvements would contribute to the planned reclamation of the downstream Trancas Canyon Creek SWA. These measures would ensure consistency with this Policy.
COS Policy 30: Develop a system of bikeways, scenic highways, and riding and hiking trails; link recreational facilities where possible.	**Consistent:** The Master Bicycle Plan of the County of Los Angeles was adopted as part of the County General Plan in 2012 and includes a future Class 3 bike path between Mulholland Highway and Pacific Coast Highway via Encinal Canyon and Decker Canyon Roads. The Project has potential to provide a rest stop along that route with access to facilities. Bicycle parking would be provided pursuant to existing regulations. A presently undeveloped spur trail has potential to link the Project site to the Backbone Trail.
Policy Statement: Promote landscaping.	
COS Policy 34: Use drought resistance vegetation.	**Consistent:** The Project would replace existing ornamental landscape and existing non-native trees with drought tolerant native species, consistent with this Policy.
COS Policy 35: Support preservation of heritage trees.	**Consistent:** The Project would avoid impacts to all oak trees on the Project site, including the one heritage oak tree on the Project site.

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TRANSPORTATION ELEMENT (TRANS)	
Policy Statement: Provide transportation to serve the needs of the public and to support adopted land use.	
TRANS Policy 3: Plan and develop bicycle routes and pedestrian walkways.	**Consistent:** The Project would include on-site pedestrian paths through the golf course and around the facilities. The clustering of structures, including overnight accommodations, the clubhouse, and the Institute building would allow for pedestrian linkages and walkways. External to the Project site, the County has provided for the future striping of a Class 3 bike lane on Encinal Canyon Road between Mulholland Highway and Pacific Coast Highway. The Project would not interfere with its development and could provide respite facilities (access to restrooms, snack bar and bike parking) for recreational bicycle riders using the bikeway, consistent with the intent of this Policy. In addition, the Project would provide showers and lockers for employees and guests to encourage bicycle commuting, in compliance with this Policy.
Policy Statement: Reduce highway congestion.	
TRANS Policy 19: Support traffic-operation improvements for improved flow of vehicles.	**Consistent:** The Traffic Impact Study prepared for the Project demonstrates that existing street systems and potentially affected intersections currently operate at LOS A and would continue to operate at acceptable levels of service in the cumulative condition with the Project in the future. No street widening and no new traffic calming or traffic control measures would be required for the Project, which would not have an adverse impact on the flow of vehicles in the Project vicinity, consistent with the intent of this Policy.
TRANS Policy 20: Encourage greater use of public transit to special purpose centers and recreational facilities	**Consistent:** The Project site is not served by public transit; however, the Project would provide a shuttle service for guests arriving at airports located in the Los Angeles area and for groups located in the region. The Project would use 14-passenger shuttle vans designed specifically for the hotel/airport industry. Use of shuttles would provide an alternative to the use of individual motor vehicles as a way to access the Project site and could effectively reduce vehicle miles traveled by automobiles consistent with this Policy.
Policy Statement: Reduce transportation related degradation of the environment.	
TRANS Policy 21: Stress environmental compatibility (including air quality, noise, ecology and aesthetics, health and safety) in developing transportation systems.	**Consistent:** See response to TRANS Policy 20, above. The use of higher capacity private transit vehicles serving guests arriving at local airport or to pick up and drop off large groups of local residents

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	would reduce potential impacts to air quality, noise, ecology, health and safety that could occur with other modes of transportation, in compliance with this Policy.
TRANS Policy 23: Avoid construction of transportation facilities within significant ecological areas unless essential following a detailed analysis of alternatives including a "no project" alternative. If the facility is still found to be necessary, it shall be constructed in the most environmentally sensitive manner.	**Consistent:** The Project would not require construction of transportation-related facilities. Paved public streets would serve the Project and primary access would continue to be from Encinal Canyon Road. No road widening and no installation of new traffic calming or traffic control measures would be required to maintain acceptable levels of service (LOS) based on County requirements. The Project's Alternative Analysis, including the "No Project" alternative determined that the Project would not adversely impact significant environmental areas. For this reason, and given that the Project would not require construction of transportation facilities within such areas, the Project would be consistent with this Policy.
Policy Statement: Improve the efficiency of the transportation system and reduce transportation energy consumption.	
TRANS Policy 26: Encourage the efficient use and conservation of energy used in transportation.	**Consistent**. The use of higher capacity shuttles to transport Project guests to/from airports and other group pickup points would result in a more efficient use (and conservation) of energy used in transportation. In addition, electric golf carts would be used to provide on-site transportation and walking paths linking buildings and uses would encourage walking between locations by guests, also resulting in the conservation of energy used in transportation consistent with this Policy.
Policy Statement: Improve transportation safety and security.	
TRANS Policy 30: Provide for seismic safety in transportation facilities for effectiveness in emergency situations.	**Consistent:** Multiple routes are available that provide access to the Project site location at Encinal Canyon Road from Pacific Coast Highway to the south, and from the Conejo Valley to the north. While seismic activity could trigger landslides on any of these routes that could block or compromise access via a particular route, the availability of multiple access routes would ensure adequate function of transportation facilities in emergency situations, pursuant to this Policy.
SCENIC HIGHWAYS ELEMENT (SH)	
Goal: Preservation and enhancement of aesthetic resources scenic corridors.	
SH Policy 3: Protect and enhance aesthetic resources within corridors of designated scenic highways.	**Consistent:** See response to COS Policy 16, above. Implementation of this Project would be consistent with this Policy.

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SH Policy 7: Develop and apply standards to regulate the quality of development within corridors of designated scenic highways.	**Consistent:** See response to COS Policy 16, above. Implementation of this Project would be consistent with this Policy.
LOS ANGELES COUNTY BICYCLE MASTER PLAN – SANTA MONICA MOUNTAINS PLANNING AREA (BMP)	
Policy Statement: Expanded, improved, and interconnected system of county bikeways and bikeway support facilities to provide a viable transportation alternative for all levels of bicycling abilities, particularly for trips of less than five miles	
BMP Policy 1.1: Construct the bikeways proposed in 2012 County of Los Angeles Bicycle Master Plan over the next 20 years. (See Table 3-29: Santa Monica Mountains Planning Area Proposed Bicycle Facilities)	**Consistent:** Per Table 3-29 of the County of Los Angeles Bicycle Master Plan, Project ID 9, a Class 3, 5.9 mile bikeway would be developed on Decker Canyon Road, Lecusa Road, and Encinal Canyon Road between Mulholland Highway and Pacific Coast Highway. The Project would include facilities available to bike riders along this route including bicycle parking, access to refreshment stands and restaurants, and all "rest area" types of facilities within the site.
NOISE ELEMENT (NOI)	
Goal: Establish compatible land use adjacent to transportation facilities.	
NOI Policy 4: Reduce the present and future impact of excessive noise from transportation sources through judicious use of technology, planning and regulatory measures.	**Consistent**: The Project would utilize its own transit vans to provide groups transportation to and from area airports and for local groups at pre-arranged pick-up points. The use of multi-person transit would reduce any noise impacts associated with traffic to and from the Project site. Electric golf carts and maintenance vehicles would be used onsite. These electric vehicles produce little noise in the course of their operation, further reducing noise impacts associated with transportation sources. Built facilities are clustered within easy walking and biking distance of one another, enabling guests to move from one activity center to another without transportation related noise. Through the use of this technology and site planning, the Project would conform to this Policy.
SAFETY ELEMENT (SAFE)	
Goal (Seismic Hazards): Minimize injury and loss of life, property damage, and the social, cultural, and economic impacts caused by earthquake hazards.	
SAFE Policy 2: Review projects proposing expansion of existing development and construction of new development, especially critical facilities, and encourage them to avoid localities exposed to high earthquake hazards through such techniques as cluster development and transfer of development rights.	**Consistent:** Responding to SAFE Policies 2 and 3, the Project would adhere to all required standards for safety. Please refer to Sections 5.11, Public Services, and 5.14, Public Utilities, of this DEIR for a description of emergency response preparedness, and Section 5.5, Geology and Soils, of this DEIR for a

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SAFE Policy 3: Continue enforcement of stringent site investigations (such as seismic, geologic, hydrologic, and soils investigations) and implementation of adequate hazard mitigation measures for development projects in areas of high earthquake hazard, especially those involving critical facilities. Do not approve proposals and projects, which cannot mitigate safety hazards to the satisfaction of responsible agencies.	description of seismic safety measures. With adherence to these standards and the mitigation measures, the Project would be consistent with these Policies.
Goal (Geologic Hazards): Protect public safety and minimize the social and economic impacts from geologic hazards.	
SAFE Policy 8: Review proposals and projects proposing new development and expansion of existing development in areas susceptible to land sliding, debris flow, and rockfalls, and in areas where collapsible or expansive soils are a significant problem; and disapprove projects which cannot mitigate these hazards to the satisfaction of responsible agencies.	**Consistent:** In response to both SAFE Policies 8 and 9, the Project would be located within an area of existing development and would adhere to all standards and requirements for safety, including all relevant standards and regulations applying to slope safety, design standard, hazard mitigation, and slope maintenance. Please refer to Section 5.5, Geology and Soils, of this DEIR. With adherence to the Code-required standards identified in this section, the Project would be consistent with these Policies.
SAFE Policy 9: Continue to improve and enforce stringent slope investigation and design standards, and to apply innovative hazard mitigation and maintenance plans for development in hillside areas.	
Goal (Wildland Fire Hazard): Reduce threats to public safety and protect property from wildland and urban fire hazards.	
SAFE Policy 17: Continue efforts to reduce all fire hazards, with special emphasis on reducing hazards associated with older buildings, multistory structures, and fire-prone industrial facilities; and maintain an adequate fire prevention capability in all areas.	Consistent: In response to SAFE Policies 17 and 18, the Project would be sited within the footprint of an existing golf club development within an area of the Project site that is already accessible by emergency vehicles, allowing for the use of standard firefighting techniques. Fuel modification and/or brush clearance up to 200 feet on adjacent terrain would also be required by the LACFD pursuant to wildland/urban interface requirements and wildland fire hazard areas. The Project would be served by an existing water system within the development area of the Project site that meets County fire flow requirements for the Project's structures. Fire-safety measures would be required of the new development to prevent the accidental occurrence and/or spread of wildfires along the wildland interface of the proposed development area of the Project site. In addition, the newer structures would be built to higher fire safety standards than the older structures being replaced and/or remodeled. Upon implementation of the mitigation measures listed in Section 5.11.1 (Fire Protection) of this DEIR, the Project's cumulative impacts related to wildfire
SAFE Policy 18: Expand and improve vegetation management efforts in wildland fire hazard areas.	

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	hazards and increased demands for fire protection would be reduced to less than significant levels. A helipad, the presence of a large, open irrigated golf course, open water features, and a paved parking lot would provide an area for staging in the event that areas in the vicinity of the Project site were threatened by wildfire. The Project therefore would be consistent with these Policies.
SAFE Policy 19: Promote improved watershed management practices to reduce the risk of damaging runoff and debris movement into urban areas.	As discussed in Section 5.8, Hydrology and Water Quality of this DEIR, the hydraulic analysis of the Project indicates the peak outflow rate would not increase over the existing baseline. Water would be retained on site in two detention basins to ensure downstream properties would be protected and velocities would be non-erosive. Upon implementation of designed improvements, the Project's impacts on offsite drainage facilities would be reduced to less than significant and the Project would be consistent with this Policy.
Goal (Hazardous Materials): Reduce threats to the public health and safety from hazardous materials, especially threats induced by earthquakes.	
SAFE Policy 20: Review proposed development projects involving the use or storage of hazardous materials, and disapprove proposals that cannot properly mitigate unacceptable threats to public health and safety to the satisfaction of responsible agencies.	**Consistent:** The Project would regularly use non-industrial quantities of hazardous materials for building maintenance, grounds maintenance, and for the operation of its on-site waste disposal/recycled water system. These hazardous materials would consist primarily of chemicals used for wastewater treatment (chlorine), pesticides and herbicides. The use, storage, and disposal of herbicides and pesticides would be in compliance with County of Los Angeles regulations for the disposal of hazardous wastes, and in compliance with the requirements of the LA County Fire Department. The byproducts of wastewater treatment, including any chemical or solid residues would be safely stored on-site until transported off-site for disposal pursuant to existing regulations. Storage and use of hazardous materials associated with wastewater treatment would be handled pursuant to existing regulations and the conditions of operating permit(s) issued by the LARWQCB and Cal EPA, which regulating agencies have responsibility for the permitting and inspection of wastewater treatment facilities and recycled water programs. With the implementation of all applicable regulations, conditions, permit requirements, and

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	mitigation measures, the Project would be consistent with this Policy.
SAFE Policy 23: Promote efforts to reduce or eliminate the use of hazardous materials through the dissemination of information and the creation of incentive and disincentives for use of safer substitutes.	**Consistent:** The Project would be subject to conditions regarding the use and handling of hazardous materials associated with grounds and building management and the requirements of other permitting agencies as noted above in response to SAFE Policy 22. With implementation of all permit conditions and compliance with applicable regulations, the Project would be consistent with this Policy.
WATER AND WASTEWATER ELEMENT (WW)	
Policy Statement: Reduce service deficiencies.	
WW Policy 8: Promote solid waste technology, including source reduction, to reduce dependency on sanitary landfills.	**Consistent:** The construction and operation of the Project would comply with all applicable County recycling ordinances including the mandatory recycling of construction waste. As discussed in Section 5.14.3, Public Utilities/Solid Waste, of this DEIR, the Project would implement a recycling program for solid waste during its operational phase. Adequate storage areas would be located within the proposed development area of the Project site for the collection and removal of recyclable materials, including green waste. With these measures, the Project would be consistent with this Policy.
Policy Statement: Reduce detrimental impacts on natural and manmade environments.	
WW Policy 19: Avoid or mitigate threats to pollution of the ocean, drainage ways, lakes, and ground water reserves.	There are no Total Maximum Daily Load standards (TMDLs) established for Trancas Canyon Creek; however, TMDLs have been established for the downstream Trancas (Broad) Beach and Trancas lagoon for bacterial fecal coliform. The Project is located at the headwaters of Transcas Canyon Creek and receives water from a large number of small upstream tributaries. The Project site does not overlay a groundwater basin; however a lower aquifer approximately 400 – 500 feet bgs provides water that is pumped on site for use in irrigation. The Project has been designed to incorporate a sand cap under the golf course green to reduce runoff and as a water quality feature. Pervious pavement would be used on golf course paths and on much of the surface parking area to provide treatment for first flush. Green roofs would incorporated where possible to increase treatment potential and reduce runoff. Two subsurface detention basins would be constructed as part of the Project to both treat and

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	retain surface runoff, reducing potential downstream erosion and siltation. Use of chemical fertilizers, pesticides and herbicides would be significantly reduced and the types of materials used would be chosen with the purpose of reducing downstream surface water impacts. No water quality impacts affecting ground water are anticipated given the depth to groundwater and the impermeability of the bedrock layer that overlays the aquifer. The lower aquifer has been pumped for irrigation water for the original golf course for at least 20 years. The Project would install a wastewater treatment facility to produce recycled water of a quality that can be used to irrigate golf courses, therefore reducing the amount of underlying groundwater required for that purpose. Accordingly, the Project would have no adverse impact on groundwater reserves. Based on the forgoing, the Project would significantly reduce any impacts to downstream ocean and drainage ways as compared to the current condition and would have no impact on groundwater reserves. The Project would be consistent with this Policy.
WW Policy 20: Design flood control facilities to minimize alteration of natural stream channels.	**Consistent:** The Project is located on an already disturbed, developed site and does not propose to alter natural stream channels. Flood control facilities, including two detention basins, would retain any incremental increase in storm water discharge from the site and reduce discharge velocity to avoid downstream erosion. The detention basins would be located within the footprint of the existing golf course development. The Project would be consistent with this Policy.
WW Policy 21: Design and construct new water and waste management facilities to maintain or protect existing riparian habitat.	**Consistent:** The Project site is located at the headwaters of Trancas Canyon Creek, a Significant Watershed Area. Existing riparian habitat exists upstream and downstream of the proposed development area of the Project site. Potable water is provided to the Project site by the Las Virgenes Municipal Water District and is used for domestic supply and irrigation. Irrigation water is also provided by on-site wells and by potable water supplied by LVMWD. The Project site is not served by a municipal sewer system and the Project would construct its own Onsite Wastewater Treatment

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	Facility (OWTF) to treat and recycle wastewater for use in irrigating the golf course or in subsurface infiltration. With the exception of the system for the caretaker's residence near Mulholland Highway, the existing septic systems currently serving the Project site would be abandoned pursuant to the requirements of an Onsite Waste Disposal System Abandonment Permit issued by the County of Los Angeles (TE-1000.1500-740.80). The new on-site treatment facility would be operated in accordance with conditions imposed by the LARWQCB. Nuisance flows resulting from irrigation runoff and first flush storm flows would be held and filtered by onsite water quality BMPs, including detention basins. With implementation of existing State and local regulations and permit requirements, the Project would be consistent with this Policy.
WW Policy 22: Design water and waste management systems that enhance the appearance of the areas where they are located and minimize environmental impacts.	**Consistent:** Water and wastewater management systems would be located underground with the exception of an existing aboveground storage tank for water. As all other components of the system would be located below ground, the Project would be consistent with this Policy.
Policy Statement: Promote conservation, recycling and reuse.	
WW Policy 23: Facilitate the recycling of wastes such as metal, glass, paper, and textiles.	**Consistent:** See discussion under WW Policy 8, above.
WW Policy 25: Encourage development and application of water conservation including recovery and reuse of storm and wastewater.	**Consistent**: The mitigation measures identified in Section 5.8, Hydrology and Water Quality, of this DEIR would mitigate water quality impacts to the extent feasible. The Project also would include an on-site wastewater treatment facility that would recycle wastewater and treat it for use in irrigation of the golf course or subsurface infiltration. With implementation of these measures, the Project would be consistent with this Policy.

As illustrated in Table 5.9-3, the Project would be consistent with applicable County General Plan policies. As such, Project impacts would be less than significant (**Class III**).

Malibu Local Coastal Program Land Use Plan

The Project's proposed uses (e.g., parking, recreational, educational, and overnight accommodations) are permitted by the Malibu Local Coastal Program Land Use Plan's designation for the development area of the Project site. **Table 5.9-4** identifies currently applicable Los Angeles County Malibu Local Coastal Program Land Use Plan policies that apply to the Project and assesses the Project's consistency with each policy.[13]

[13] In 2007, the County adopted an updated Malibu Local Coastal Plan (MLCP), which is still pending approval by the Coastal Commission. Until the new Plan is adopted, it cannot be used as the basis of a Plan Consistency Analysis for this Project.

Table 5.9-4
Malibu Local Coastal Plan Consistency Analysis

Malibu Local Coastal Plan	
RECREATION AND COASTAL ACCESS (RCA)	
General policies	
RCA P1: Provide recreational opportunities to meet the variety of recreation demands.	**Consistent:** The Project would improve recreational opportunities within the Santa Monica Mountains National Recreation Area by remodeling an existing golf course and expanding the services and facilities available to include conference space for educational programs, overnight accommodations, and an expanded clubhouse. While the golf course would remain available to the general public, the availability of restaurants, a snack bar, driving range, swimming pool, and other amenities would serve the needs of overnight guests on-site while also providing access to public facilities for the public, including hikers and bicycle riders using nearby trails or the proposed Class 3 bike lane between Mulholland Highway and Pacific Coast Highway. With its proposed facilities, the Project would be consistent with this Policy.
RCA P2: Provide for passive and educational, as well as active, recreational opportunities.	**Consistent:** The Project would provide a venue for educational programs through the Institute's affiliation with the University of Southern California, consistent with this Policy.
Acquisition of private lands and policies	
RCA P9: Utilize open space easements and dedications, where appropriate, to facilitate the objectives of a recreational program.	**Consistent:** The Project would dedicate over 450 acres as pristine open space in the Santa Monica Mountains National Recreation Area in conformance with this Policy.
RCA P11: Encourage the Santa Monica Mountains National Recreation Area to provide a wide variety of outdoor recreational activities and opportunities to metropolitan Los Angeles.	**Consistent:** The Project is a privately owned and managed project located in the Santa Monica Mountains National Recreation Area. Currently, the Project site provides recreational opportunities through a public golf course. The Project would remodel the golf course, which would remain open to the public, and would add additional amenities including facilities for education and for overnight accommodations, which would add to and/or support the recreational uses available in the SMMNRA, consistent with this Policy.
Environmental compatibility policies	
RCA P14: Program recreational use to minimize the adverse impact on natural elements.	**Consistent:** The Project would remodel the existing golf course. In doing so, the Project would implement water quality improvements and remove an existing septic system, which would be replaced with an on-site waste treatment facility to recycle wastewater for irrigation or subsurface infiltration. The Project also would install photovoltaic panels to provide power for

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	the Project. Existing non-native ornamental landscaping would be removed and replaced with native, drought-tolerant species designed to use water more efficiently and to prevent the spread of invasive non-native species downstream. Existing on-site water features would be drained, dredged and cleaned to remove non-native aquatic species to prevent the spread of these species downstream. The Project would reduce environmental impacts associated with the current use of the site while maintaining its recreational values, consistent with this Policy.
RCA P16: Require that entrance roads, parking facilities, and other necessary developments in recreation areas be designed to maintain environmental and visual compatibility with the surrounding area.	**Consistent:** The Project would be accessed via Country Club Drive from Encinal Canyon Road, which is an existing paved street. The parking lot of the Project would be repaved with pervious paving to improve water quality and reduce impacts from first flush contaminants. A detention basin also would be located at the south end of the parking lot to improve water quality. As the parking lot would not be visible from Encinal Canyon Road, a designated county scenic corridor, there would be no visual impacts, in compliance with this Policy.
Commercial recreation policies	
RCA P17: Encourage the development of commercial and visitor serving facilities at suitable locations which provide convenient public access, adequate infrastructure, convenient parking, and, when feasible, which are focused at locations where existing low cost recreations uses will be enhanced.	**Consistent:** The Project would remodel an existing golf club. The site is accessed by public streets from multiple locations, would contain adequate, convenient parking and adequate infrastructure to serve the Project. Additions to the Project site include overnight guest accommodations, a restaurant, computerized driving range, and related amenities that not only would serve the Institute but would serve the general public, including hikers and bike enthusiasts using the future Class 3 bike land on Encinal Canyon Road between Pacific Coast Highway and Mulholland Highway, consistent with the intent of this Policy.
RCA P18c: On land suitable for visitor-serving commercial recreational facilities, provide priority or visitor serving facilities over private residential, general industrial, or general commercial development.	**Consistent:** The Project is a private commercial recreational facility (golf course) open to the public. The alternative use for the Project site based on its zoning and general plan designation is for large and very large lot residential estate development. Continuation and improvement of the golf facilities and the addition of educational facilities, overnight guest accommodations, and related uses rather than developing residential uses is consistent with this Policy.

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RCA P19: Ensure that the types and intensities of commercial recreational uses are environmentally compatible with the area and the site.	**Consistent:** The Project would continue an existing commercial recreational use (i.e., a privately owned, publically available golf course) and expand available recreational and visitor-serving uses within the footprint of the existing golf course in an environmentally responsible manner as discussed elsewhere in this consistency analysis and in Sections 5.1 – 5.14 of this DEIR. The changes contemplated by the Project would enhance its environmental compatibility by improving water quality.
RCA P20: Locate commercial recreation facilities to efficiently utilize public services, particularly the road system.	**Consistent:** The Project would remodel an existing golf club that would retain its existing use and public access while increasing the facilities available on the site, all within the existing disturbed footprint of the original golf course. The Project site is accessed primarily from Encinal Canyon Road via Pacific Coast Highway and/or Mulholland Highway. No change in access is anticipated.
RCA P21: Encourage that recreation-oriented commercial uses serve as support facilities for public recreation areas.	**Consistent:** The Project's facilities would be available to the public and would provide support for hikers and bikers utilizing the Backbone Trail in the Santa Monica Mountains National Recreation Area and the Class 3 bike lane on Encinal Canyon Road, consistent with this Policy.
Compatibility of recreation uses with adjacent development policies	
RCA P25: Protect adjacent neighborhood areas, to the extent feasible, from noise, visual and traffic impacts from new recreation areas.	**Consistent:** As discussed in Section 5.10, Noise, of this DEIR, construction and operation of the Project would not result in significant noise impacts to nearby residential areas. Only limited residential uses are located in proximity to the Project site. Based on the noise analysis and modeling prepared for the Project and included as part of the Appendices, noise impacts generated by Project traffic on Encinal Canyon Road on residential development along the right-of-way would be less then significant. Visual impacts would be less than significant as illustrated in the analysis provided in Section 5.1, Aesthetics, of this DEIR. The Project is only intermittently visible from any public roadway due to intervening topography and vegetation. Those portions of the Project site visible from scenic routes or nearby hiking trails are generally open space areas that would not be developed by the Project. Traffic impacts would be less than significant as demonstrated in the analysis provided in Section 5.13 of this DEIR, based on the Traffic Impact Analysis (TIA)

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	prepared for this Project and included in its Appendices. All potentially affected intersections and street segments are currently operating at an acceptable level of services (LOS C or better), which would not change with the development of the Project. In the Project plus cumulative scenario, the implementation of mitigation measure MM5.13-1 to provide a fair share contribution to fund the cost of planned improvements in the Agoura Village Specific Plan EIR, would reduce cumulative impacts to less than significant. Accordingly, the Project would be consistent with this Policy.
Trails and bikeways	
RCA P31: Initiate a program to provide bike racks, lockers, or other devices for securing bicycles in convenient locations at beach and mountain parks and staging areas.	**Consistent:** The Project site is linked to the Backbone Trail via a spur trail and is also accessible from the proposed Class 3 bikeway on Encinal Canyon Road between Mulholland Highway and Pacific Coast Highway. The Project would provide bicycle racks, access to restroom facilities, and access to the snack bar or restaurant for hikers and bikers using these facilities, consistent with this Policy.
RCA P37: Design and locate trails and/or adjacent development so that neither intrudes unnecessarily on the environment of the other.	**Consistent:** The Project would not intrude on the Backbone or Zuma Canyon trails, nor would it obstruct any ocean views available from the trails. As discussed in Section 5.1, Aesthetics, of this DEIR, the Project would result in a less than significant impact on views from designated public hiking or riding trails or from adjacent development, as discussed under RCP 25, and is, therefore, consistent with this Policy.
MARINE AND LAND RESOURCE PROTECTION (MLRP)	
Policy Statement/Goal: Designation of resources	
MLRP P57: Designate 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.	**Consistent:** Portions of the Project site meet the criteria for ESHA designation. Section 5.2, Biological Resources, of this DEIR includes an assessment and mapping of ESHA-qualified areas of the Project site pursuant to the criteria. No development is proposed within ESHA-designated areas, pursuant to this Policy.
MLRP P59: Trancas Canyon and other areas identified by the Department of Fish and Game shall be added to the list of Significant Watersheds.	**Consistent:** Trancas Canyon has been added to the list of Significant Watershed Areas (SWA) pursuant to this Policy and the Project is designed to help improve water quality as discussed in Section 5.8, Hydrology, of this DEIR by eliminating downstream contamination by invasive aquatic species to the extent feasible as discussed in Section 5.3, Biological Resources, of this DEIR pursuant to the goals for this SWA.
Protection of environmental resources	

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Protection of environmental resources	
MLRP 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.	**Consistent:** The development area of the Project would not be located within an ESHA. Storm water runoff during construction and operational phases has the potential to contain pollutants that could adversely impact sensitive biological resources within Trancas Canyon, a designated Significant Watershed Area. Implementation of a Storm Water Pollution Prevention Plan (SWPPP), compliance with the County's MS4 requirements, observance of proper Best Management Practices (BMPs), and compliance with treatment measures in compliance with the County's Low Impact Development Ordinance would be required for this Project during construction and operational phases. With implementation of mitigation measures required pursuant to the Project's regulatory permits, the Project would be consistent with this Policy.
MLRP 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.	**Consistent:** Two areas within the open space area of the Project site have been designated ESHAs due to the quality of the habitat found there. Development of the Project site has been sited so as to avoid any impacts or degradation of these areas, consistent with this Policy.
MLRP 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.	**Consistent:** The Project would remodel the existing golf course and associated facilities within the footprint of the existing golf course, which is accessed from Encinal Canyon Road, a paved public street, and is provided with potable water by existing LVMWD infrastructure. On-site wastewater treatment would be provided through installation of a new on-site water treatment facility that would produce recycled water suitable for use in irrigation or subsurface infiltration. The existing septic systems, with the exception of the system for the existing caretaker's residence near Mulholland Highway, would be abandoned pursuant to a permit issued by the County Department of Public Health. By using an already disturbed area of the Project site and improving its water quality features, wastewater facilities, water conservation components, and replacing non-native ornamental landscape with drought tolerant native species, the Project would minimize its effects on sensitive environmental resources onsite and downstream, consistent with the intent of this Policy.
Stream Protection and Erosion Control	
MLRP P76: In accordance with Section 30236 of the Coastal Act, channelization, dams or other	**Consistent:** The Project would be located on an already disturbed portion of the Project site and would

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substantial alterations of stream sources shown as blue line streams on the latest available USGS map should incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.	not alter natural stream channels. The Project is located at the headwaters of Trancas Canyon Creek and prior development on the Project site included the channelization of the portion of Trancas Canyon Creek within the golf course area. The Project would provide additional facilities but development would be limited to the existing golf club development footprint and would not cause or increase any impacts to Trancas Canyon Creek downstream of the Project site, consistent with the intent of this Policy.
MLRP P81: To control runoff into coastal waters, wetlands and riparian areas, as required by Section 30231 of the Coastal Act, the maximum rate of storm water runoff into such areas from new development should not exceed the peak level that existed prior to development.	**Consistent:** The hydraulic analysis of the Project indicates any increase in peak flow from the existing condition would be detained on-site in detention basins pursuant to current regulations. The Project would implement specific BMPs, including the use of a sand cap under the turf on the golf course, the use of green roofs, and the installation of pervious pavement in the parking lots and other pathways to increase on-site infiltration of nuisance and storm water runoff as compared to the existing conditions. Section 5.8, Hydrology and Water Quality, of this DEIR contains a detailed discussion of site drainage in the existing and post-Project condition and Hydrology and Water Quality reports contained in Appendix G of this DEIR provide calculations that support the analysis, consistent with this Policy.
MLRP P82: Grading shall be minimized for all new development to ensure the potential negative effects of runoff and erosion on these resources are minimized.	**Consistent:** All grading activities are limited to the already disturbed portions of the Project site. Storm water runoff during the Project's construction phase could result in erosion and potential downstream siltation unless mitigated by Best Management Practices (BMPs). Section 5.5, Geology and Soils, of this DEIR cites existing regulations that require preparation of construction and post-construction phase BMPs to reduce erosion potential. Implementation of these BMPs would reduce any construction phase and post-construction phase erosion impacts to a less than significant level, consistent with this Policy.
MLRP 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.	**Consistent:** The Project would include the removal of non-native ornamental landscaping and plant native, drought tolerant species as required within ESHAs and Significant Watersheds. Species used would comply with fire safety requirements, including requirements for fuel modification in the vicinity of occupied structures, consistent with this Policy.

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MLRP P85: Earthmoving operations within ESHAs, SWAs, and other areas of high potential erosion hazard (including areas with a slope exceeding 2:1) shall be prohibited between November 1 and March 31 unless a delay in grading until after the rainy season is determined by the Planning Director to be more environmentally damaging. Where grading begins before rainy season, but extends into the rainy season for reasons beyond the applicant's control, measures to control erosion must be implemented at the end of each day's work.	**Consistent:** All grading activities are limited to the previously disturbed portions of the Project site. Storm water runoff during the Project's construction phase could result in erosion and potential downstream siltation unless mitigated by Best Management Practices (BMPs). Additional discussion is included under MLRP P82, and mitigation measures and regulatory requirements are discussed at length in Section 5.5, Geology and Soils, and 5.8, Hydrology and Water Quality, all of which address the content of these BMPs. The Regional Planning Director would confirm the adequacy of these measures to permit grading between November 1 and March 31. BMPs including silt fences, straw wattles, straw blankets, and hydro-mulching of exposed surfaces would be used to ensure that downstream siltation would not occur as a result of grading during the rainy season.
MLRP P86: A drainage control system, including on-site retention or detention where appropriate, shall be incorporated into the site design of new developments to minimize the effects of runoff and erosion. Runoff control systems shall be designed to prevent any increase in site runoff over pre-existing peak flows. Impacts on downstream sensitive riparian habitats must be mitigated.	**Consistent:** A drainage control system, which includes onsite detention basins, and detention ponding within the golf course in 25-year plus precipitation events, has been incorporated into the Project drainage design. These facilities are designed to retain the Project's incremental flow so that the existing condition is not exceeded. Downstream SEAs would be protected from excessive siltation during both the construction and operational phases. In addition, replacement of existing non-native ornamental vegetation with native, drought tolerant vegetation would eliminate the possibility of downstream recruitment of invasive vegetation originating from the project site. Lastly, draining of existing onsite water features, and removal of non-native, invasive aquatic species would offer further protection to native fauna within the downstream SEA. The Project would have no direct impacts on the downstream SEA and would be consistent with this Policy.
MLRP P90: Grading plans in upland areas of the Santa Monica Mountains should minimize cut and fill operations in accordance with the requirements of the County Engineer.	**Consistent:** The Project is located in an upland area of the Santa Monica Mountains. Grading would be required within the already graded and disturbed areas of the existing golf course to create building pads for proposed structures, install needed infrastructure, and remodel the golf course. All cut and fill would be balanced on-site and would meet the requirements for Hillside Grading established by the County Engineer, consistent with this Policy.

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MLRP P91: All new development shall be designed to minimize impacts and alterations of physical features, such as ravines and hillsides, and processes of the site (i.e., geological, soils, hydrological, water percolation and runoff) to the maximum extent feasible.	**Consistent:** The Project site has been designed to minimize impacts and alterations of physical features by limiting development to the existing disturbed footprint of the already existing golf course.
MLRP P92: For permitted grading operations on hillsides, the smallest practical areas of land should be exposed at anyone time during construction, and the length of exposure should be kept to the shortest practicable amount of time.	**Consistent:** The Project is located within a natural bowl surrounded by steep hillsides and defined ridgelines. Permits for site grading would require a SWPPP and installation and maintenance of BMPs to reduce erosion during the construction phase. Landscaping and buildings would ultimately cover the site and eliminate potential for site-generated erosion. The Project would comply with all required conditions on its grading permit, consistent with the Policy.
MLRP P93: Where grading is permitted during the rainy season (i.e., November 1 March 31), sediment basins (including debris basins, desilting basins, or silt traps) shall be required on the project site prior to or concurrent with the initial grading operations and maintained through the development process to minimize sediment from runoff waters during construction. All sediment should be retained on-site unless removed to an appropriate approved dumping location.	**Consistent:** A Local Stormwater Pollution Prevention Plan (LSWPPP) would be prepared for the Project and approved by the County and, if required, by the Regional Board, before a grading permit would be issued. The LSWPPP would include temporary measures that must be utilized on the Project site during the construction phase to minimize sediment from runoff waters during construction. Implementation, maintenance, and on-going inspection of these facilities during the construction phase by both the Applicant and by the County would ensure their effectiveness so that the Project would be and remain consistent with this Policy.
MLRP P94: Cut and fill slopes should be stabilized with planting at completion of final grading. In ESHAs and SWAs, planting should be of native plant species using accepted planting procedures, consistent with fire safety requirements. Such plantings should be adequate to provide 90 percent coverage within 90 days, and should be repeated if necessary to provide such coverage. This requirement should apply to all disturbed soils. Jute netting or other stabilization techniques may be utilized as temporary methods.	**Consistent:** Upon completion of final grading, the Project site would be landscaped and/or paved. Native, drought tolerant species would replace existing ornamental landscape and turf on the golf course, which comprises the majority of the Project site. Where necessary, temporary slope and soil stabilization methods would be used to ensure erosion is controlled on-site, consistent with this Policy.
MLRP P95: Where construction will extend into the rainy season, temporary vegetation, seeding, mulching, or other suitable stabilization methods should be used to protect soils subject to erosion. The County Engineer should approve the appropriate methods.	**Consistent:** As required by the County of Los Angeles and the Los Angeles Regional Water Quality Control Board, the Project would implement a Storm Water Pollution Prevention Plan (SWPPP) and comply with the County's MS4 permit requirements, which would include proper Best Management Practices (BMPs) and treatment measures, consistent with this Policy.

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MLRP P96: Degradation of the water quality of groundwater basins, nearby streams, or wetlands shall not result from development of the site. Pollutants, such as chemicals, fuels, lubricants, raw sewage, and other harmful waste shall not be discharged into or alongside coastal streams or wetlands.	**Consistent:** The Project would be required to prepare and implement a SWPPP subject to review and approval by the County and comply with the County's MS4 permit requirements. The SWPPP would include BMPs for controlling and treating polluted runoff in accordance with the requirements of the Los Angeles Regional Water Quality Control Board. The construction and operation of the Project would result in a reduction in minerals and nutrients leaving the Project site as compared to current conditions, as documented in Section 5.8, Hydrology and Water Quality, of this DEIR, reducing adverse impacts to water quality, consistent with this Policy.
Viewshed protection	
MLRP P125: New development shall be sited and designed to protect public views from LCP-designated scenic highways to and along the shoreline and to scenic coastal areas, including public parklands. Where physically and economically feasible, development on sloped terrain should be set below road grade.	**Consistent**: The Project would be sited and designed to protect public views from County-designated scenic highways and corridors as well as from public trails in the vicinity of the Project site. Development would be confined to the footprint of the existing golf course. Views from Encinal Canyon Road and Mulholland Highway are largely obstructed by intervening topography, consistent with this Policy.
Visual compatibility	
MLRP P129: Structures should be designed and located so as to create an attractive appearance and harmonious relationship with the surrounding environment.	**Consistent:** The Project's proposed structures would be consistent in design and work together as a cohesive whole. Buildings would be clustered in the southernmost area of the Project site, and located within the already disturbed and developed area of the existing golf course. Green roofs, natural materials, native landscape and the open space of the golf course would blend together to create a built environment compatible with the steep slopes and ridgelines surrounding its valley setting and maintaining the surrounding viewshed, consistent with this Policy.
MLRP P130: In highly scenic areas and along scenic highways, new development (including buildings, fences, paved areas, signs, and landscaping) shall: • Be sited and designed to protect views to and along the ocean and to and along other scenic features, as defined and identified in the Malibu LCP; • Minimize the alteration of natural landforms. • Be landscaped to conceal raw-cut slopes; • Be visually compatible with and subordinate to the character of its setting;	**Consistent:** See the consistency discussions under MLRP P125 and P129.

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• Be sited so as not to significantly intrude into the skyline as seen from public viewing places.	
Policy Statement/Goal: Visually prominent elements.	
MLRP P131: Where feasible, prohibit placement of structures that will break the ridgeline view, as seen from public places.	**Consistent:** None of the Project's structures would break a ridgeline view as seen from public places.
Policy Statement/Goal: Siting of structures and architectural character of visual resource areas.	
MLRP P134: Structures shall be sited to conform to the natural topography, as feasible. Massive grading and reconfiguration of the site shall be discouraged.	**Consistent:** The structures on the Project site would be clustered at the southernmost area of the Project site, at its lowest elevation. Grading would occur within the already graded and disturbed areas of the existing golf club and would be balanced on-site.
MLRP P135: Ensure that any alteration of the natural landscape from earthmoving activity blends with the existing terrain of the site and the surroundings.	**Consistent:** See the consistency discussion under MLRP P134.
MLRP P136: New development in existing communities shall respect the prevailing architectural and visual character of existing structures.	**Consistent:** The Project would be developed within the existing golf club. The Project's proposed structures would blend with the surrounding environment. No other development is located in the immediate vicinity, so the proposed new development on the Project site would be consistent with this Policy.
MLRP P137: Clustering of development in suitable areas shall be encouraged as a means to facilitate greater view protection.	**Consistent:** The Project would remodel an existing golf club. All buildings would be clustered in the southern portion of the 650-acre Project site and would not block off-site views, in compliance with this Policy. Also see the consistency discussion under MLRP P125 and P129.
MLRP P138b: Buildings located outside of the Malibu Civic Center shall not exceed three (3) stories in height, or 35 feet above the existing grade, whichever is less.	**Consistent:** The buildings proposed for the Project site would comply with required height limitations, consistent with this Policy as noted in Section 3, Project Description, of this DEIR.
Geologic hazard	
MLRP P147: Continue to evaluate all new development for impact on, and from, geologic hazard.	**Consistent**: Geologic hazards related to the Project are evaluated in Section 5.5, Geology and Soils, of this DEIR. With compliance with current building, grading, and structural codes, impacts would be reduced to less than significant levels, consistent with this Policy.
Flood hazard	
MLRP P152: Prohibit buildings within areas subject to inundation or erosion unless proper mitigation measures are provided to eliminate flood hazard.	**Consistent:** The only areas of the Project site potentially subject to flood in a 25, 50, and 100-year storm event are located within the golf course, well below and at a substantial distance from any proposed occupied structure, as illustrated in Section 5.8, Hydrology and Water Quality, of this DEIR, consistent with this Policy.

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Fire hazard	
MLRP P156: Continue to evaluate all new development for impact on, and from, fire hazard.	**Consistent:** The Project site is located in an area subject to high fire severity hazard; however, the Project's buildings would be designed pursuant to code for fire resistance, have green roofs that would be irrigated, would be fitted with appropriate interior sprinkler systems, and would observe Fire Department required fuel modification zones. Occupied buildings would be physically separated from areas with highly flammable fuels by paved parking lots and the irrigated golf course. The water system would provide adequate fire flow as determined by the LA County Fire Department, consistent with this Policy.
MLRP P157: Continue present requirements for fire retardant roofing in fire hazardous areas (Fire Zone 4).	**Consistent:** The Project's proposed buildings would have fire retardant roofing in compliance with the County Code, consistent with this Policy.
MLRP P159: Continue present requirements on all new development for emergency vehicle access and fire-flow water supply as determined by the Forester and Fire Warden until such time as alternative mitigation measures providing an equivalent degree of safety are developed and implemented.	**Consistent:** Adequate fire flow would be provided to the site by the LVMWD. Sources of additional water would include on-site golf course water features and stored treated wastewater, in addition to existing on-site wells. A helipad would be located on the site and the Project's paved parking lot and golf course could be used as a staging area by Fire Department equipment and personnel in the event of an emergency. There are multiple routes to and from the Project site, ensuring the availability of access for emergency vehicles and the ability to evacuate the sites if necessary, consistent with this Policy.
MLRP P160: Require residential structures in fire hazard areas to utilize fire resistant building materials and designs (i.e., one-hour fire resistant walls and enclosed eaves, double pane windows, and improved vent requirements).	**Consistent:** Buildings constructed as part of the Project would be constructed pursuant to current codes for fire prone areas, consistent with the requirements of this Policy.
Archaeology	
MLRP P169: Site surveys performed by qualified technical personnel should be required for projects located in areas identified as archaeologically/paleontologically sensitive. Data derived from such surveys shall be used to formulate mitigating measures for the project.	**Consistent:** Cultural resource assessments have been completed for this Project. Two listed archaeological/historic resources were identified in the records search. Only one of these is still present and would be protected during site construction. Paleontological resources may occur in areas with fairly deep alluvium deposits, which are found at the south end of the site. Excavation to install drainage and wastewater treatment infrastructure could uncover previously undetected paleontological resources; however, mitigation measures provided in Section 5.4, Cultural Resources, of this DEIR, would reduce any potential impacts to a less than significant level,

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	consistent with this Policy.
Groundwater/hydrology	
MLRP P178: Minimize the flow of sediment and other polluting materials into groundwater recharge areas.	**Consistent:** The Project site does not overlie any groundwater basin nor contribute to recharge of any basin. The Project would be consistent with this Policy.
MLRP P180: Assure that urban development over groundwater recharge areas minimizes impervious coverage and maximizes the amount of water, which can enter the aquifer zone below ground.	**Consistent:** As discussed in Section 5.8, Hydrology and Water Quality, of this DEIR, the Project site does not overlie any groundwater basin nor does it contribute to the recharge of any basin. The Project would be consistent with this Policy.
PUBLIC WORKS (PW)	
Circulation	
PW P188: Consistent with other policies of the LUP, encourage the development and maintenance of alternative access routes to each mountain and coastal community for use during emergencies such as earthquakes or fires.	**Consistent:** The Project's primary access is via Encinal Canyon Road from Pacific Coast Highway; however, the Project site may also be accessed via Decker Canyon Road/Westlake Boulevard from either Pacific Coast Highway or U.S. Highway 101, and Mulholland Highway via Encinal Canyon Road and Kanan Dume Road. The availability of multiple routes for access satisfies the requirements of this Policy.
PW P189: Develop parking facilities for bicycles, motorcycles, and public transit at recreation areas to encourage the use of these modes of transportation.	**Consistent:** As required by Code, the Project's parking lot would include spaces that may be used by motorcycles. While the site is not served by public transit, the Project would operate a shuttle service and provide parking for shuttle vans as well as pick up/drop off locations. Bicycle racks would be provided in proximity to the clubhouse and the conference building. The Project would be consistent with this Policy.
Sewer	
PW P217: Wastewater management operations within the Malibu Coastal Zone shall not degrade streams or adjacent coastal waters or cause or aggravate public health problems.	**Consistent:** The Project would abandon the existing septic system currently serving the golf club with the exception of a single septic tank that serves the caretaker's residence by Mulholland Highway. Abandonment would be accomplished pursuant to existing regulations for abandonment issued by the County of Los Angeles. The Project would install an on-site wastewater treatment facility designed to retain solids in holding tanks while treating liquid wastes to a level required for the use of recycled water on public golf courses. The system would be operated pursuant to the provisions of the permit issued by the LARWQCB. Replacement of the existing septic system with a modern wastewater treatment facility would serve to protect downstream waters in Trancas Canyon Creek, which discharges directly into the Pacific Ocean, from coliform bacteria and other toxics that can be the result of septic system malfunction. This proposed system is, therefore, consistent with this Policy.

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PW P223: The construction of new small package wastewater treatment plants shall be prohibited, except in those areas where this is the desired long-term wastewater management solution selected by the County Engineer – Facilities.	**Consistent:** The Project site is located in an area that is not served, and would not be served by a municipal sewer system. Therefore, the Malibu Institute proposes to use an Onsite Wastewater Treatment System (OWTS) that would include a water recycling feature. The proposed OWTS would consist of a sewer network within the proposed 21-acre development area gravity draining the resulting wastewater to a proposed treatment facility installed underground near the information building at the entrance of the Project site on Clubhouse Drive, near Encinal Canyon Road. The OWTS would use a combination of aeration, ultrafiltration, and disinfection to treat effluent to Title 22 standards, which would be suitable for unrestricted, non-potable uses onsite. Because the Project is not a residential use, the County of Los Angeles would not be obligated to operate, maintain or monitor the proposed treatment facility. Also, as the Project is a commercial use, regulatory agencies could order Project operations to cease in the event of failure of the proposed treatment facility until it was repaired. As such, to ensure the facility would be properly operated, the OWTS would be operated, managed and maintained by the Ventura Regional Sanitation District (VRSD), and the Applicant would post a bond or security to ensure VRSD or its successor will have adequate funds to operate, maintain and monitor the proposed treatment facility. There are two options for dispersal of the treated effluent/recycled water generated by the OWTS. Under the preferred option, the treated effluent/recycled water would be dispersed as irrigation on the eastern portion of the 122-acre golf course, to supplement potable water supplies currently being used to irrigate. The recycled water would be dispersed either through spray irrigation or subsurface drip lines at least nine inches below ground surface. Under the second option recycled water would be dispersed to a conventional subsurface dispersal system, which would be regulated by the County Department of Public Health, and the treated water would be allowed to percolate to groundwater. Under either dispersal option, the proposed OWTS is the appropriate long-term wastewater management solution for the Project site, as there is no private or public wastewater utility infrastructure in the vicinity that could serve the Project site.

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	Under the first dispersal option, the Project would provide a unique opportunity to use wastewater treated to Title 22 standards to irrigate a golf course, reducing the demand for potable water supplies. Under the second dispersal option, the treated effluent would be allowed to recharge the groundwater under the Project site.
PW P226: The County shall not issue a coastal permit for development unless it can be determined that sewage disposal adequate to function without creating hazards to public health or coastal resources will be available for the life of the project beginning when occupancy commences.	**Consistent:** See response to PW P223, above.
Water systems	
PW P233: Continue to require all new developments to demonstrate that an adequate potable water supply is available to each parcel.	**Consistent:** The Project would be served by the Las Virgenes Municipal Water District, which has issued a will serve letter for the Project, in compliance with this Policy.
PW P234: Continue to require all new developments to demonstrate that an adequate water supply for fire protection is available based on the location of development, type of construction, spacing of structures, fire hazards, and so on.	**Consistent:** The County Fire Department requires that the Applicant demonstrate the availability of adequate fire flow and hydrant placement prior to signing off on the issuance of permits that would allow wood or wood products to be delivered to or stockpiled on the site. In addition, the Applicant would be required to demonstrate the presence of all-weather surfaces adequate to support fire suppression apparatus needed to adequately serve the site during the construction process. Prior to the issuance of the Certificate of Occupancy, the County Fire Department must sign off on the construction permit, certifying that all measures required by Code or conditions of approval for the Project's operational phase are in place and operational. Lastly, the County Fire Department is a responsible agency contacted by the Department of Regional Planning in the course of the Project's entitlement process and public circulation of the DEIR, during which time the Department could have the opportunity to review the Project, comment upon those matters related to the provision of fire suppression services and require imposition of mitigation measures and conditions of approval to ensure that adequate fire protection facilities are provided in and available to the Project, in a manner consistent with this Policy.

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PW P236: All new developments shall be encouraged, where feasible, to best utilize the existing water facilities.	**Consistent:** The Project receives potable water from the Las Virgenes Municipal Water District, which has adequate facilities to provide the amount of water required by the Project. In addition, there are six operating groundwater wells on the site, which produce water used for irrigation of the golf course. This supply would be supplemented by recycled water made available through the Project's wastewater treatment facility and recycling program, which would help to reduce the amount of potable water needed for landscape maintenance from the Las Virgenes Municipal Water District, in compliance with this Policy.
PW P238: Encourage the development of standards and policies that will maximize the beneficial uses of reclaimed water and reduce the need for exploiting domestic water supplies.	**Consistent:** The Project would use a wastewater treatment facility to recycle wastewater for use in irrigation of the golf course, maximizing the beneficial uses of reclaimed water and reducing the need for potable water for irrigation, consistent with this Policy.
PW P241: Require all new development in existing developed areas to be in accordance with a water conservation program.	**Consistent:** The Project would implement water conservation programs including the installation of water-efficient plumbing fixtures and irrigation systems and use of recycled wastewater for irrigation consistent with the County's Low Impact Development (LID) requirements and other applicable codes and regulations of the Los Angeles County Code (Ordinance No. 91-0046U). See also the consistency discussion under PW P178.
NEW DEVELOPMENT (ND)	
Policy Statement/Goal: Land Use Plan Map.	
ND P271: New Development in the Malibu Coastal Zone shall be guided by the Coastal Land Use Plan Map and all pertinent overlay categories. The current Local Coastal Land Use Plan is available on the County's website and pertinent sections of it are included as Exhibits to this Section of the DEIR and in the Project Description of the DEIR (Section 3). All properties are designated for a specific use. These designations reflect the mandates of the California Coastal Act, all policies contained in this Local Coastal Plan, and the constraints and sensitivities of resources present in the coastal zone. All existing zoning categories will be modified as necessary to conform with and carry out the LCP land use plan.	**Consistent:** The Project and its uses are allowed by the Malibu Local Coastal Program Land Use Plan's Non-Urban Hillside land use designation, consistent with this Policy. Zoning on the Project site is consistent with the Land Use designation in the General Plan and the approved uses on the Project site. See Figure 5.9-1 to illustrate consistency with this Policy.
ND P271(a)(3): Visitor Serving Commercial Recreation/Low-Intensity Visitor Serving Commercial Recreation. The principal permitted use is urban and rural visitor-serving commercial	**Consistent:** The developed portion of the Project site is designated R-R-1 (Resort and Recreation, One Acre Minimum Lot Size). The Project's principal uses would be the provision of a public golf course, overnight

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recreation uses characterized by large open space areas with limited building coverage such as golf courses, summer camps, equestrian facilities, and recreational vehicle parks. Not all uses are suitable in every location; discretional site review is required. Visitor Serving Commercial Recreation/ Recreation-Serving Commercial. The principal permitted use is recreation-serving commercial uses such as hotels, motels, restaurants, recreations clubs and facilities, and sport equipment sales, etc. Not all types of uses or project scales are suitable in every designated location; discretionary site review is required.	visitor accommodations, restaurants and snack bars, a pro-shop for the sale of sports equipment and related recreational uses, consistent with the Visitor Serving Commercial/Low Intensity Visitor Servicing Commercial uses specified in the Local Coastal Plan. Accordingly, the Project is consistent with this provision of the Local Coastal Plan.
ND P273: Development shall conform to Chapter 3, as amended, of the California Coastal Act of 1976.	**Consistent:** Chapter 3 of the California Coastal Act contains the policies that constitute the standards by which adequacy of local coastal programs and of proposed developments are determined. With respect to local coastal programs, the applicability of the Chapter 3 policies is limited to the land use plans of the Local Coastal Program. With respect to the Project, Article 3 of this Chapter (Recreation) indicates that the use of private lands suitable for visitor-serving recreational facilities designed to enhance public recreational activities shall have priority overall private residential, general industrial, or general commercial development. Article 5 (Land Resources) of this Chapter, states that environmentally sensitive habitat areas shall be protected and development near them sited and designed to be compatible with the continuance of such areas. Article 6 (Development) requires that new development be located within, contiguous to, or in close proximity to existing developed areas or in areas with adequate public services where it would not have significant adverse effects either individually or cumulatively on coastal resources. The Project conforms to the provisions of Chapter 3 as cited above: it is a visitor serving recreational facility designed to enhance public recreational activities, it preserves both on and offsite environmentally sensitive habitat areas and is located within the footprint of an existing developed area with adequate public services and is therefore compliant with this Policy.

Based on the foregoing assessment, the Project would be consistent with the applicable provisions of the Local Coastal Plan with compliance with applicable laws, regulations and ordinances and the

implementation of mitigation measures provided in the various sections of this DEIR that address specific topical areas of concern. Therefore, Project impacts would be less than significant (**Class III**)

Hillside Management and SEA Conformance Criteria

Threshold: Would the Project conflict with Hillside Management Criteria, SEA Conformance Criteria, or other applicable criteria?

The Project site is not located within an SEA, which is discussed in more detail in Section 5.3, Biological Resources, and as such would not conflict with SEA Conformance Criteria. As shown in Table 5.9-3 above, the Project would not conflict with the County's Hillside Management Criteria, and would be consistent with General Conditions and Standards for Development for Non-Urban Hillside Development as provided in the General Plan. The Project also would be consistent with the General Plan Conservation and Open Space Element Policy COS 24 regarding protection of the natural and scenic character of hillside areas and reducing risks from fire, flood, mudslide, erosion, and landslides. Therefore, Project impacts regarding consistency with Hillside Management Criteria or SEA Conformance Criteria would be less than significant (**Class III**)

County of Los Angeles Zoning Code

Threshold: Would the Project be inconsistent with the zoning designation of the subject property?

The development area of the Project site is zoned R-R-1 (Resort and Recreation) and A-1-1 (Light Agricultural). The "-1" suffix that follows the Project site's zoning designations specifies the minimum lot size in acres. Additional sections of the Planning and Zoning Code provide additional development standards and address such issues as setbacks, parking requirements, signage, and lot area. **Table 5.9-5** provides a consistency analysis of the Project's uses and zoning, which indicates that the Project's impacts related to consistency with the existing zoning designation would be less than significant (**Class III**).

Table 5.9-5
Malibu Institute Zoning Consistency

Proposed Use	Current Zone/ Proposed Zone	Consistency
Malibu Institute – Meeting Rooms/Lecture Hall	R-R-1/R-R	Colleges and universities, including appurtenant facilities, giving advanced academic instruction approved by the State Board of Education or other recognized accrediting agency, but excluding trade or commercial schools are permitted with a CUP (County Code section 22.40.220).
Overnight Bungalow Accommodations	R-R-1/R-R	Guest Ranches/Cabins/Hotels are permitted with a CUP (County Code section 22.40.22). Rural inns/cabins would be permitted.
Golf Course	R-R-1 and A-1-1/R-R	Golf courses are a principal permitted use in the R-R zone (County Code section

Proposed Use	Current Zone/ Proposed Zone	Consistency
		22.40.190A). The use is also permitted with a CUP in the A-1 zone (County Code section 22.24.100). Remodeling of an existing golf course would be allowed under the proposed zoning.
Administration/Security	A-1-1/R-R	Colleges and universities, including appurtenant facilities giving advanced academic instruction approved by the State Board of Education or other recognized accrediting agency, but excluding trade or commercial schools are permitted with a CUP (County Code section 22.40.220). Under the proposed zoning, these uses would be allowed as appurtenant facility to existing golf course and Institute.
Golf Pro Shop/Cart Barn	R-R-1/R-R	Pro shops are permitted as an appurtenant use to a golf course in the R-R zone (County Code section 22.40.190.A); permitted with a CUP as an appurtenant use in the A-1 zone (County Code section 22.24.100). Under the proposed zoning, they would be allowed as part of a remodel of an existing golf course.
Maintenance and Warehouse Buildings	R-R-1/R-R	Use is permitted as appurtenant to a golf course use (County Code sections 22.40.190.A and 22.24.100). Under the proposed zoning, the use would be allowed as an appurtenant facility to the existing golf course and Institute.
Restaurant/Bar/Cocktail Lounge	R-R-1/R-R	Restaurants/Bars/Cocktail Lounges are permitted with a CUP (County Code section 22.40.220). Sale of Alcoholic Beverages for on-site consumption is permitted with a CUP (County Code section 22.56.195).
Grading	R-R-1 and A-1/R-R	On-site grading is permitted with a CUP (County Code sections 22.40.440 and 22.24.100)

Proposed Use	Current Zone/ Proposed Zone	Consistency
Water Tank	R-R-1/R-R	A water tank is permitted with a CUP (County Code sections 22.40.220 and 22.24.100).
Helipad	R-R-1/R-R	A heliport or helistop is permitted with a CUP (County Code sections 22.40.220 and 22.24.100).

Southern California Association of Governments Regional Policies

The Project is located within the six-county Southern California Association of Governments (SCAG) region. SCAG is a "joint powers agency" with responsibility relative to regional issues that cross local jurisdictional boundaries. The SCAG region encompasses a population exceeding 18 million persons in an area of more than 38,000 square miles.[14] The six neighboring counties that comprise the SCAG region include: Orange, Riverside, Ventura, Los Angeles, San Bernardino, and Imperial counties. In 2009, SCAG's Community, Economic, and Human Development (CEHD) Committee and Regional Council took action to accept the 2008 Regional Comprehensive Plan (RCP), which serves as an advisory document for local governments in the SCAG region.[15] On April 4, 2012, the SCAG Regional Council adopted the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). An analysis of project consistency with SCAG documents is required where a project is determined by SCAG to be of area-wide or regional significance. Since the Project is largely the redevelopment and expansion of an existing use, no such notification of significance was received from SCAG during the Project's scoping process and no policy-by-policy consistency analysis is required. The Project is consistent with the requirements of the SCAG regional documents insofar as it:

- Provides no new housing units nor does it displace existing housing units;
- Does not require the construction of new roads and does not create significant additional traffic that would adversely impact traffic patterns and transportation either locally or regionally;
- Provides an appropriate recreational use consistent with existing and proposed land use plans, including those already approved by the County of Los Angeles;
- Utilizes sustainable design, including solar energy, on-site wastewater treatment and recycling of water for irrigation, removal of non-native ornamental vegetation and replacement with drought tolerant native species, and removal of potentially invasive non-native fish species, and otherwise would be consistent with the general requirements of the County of Los Angeles LID program and sustainable design;
- Does not place sensitive uses or persons in places of known seismic hazard;
- Is consistent with the Local Coastal Plan and General Plan of the County of Los Angeles;
- Conforms to Dark Sky requirements;
- Would not disturb sensitive habitat or require take of any identified listed species or species of concern; and
- Would utilize alternative transportation to help reduce vehicle trips and air quality impacts.

[14] Southern California Association of Governments, "About Us," accessed on July 27, 2009 from: http://www.scag.ca.gov/about.htm.

[15] The 2008 Regional Comprehensive Plan shall replace the 1996 Regional Comprehensive Plan and Guide (RCPG). In the interim, SCAG recommends a review of regional policies contained on their website at http://www.scag.ca.gov/index.htm.

Accordingly, there would be no adverse impacts associated with compliance with SCAG regional plans. (**Class III**)

Threshold: Would the Project conflict with any applicable habitat conservation plan or natural community conservation plan?

The Project is not located within an area covered by a Multiple Species Habitat Conservation Plan or Natural Community Conservation Plan. The Project site is, however, located within and adjacent to the Santa Monica Mountains National Recreation Area, which has adopted a General Management Plan that includes provisions for the preservation of resources within the publicly owned lands.

The U.S. Congress created the SMMNRA in 1978 and granted the National Park Service the authority to promote a level of shared management for the park. The National Park Service, the California State Parks, and the Santa Monica Mountains Conservancy jointly administer the public parklands within the SMMNRA. When the recreation area was established in 1978, the State of California was the largest public landowner, with over 28,000 acres of land in four major parks. Federal land acquisition began in 1980. Today, approximately 63,000 acres of open space lands are held by government and conservation agencies; however, the largest amount of acreage remains in private ownership. The area's first General Management Plan (GMP) was completed in 1982. In 2002, the three agencies drafted a new GMP and EIS. The GMP has no authority over local land use decisions; however, the NPS requested the EIR include a consistency analysis of the Project with the policies and objectives of the current GMP, which may be construed to function broadly as a form of conservation planning for the area. A consistency analysis is provided in response to that request is in **Table 5.9-6** below.

The Project site is located within the SMMNRA and is identified as a private recreational site on Figure 4 of the 2002 GMP/EIS.

Table 5.9-6
Santa Monica Mountains National Recreation Area General Management Plan (SMMNRA) Consistency Analysis

SMMNRA General Management Plan	
MISSION GOALS	
Resource Condition Goals – RCG	
RCG 1: Protect and enhance species, habitat diversity and natural processes	**Consistent:** The Project would remove existing non-native and potentially invasive ornamental landscaping from the existing golf club and replace it with drought tolerant, native species designed to blend with the surrounding native plant communities, consistent with this Goal.
RCG 2: Protect and restore native plant species and plant communities, such as coastal sage scrub, coastal live oak woodland and valley oak savannas.	**Consistent:** Plant communities and native plant species in the vicinity of the Project site include coastal sage scrub and coastal live oak woodlands. Riverine/riparian and wetland habitats and species typical of these areas are also present on the Project site. The Project would preserve 450 acres of undisturbed coastal sage scrub and coastal live oak woodlands as well as wetland vegetation and other

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	species located within onsite ESHAs generally associated with ephemeral creeks and existing sediment basins. In addition, the Project would replace non-native ornamental vegetation within the development site with drought tolerant native vegetation consistent with the surrounding plant communities. Therefore, the Project is consistent with this Goal.
RCG 3: Protect and restore estuaries and wetlands.	**Consistent:** Potentially jurisdictional wetlands and riparian habitats are identified on the Project site. These are covered by ESHA designations and would be preserved. Water features within the golf course would be drained, cleaned of all non-native aquatic species and accumulated sediments, and restored with clean, recirculating water and native wetland plant materials. Development on the Project site would be clustered in its central and southern portions within the disturbed footprint of the existing golf club and would not result in any additional disturbance of natural wetlands, consistent with this Goal.
RCG 4: Enact programs to combat and remove the encroachment of exotic flora and fauna into natural ecosystems where feasible.	**Consistent:** See response to RCG 1, above. On-site water features that host potentially invasive non-native aquatic species would be drained and cleaned, and invasive species removed, as part of the redevelopment of the golf course, consistent with this Goal.
RCG 5: Manage fire throughout the recreation to mimic natural fire regimes where feasible and reduce the threat of wildfires.	**Consistent:** The majority of the Project site (more than 450 acres) would remain untouched by development and, dedicate as permanent open space. Fuel modification zones would be implemented only as required to protect critical structures. Occupied structures would be clustered within the footprint of the existing golf course and separated from natural areas by the irrigated golf course and parking lot, providing non-invasive fire breaks to protect buildings. Development of the Project site would include the maintenance of a helipad for use by the Fire Department, and the Project site is situated such that it can be used as a staging area for firefighters in the event of wildfire in the surrounding hills, consistent with this Goal.
RCG 6: Maintain or improve water quality and manage riparian communities, natural stream characteristics, estuaries and coastal waters for their significant ecological values.	**Consistent:** The Project would improve and remodel the existing golf course. In doing so, the Project would implement water quality improvements, as described in Section 5.8, Hydrology and Water Quality, of this DEIR, and remove an existing 30-plus year old septic system,

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	which would be replaced with an on-site waste treatment facility to recycle wastewater for irrigation. The Project also would install photovoltaic panels to provide solar energy to help power the Project. Existing non-native ornamental landscape would be removed and replaced with native, drought tolerant species designed to use water more efficiently and to prevent the spread of invasive non-native species downstream (see response to RCG 1, above). Existing on-site water features would be drained, dredged and cleaned to remove non-native aquatic species to prevent downstream spread (see response to RCG 3 and 4, above). In all areas of operation, the Project would reduce environmental impacts associated with the current use of the Project site while maintaining its recreational values, consistent with this Goal.
RCG 7: Develop scientific geographic information data to inform decision-making concerning proper parkland development. Share geographic information data with private landowners and local agencies to promote and support sustainable development in the Santa Monica Mountains	**Consistent:** NPS provided comments on the scope of this DEIR and on the Project, which have been considered in developing this Project. The Project has incorporated many of the recommendations of the NPS, including: (1) the inclusion of bike racks and providing publicly available facilities for users of the bicycle and hiking trails that are a part of the Park improvement program; (2) removal and replacement of exotic, potentially invasive landscape with native, drought tolerant species that also meet Los Angeles County Fire Department standards; (3) providing a recreational use that is open to the public and consistent with the Parks general designation for the site; (4) draining and cleaning on-site water features to remove sources of potentially invasive aquatic species; (5) improving water quality and reducing dependency on pesticides and herbicides and replacement of an existing septic system with a modern wastewater treatment facility that would include capacity for producing and using recycled water for irrigation. All measures are consistent with this Goal.
RCG 8: Work with private landowners and local agencies to promote and perpetuate biological diversity through development density strategies, such as buffer areas adjacent to significant park resources.	**Consistent:** See responses to RCG 8, RCG 6 and RCG 1, above.

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RCG 9: Preserve the cultural history of the Santa Monica Mountains, and encourage cooperative cultural resource stewardship with private landowners and other federal, State, and local agencies.	**Consistent:** The Project would monitor grading and excavation in areas where resources have potential to exist, consistent with this Goal.
RCG 10: Evaluate potentially eligible ethnographic sites, traditional cultural properties, buildings, structures, and cultural landscapes for inclusion in the National Register of Historic Places as required by the National Historic Preservation Act.	**Consistent:** As documented in Section 5.4, Cultural Resources, of this DEIR, cultural resource surveys of the Project site have been conducted. No eligible historic resources have been identified on the Project site. An onsite archaeological resource of undetermined origin or composition that has been identified by a comprehensive records search would be protected and monitored during construction as indicated in Section 5.4. The Project is, therefore, consistent with this Goal.
RCG 11: Encourage cooperation between land managing agencies, local organizations, and private landowners to protect and preserve ethnographic and historic resources.	**Consistent:** See response to RCG 9 and RCG 10, above.
RCG 12: Create a shared curatorial facility for the three agencies to preserve the baseline data of the natural and cultural resources and museum collections. Develop a process to protect significant resource collections that would include resources recovered from private lands.	**Consistent:** As provided for in Section 5.4, Cultural Resources, of this DEIR, cultural or paleontological resources that might be uncovered in the course of Project development would be appropriately documented and, if significant, would be appropriately curated pursuant to mitigation measures contained in Section 5.4 of this DEIR as required by County and State laws and regulations, pursuant to this Goal.
RCG 13: Develop influential museum partnerships with other agencies and institutions and the Friends of Satwiwa. **RCG 14:** Conduct consultations and oral histories with Native Americans and other ethnic groups with historical ties to the Santa Monica Mountains to improve understanding of cultural resources.	**Consistent:** Consultation with Native American groups was conducted as part of the Cultural Resources Study, pursuant to this Goal.
RGC 15: Establish an ongoing dialogue and partnership with state and local governments, agencies, jurisdictions, and private landowners to promote shared responsibilities to protect open space and habitat, recreational trails, ethnographic and historic resources, and scenic vistas.	**Consistent:** The Project has incorporated stewardship policies into the Project's design and management, including the dedication of over 450 acres as permanent open space and the implementation of habitat enhancement, protection, and water quality improvements noted in prior responses, pursuant to this Goal.
Land Use and Ownership Goals (LU)	
LU 1: Make NPS, SCP, and SMMC built environments work in harmony with the natural environment. Use aesthetically pleasing and compatible design principles	**Not Applicable, but Consistent Through Existing Regulations:** The Project site is located on privately owned land and is not subject to this Goal. Nonetheless, the County General Plan and the

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	Malibu Local Coastal Program Land Use Plan contain policies that require architectural consistency and compatibility with the surrounding environment and require review of the Project to ensure implementation of these requirements, which are consistent with this similar Goal for the public and quasi-public agencies referenced.
LU 2: Apply sustainable design to minimize the short and long term environmental impacts of NPS, CSP, and SMMC development. Use resource conservation, recycling, waste minimization, and energy-efficient and ecologically responsible materials and techniques for construction when feasible	**Not Applicable, but Consistent Though Existing Regulations:** The Project site is located on privately owned land and is not subject to this Goal. However, the County of Los Angeles Building Code would require recycling of construction materials and source reduction to the extent feasible, the AQMD would require air quality measures during construction to minimize air quality impacts from machinery and fugitive dust, and the LARWQCB would require implementation of BMPs to reduce pollution, erosion and downstream sedimentation and other toxic pollution during the Project's construction Phase. The Project would comply with all existing regulations and permit conditions in the course of construction and thus would be consistent with the intent of this Goal.
LU 3: Work with private landowners and other agencies to evaluate the cost-effectiveness of using public funding to restore buildings destroyed by natural disasters in areas of known high hazards (e.g., flood zones, earthquake fault zones, and landslide zones)	**Not Applicable:** The Project site is located on private land, is not located within a flood zone, an earthquake fault zone, or landslide area.
LU 4: Be a good neighbor to the other landowners, helping to protect their interests and rights by taking into account their individual concerns.	**Not Applicable**: The Applicant is not responsible for achieving this Goal.
Visitor Experience Goals (VE)	
VE 1: Complete the Backbone Trail and manage as a scenic corridor to provide non-motorized access to diverse points of opportunity for recreation, interpretation, and appreciation involving natural and cultural resources.	**Not Applicable, but Consistent Through Existing County Policies**: The Project is not responsible for the development and management of the Backbone Trail. This DEIR, however, treats the trail as a scenic corridor and assesses the Project's potential impacts to scenic vistas from the Trail where it passes in proximity to the Project site. See Section 5.1, Aesthetics, of this DEIR. The Project would not create a significant visual impact on the trail.

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VE 2: Anticipate and manage potential conflicts among recreational uses. Appropriately enhance the visitor experience and provide a safe and conflict free environment.	**Not Applicable, but Consistent with Intent:** The Project would be consistent with the land use designation for the site in the County General Plan, Malibu Local Coastal Program Land Use Plan, the SMMNRA General Management Plan and would not conflict with other recreational uses, pursuant to this Goal
VE 3: Provide privacy for the traditional and ceremonial uses of the park's ethnographic resources.	**Not Applicable:** The Project site does not contain any ethnographic resources as indicated in Section 5.4, Cultural Resources, of this DEIR and would not interfere with traditional use of such resources that may be located in its vicinity.
VE 4: Create a seamless, enjoyable, and safe experience for visitors.	**Not Applicable**: The Project would provide a publicly accessible recreational facility consistent with its designation in the GMP and thus would be consistent with this general Goal.
VE 5: Make facilities, programs and services of the recreation area reasonably accessible to all people, including those with disabilities	**Consistent:** The Project would be accessible to those with disabilities, consistent with this Goal.
VE 6: Encourage private enterprise to provide many of the necessary services and recreational developments to support visitor enjoyment of the national recreation area. Encourage compatible recreational, educational, research and other facilities on appropriate private lands as part of and adjacent to the national recreation area	**Consistent:** The NPS, in its letter of January, 2013, (available in Appendix A) acknowledged the Project was consistent with the GMP's goal to provide recreational services on private property. The Project would provide recreation and educational services consistent with this Goal
VE 7: Plan and develop appropriate recreational and educational facilities and amenities necessary to promote and support an enjoyable and safe recreation experience in the national recreation area.	**Not Applicable:** The Project is a publicly available recreational use on private property; however, as noted in response to VE 6, above, the Project would contribute to the availability of public recreational facilities in a manner consistent with this Goal.
Education and Interpretation Goals (EI)	
EI 1: Provide an educational outreach program to instruct participants on the functions, issues, opportunities, and value of the ecosystem in an expanding urban community. A formal component of this outreach program would be developed in partnership with the local educational system.	**Consistent:** The Project would provide facilities that would be used for educational purposes in collaboration with the University of Southern California. Programs consistent with Goal EI 1 could be incorporated into the available curriculum through partnership between the University and the SMMNRA partners if initiated by the NPS or others in a manner consistent with this Goal.
EI 2: Request that members of distinct cultural communities provide interpretation and education programs	**Not Applicable**: This Goal applies only to publicly owned parkland and not to privately owned facilities.
EI 3: Encourage safe and enjoyable resource use and protection. Place information and interpretation at appropriate locations throughout the recreation area and nearby communities.	**Not Applicable**: This Goal applies only to publicly owned parkland and not to privately owned facilities.

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EI 4: Create an experience that may increase visitor appreciation and awareness of the environment and historic sites within the SMMNRA and their place in the history of California.	**Not Applicable:** This Goal applies only to publicly owned parkland and not to privately owned facilities.
EI 5: Place visitor contact facilities strategically at several locations within the recreation area to detail significant stories and provide information and directions to sites and activities.	**Not Applicable:** This Goal applies only to publicly owned parkland and not to privately owned facilities; however, the Project would have appropriate signage identifying its location.
Access and Transportation Goals (AT)	
AT 1: Make SMMNRA facilities universally accessible to people of all abilities when possible.	Consistent: The Project would comply with all applicable ADA requirements.
AT 2: Promote development of efficient transportation to the SMMNRA from locations throughout southern California, as well as within the park.	**Not Applicable**: The provision of efficient transportation to the SMMNRA would not be affected by the Project. The Project would, however, draw people to the area and as a result overnight guests may choose to take advantage of park facilities while staying at the Project site and in that way increase accessibility.
AT 3: Work with state and local agencies and the public to ensure that environmentally sensitive development and maintenance of public roads in the mountains occurs.	**Not Applicable**: This Goal applies only to public roads. The Project would not require the construction of new roads through the mountains or demand greater maintenance of existing roads.
AT 4: Work with the surrounding communities to improve adjoining trail systems as a means of access to the national recreation area.	**Not Applicable**: The Project is not the site of any portion of the Backbone Trail system; however, a spur trail may be accessed near the Project site that ties into the Backbone Trail. The Project would provide access to restroom facilities and snack bar facilities on site to hikers on the Backbone Trail who use the spur trail to access the facilities.
AT 5: Make the recreation area accessible to a greater portion of the public by providing a wider range of transportation alternatives.	**Not Applicable:** Public transit does not serve the Project site; however, the Project would provide shuttle service to nearby airports and to groups using its visitor serving facilities. This shuttle service would not only provide access to the Project but, given its proximity to the SMMNRA, would potentially increase the number of people able to visit the park while staying at the Project and provide alternative transit for some of those Project visitors.
AT 6: Encourage surrounding communities to expand their transit systems into the park by modifying existing visitor facilities and developing new facilities that are accessible to large transit vehicles	**Not Applicable.** Transit systems are the responsibility of public agencies.
AT 7: Educate the public about the benefits of using transportation alternatives.	**Not Applicable.** Public transit is not available to the site.
AT 8: Involve the surrounding communities in a cooperative effort to develop partnerships to assist	**Not Applicable.** Public transit is not available to the site. Vans used to transport guests to the Project site

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in funding transportation alternatives and achieving common transportation objectives.	would not be available for general commercial use.
AT 9: Explore the feasibility of providing low-emission shuttle system within the park.	**Not Applicable.** Applies only to the public park areas.
AT 10: Improve air quality by encouraging the use of alternative forms of transportation and the use of alternative fuels, including the conversion of park vehicles to low-emission fuel sources and financial incentives for employee use of public transit.	**Not Applicable, but Consistent with Regional Policies.** The Project would provide shuttle vans to pick up visitors from local airports and groups from local pick-up points for transport to and from the Project and would use electric golf carts for on-site transport, reducing the Project's contribution to cumulative air quality impacts.
AT 11: Work with surrounding communities to reduce visually intrusive overhead power and telephone lines and street lighting along scenic roadway corridors within the national recreation areas.	**Consistent:** The Project would underground new power lines within the proposed development area of the Project site. Dark Sky lighting principles would apply to parking lot and security lighting. No night golf would be permitted.
AT 12: Redesign existing trailhead parking facilities and build new ones in known areas of congestion to increase capacity and efficiency and provide for growing levels of visitor use.	**Not Applicable**. The Project site is not located at a trailhead or area of known congestion providing access to the SMMNRA.

Based on the foregoing analysis, the Project would be consistent with the applicable goals of the NPS 2002 General Management Plan for the Santa Monica Mountains National Recreation Area, assuming implementation of all required mitigation measures and compliance with all applicable County, state, and federal laws, regulations and ordinances.

As the Project site is not located within any applicable habitat conservation plan or natural community conservation plan, and is also consistent with the SMMNRA GMP as shown in Table 5.9-6, which for purposes of this analysis is considered to function as a form of conservation planning for areas within the SMMNRA, potential impacts related to conflict with any applicable habitat conservation plan or natural community conservation plan would be less than significant with no additional mitigation required (**Class III).**

5.9.5 Cumulative Impacts

The development of the Project together with development of related projects within the surrounding vicinity would result in a modest intensification of existing land uses. The existing Malibu Golf Club would be remodeled and redeveloped with educational, recreational, parking, overnight accommodations, and supporting facilities in accordance with the provisions of the applicable provisions of the Los Angeles County General Plan and Zoning Code and the applicable provisions of the Malibu Local Coastal Program Land Use Plan. Outside of the Project site and outside of the Project's control, the related projects include construction of additional residential units along Decker Canyon Road pursuant to existing zoning and continued expansion of the Santa Monica Mountains National Recreation Area facilities consistent with its 2002 General Management Plan Goals. Additional residential development would replicate existing residential development patterns: single units on large lots surrounded by open space. A planned renovation of a County youth detention camp (Camp Kilpatrick), located on Encinal Canyon Road just east of the Project site, would not increase the number of detainees on the grounds, or

the scale of development on that property, and therefore would not represent a change in existing uses or an intensification of those uses. No intensive and significant land use changes are anticipated within the immediate vicinity of the Project site, although additional development may occur along Pacific Coast Highway and in incorporated communities within the Conejo Valley. These developments are, however, at a considerable distance from the Project and do not directly relate to it. The expansion and addition of uses within the Project site would not make a cumulatively considerable contribution to effects associated with land use in the Project area and would not result in significant adverse land use compatibility impacts when considered in combination with the related projects anticipated in the area. Therefore, the Project would not contribute to significant cumulative land use impacts (**Class III**).

5.9.6 Mitigation Measures

There would be no significant land use impacts resulting from development of the Project site; therefore, no mitigation measures are required. However, the mitigation measures listed in other sections of this DEIR also would ensure policy consistency with the Los Angeles County General Plan and the Malibu Local Coastal Program Land Use Plan.

5.9.7 Residual Impacts

There would be no residual adverse land use impacts resulting from the implementation of the Project (**Class III**).

5.10 NOISE

This section of the DEIR analyzes the Project's potential noise and vibration impacts. Specifically, the analysis describes the existing noise environment within the Project area, estimates future noise and vibration levels at surrounding land uses resulting from construction and operation of the Project, identifies the potential for significant Project or cumulative noise and vibration impacts, and provides mitigation measures to address potentially significant impacts. A discussion of potential noise impacts of the Project on area wildlife is provided in Section 5.3, Biology.

5.10.1 Existing Conditions

Background

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally defined as unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound wave. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level.

Loud or soft, noisy or quiet, high-and-low pitch are all qualitative terms used to describe sound. These terms are relative descriptions. The science of acoustics attempts to quantify the human perception of sound into a quantitative and measurable basis. Amplitude is the measure of the pressure exerted by sound waves and may be so small as to be inaudible by humans, or so great as to be painful. Frequency refers to pitch or tone where the unit of measure is in cycles per second called "hertz". Very low frequency bass tones and ultra-high frequency treble tones are difficult for humans to detect. Many noise generators in the ambient world are multi-spectral.

The decibel (dB) scale is used to quantify sound pressure levels. Although decibels are most commonly associated with sound, "dB" is a generic descriptor that is equal to ten times the logarithmic ratio of any physical parameter versus some reference quantity. For sound, the reference level is the faintest sound detectable by a young person with good auditory acuity. Since the human ear is not equally sensitive to all sound frequencies within the entire auditory spectrum, human response is factored into sound descriptions by weighting sounds within the range of maximum human sensitivity more heavily in a process called "A-weighting," written as dB(A). Any further reference in this discussion to decibels, written as "dB," should be understood to be A-weighted.

Examples of various sound levels in different environments are shown in **Table 5.10-1**.

Table 5.10-1
Typical Noise Levels

Common Outdoor Activities	Noise Levels, dBA	Common Indoor Activities
	—110—	Rock Band
Jet Fly-over at 1,000 feet	—105—	
	—100—	
Gas Lawn Mower at 3 feet	—95—	
	—90—	
Diesel Truck at 50 feet at 50 mph	—85—	Food Blender at 3 feet
	—80—	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime	—75—	
Gas Lawn Mower at 100 feet	—70—	Vacuum Cleaner at 10 feet
Commercial Area	—65—	Normal Speech at 3 feet
Heavy Traffic at 300 feet	—60—	
	—55—	Large Business Office
Quiet Urban Daytime	—50—	Dishwasher Next Room
	—45—	
Quiet Urban Nighttime	—40—	Theater, Large Conference Room
Quiet Suburban Nighttime	—35—	(Background)
	—30—	Library
Quiet Rural Nighttime	—25—	Bedroom at Night, Concert Hall
	—20—	(Background)
	—15—	Broadcast/Recording Studio
	—10—	
	—5—	
Lowest Threshold of Human Hearing	—0—	Lowest Threshold of Human Hearing
Source: Caltrans, Technical Noise Supplement (TeNS), 1998.		

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called Leq), or, alternately, as a statistical description of the sound pressure level that is exceeded over some fraction of a given observation period. Its unit is the dB. The most common averaging period for Leq is hourly. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, State law requires, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL). CNELs are a weighted average of hourly Leqs. CNEL applies a penalty to noise that occurs at night. CNEL is calculated by adding a five-decibel penalty to sound levels in the evening (7:00 p.m. to 10:00 p.m.), and a ten-decibel penalty to sound levels in the night (10:00 p.m. to 7:00 a.m.) to compensate for the increased sensitivity to noise during the quieter evening and nighttime hours.

For "stationary" noise sources operating on private property, the County has legal authority to establish noise performance standards designed to not adversely impact adjoining uses. These standards are articulated in Title 12 of the Los Angeles County Code.

Noise impacts decrease with increasing distance between source and receptor. This attenuation is referred to as noise decay, and is typically affected by the type of surface that sound waves are passing over, which may be characterized as either soft site or hard site surfaces. If sound waves are scattered or absorbed by an underlying surface such as a vegetated area (soft site), that portion of the wave near the ground is attenuated and noise levels will decline more rapidly than while passing over "hard" surfaces (hard site) that tend to reflect sound waves such as pavement. If a sound wave passes over an obstruction such as a sound wall that is close to the source, the wave does not have opportunity to interact with the ground to be absorbed or dispersed, even if the ground is acoustically soft; in which case the condition would be characterized by hard site conditions regardless of the surface condition. As separation increases between a source and an obstruction, the opportunity for a soft site to result in additional sound absorption increases.

Baseline Noise Levels

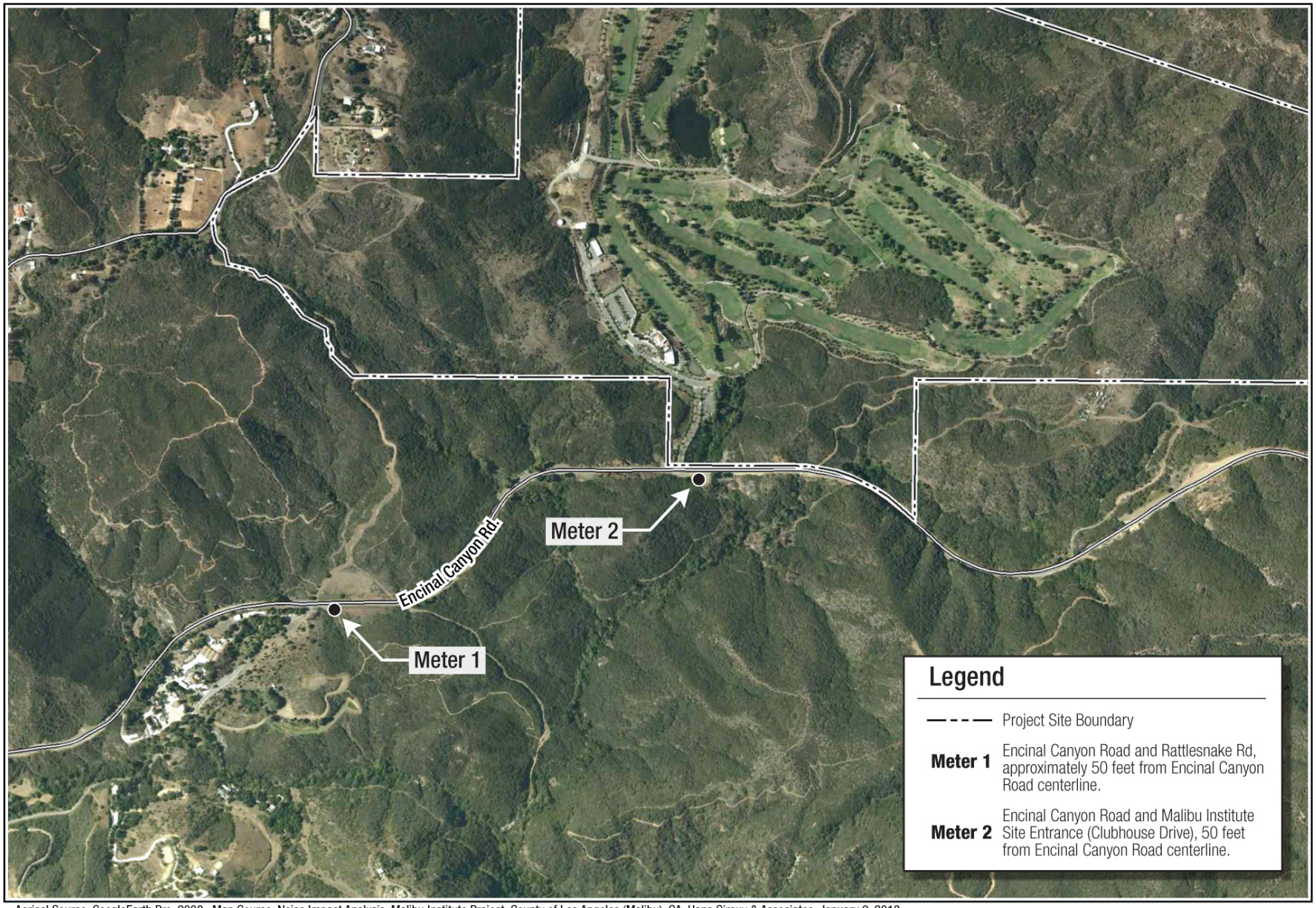
Short-term on-site noise measurements were taken to document existing baseline levels in the Project area. These help to serve as a basis for projecting future noise exposure from projects upon the surrounding community as well as determining Project compatibility with the existing noise environment. Noise measurements were conducted on Wednesday, November 28, 2012 from 1:00 p.m. to 2:00 p.m. at two area locations: Meter 1 was located at the intersection of Encinal Canyon Road and Rattlesnake Road, approximately 50 feet from the Encinal Canyon Road centerline; and Meter 2 was placed at the Project site entrance along Encinal Canyon Road at the Encinal Canyon Road and Malibu Golf Club entrance (Clubhouse Drive), 50 feet from the Encinal Canyon Road centerline. Observed noise levels at both locations are low and very little traffic was observed.

The locations of the noise monitors are shown in **Figure 5.10-1**, and the Project's noise monitoring results are shown in **Table 5.10-2**.

Table 5.10-2
Malibu Institute
Measured Noise Levels (dBA)

Meter No.	Leq	Lmax	Lmin	L_{10}	L_{33}	L_{50}	L_{90}
1	54.7	54.7	54.7	54.7	54.7	54.7	54.7
2	55.3	55.3	55.3	55.3	55.3	55.3	55.3

Monitoring experience shows 24-hour weighted CNELs can be estimated reasonably well from mid-afternoon noise readings. CNELs are approximately equal to mid-afternoon Leq plus 2-3 dB (Caltrans Technical Noise Supplement, 2009). This would equate to existing CNELs in the 57-58 dB level at 50 feet from the Encinal Canyon Road centerline. At setback distances greater than 50 feet this noise level would decrease at a rate of -3 dB per doubling of distance. Proposed project improvements would be more than 500 feet from Encinal Canyon Road such that associated traffic noise impacts would be barely detectible. Background noise levels are well within the Los Angeles County sensitive use noise compatibility guidelines for the proposed on-site overnight accommodation uses, educational conference uses and golf-course recreational use. There are no ambient noise constraints to Project development as proposed.



Aerical Source: GoogleEarth Pro, 2008. Map Source: Noise Impact Analysis, Malibu Institute Project, County of Los Angeles (Malibu), CA, Hans Giroux & Associates, January 9, 2013.

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Noise Meter Locations

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FIGURE 5.10-1

5.10.2 Regulatory Setting

Federal

Noise Control Act

The Federal Noise Control Act of 1972 addressed the issue of noise as a threat to human health and welfare, particularly in urban areas. In response to the Noise Control Act, the EPA published Information of Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.[1] **Table 5.10-3** summarizes EPA's recommendations for residential and other noise-sensitive land uses. EPA's intent was that these findings would not be considered as standards, criteria, or regulatory goals, but as advisory exposure levels below which there is no reason to suspect that the general population would be at risk from any of the identified health or welfare effects of noise.

Table 5.10-3
Summary of Noise Levels Identified as Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety

Effect	Level	Area
Hearing	Leq ≤ 70 dBA	All areas
Outdoor activity interference and annoyance	Ldn ≤ 55 dBA	Outdoors in residential area and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
Outdoor activity interference and annoyance	Leq ≤ 55 dBA	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	Ldn ≤ 45 dBA	Indoor residential areas.
Indoor activity interference and annoyance	Leq ≤ 45 dBA	Other indoor areas with human activities such as schools, etc.

State

The State of California has established guidelines for acceptable community noise levels, which are based upon the CNEL rating scale to ensure noise exposure is considered in any development, as seen in **Table 5.10-4**. CNEL-based standards apply to noise sources whose noise generations are preempted from local control (such as from on-road vehicles, trains, airplanes, etc.) and are used to make land use decisions as to the suitability of a given site for its intended use. These CNEL-based standards are typically articulated in the Noise Element of the General Plan. Local jurisdictions generally regulate the level of non-transportation noise through a Noise Ordinance, which is typically found in the jurisdiction's code.

[1] US Environmental Protection Agency, Office of Noise Abatement and Control, *Information of Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety,* March 1974.

Table 5.10-4
California Land Use Compatibility Guidelines for Exterior Community Noise

Land Use	Community Noise Exposure CNEL, dB			
	Normally Acceptable[1]	Conditionally Acceptable[2]	Normally Unacceptable[3]	Clearly Unacceptable[4]
Single Family, Duplex, Mobile Homes	50-60	55-70	70-75	Above 75
Multi-Family Homes	50-65	60-70	70-75	Above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50-70	60-70	70-80	Above 80
Transient Lodging: Motels, Hotels	50-65	60-70	70-80	Above 80
Auditoriums, Concert Halls, Amphitheaters	-	50-70	-	Above 65
Sports Arena, Outdoor Spectator Sports	-	50-75	-	Above 70
Playgrounds, Neighborhood Parks	50-70	-	67-75	Above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-75	-	70-80	Above 80
Office Buildings, Business and Professional Commercial	50-70	67-77	Above 75	-
Industrial, Manufacturing, Utilities, Agriculture	50-75	70-80	Above 75	-

Source: State of California Governor's Office of Planning and Research, General Plan Guidelines, 2003.

[1] Normally Acceptable: Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

[2] Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

[3] Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

[4] Clearly Unacceptable: New construction or development should generally not be undertaken.

Since the Los Angeles County Noise Element does not specifically call out CNEL-based standards, the state standards, which are typical of most jurisdictions, were used as a guideline. As shown in **Table 5.10-4**, noise exposure of 65 dB CNEL is the exterior noise-land use compatibility guideline for usable space (balconies, patios, etc.), for multi-family dwelling units and transient visitor accommodations such as the proposed bungalows in California. Single-family dwellings have a 60 dB CNEL recommended exposure. The normally acceptable noise level for the golf course and recreational uses extends up to 75 dB CNEL. Because of the complexity of over-lapping acceptability levels and the broad ranges of noise exposures within each acceptability class, the draft update of the Noise Element of the General Plan seeks to simplify noise/land use compatibility standards. An exterior level of 65 dB CNEL in usable outdoor space of noise-sensitive land uses and interior level of 45 dB CNEL in inhabitable interior space is the now recommended level.

California Noise Control Act of 1973

The California Noise Control Act of 1973 establishes an Office of Noise Control within the State, with duties that include but are not limited to:

- Determining the psychological and physical health effects of noise;
- Determining the physiological effects of noise upon plant and animal life;
- Monitoring noise;
- Collecting and disseminating authoritative information on adverse effects of noise and of means for its control;
- Developing, in cooperation with local governments, model ordinances for urban, suburban, and rural environments;
- Providing assistance to local governmental entities engaged in developing and implementing noise abatement procedures;
- Developing criteria and guidelines for use in setting standards for human exposure to noise;
- Developing standards for the use of noise-producing objects in California; and
- Developing criteria for submission to the Legislature so that state agencies may require noise control in equipment purchased for state use.

1990 Governor's Office of Planning and Research, General Plan Guidelines

As discussed above, OPR published General Plan Guidelines for acceptable community noise levels, which are based upon the CNEL rating scale to ensure noise exposure is considered in any development. The OPR guidelines have been periodically updated, but have not changed substantially in almost 40 years.

2012 California Green Building Standards Code

The California Green Building Standards Code requires buildings to employ assemblies and components with Sound Transmission Class (STC) values determined in accordance with American Society for Testing and Materials (ASTM) Standards E90 and ASTM E413 or Outdoor-Indoor Sound Transmission Class (OTIC) determined in accordance with ASTM E1332, using either the prescriptive or performance method in Section 5.570.4.1 or 5.507.4.2 of the Green Building Standards Code.

State Department of Health Services

The State Office of Noise Control in the State Department of Health Services has established guidelines for the preparation and content of the noise element of the general plan to provide a basis for comprehensive local programs to control and abate environmental noise and to protect citizens from excessive exposure. These guidelines state that the purpose of the noise element of a general plan is:

- To provide sufficient information concerning the community noise environment so that noise may be effectively considered in the land use planning process. In so doing, the necessary groundwork will have been developed so that a community noise ordinance may be utilized to resolve noise complaints.
- To develop strategies for abating excessive noise exposure through cost effective mitigating measures in combination with zoning, as appropriate, to avoid incompatible land uses.
- To protect those existing regions of the planning area whose noise environments are deemed acceptable and also those locations throughout the community deemed "noise sensitive."
- To utilize the definition of the community noise environment, in the form of CNEL or Ldn noise contours as provided in the Noise Element for local compliance with the State Noise Insulation

Standards. These standards require specified levels of outdoor to indoor noise reduction for new multifamily residential constructions in areas where the outdoor noise exposure exceeds CNEL (or Ldn) 60 dB.

These guidelines serve as a primary tool for the development of general plan noise elements, including the Los Angeles County General Plan, which jurisdictions use to assess the compatibility between land uses and outdoor noise.

State of California General Plan Guidelines 2003 – Noise Element

The advisory guidelines provided in this document serve as a reference for cities and counties in the State of California for the preparation of local general plans. This document reiterates the guidelines for the preparation and content of the noise element of the general plan provided by the State Department of Health Services as described above.

Local

Los Angeles County General Plan

The General Plan contains policies that provide direction for the achievement of element goals. The Noise Element (adopted January 30, 1975) presents noise levels associated with major transportation facilities quantified down to the levels specified in the law, or, in some instances, higher levels utilizing the best information available from those agencies which were required to furnish present and projected noise levels as mandated by the Government Code.

The Noise Element includes goals that may be applicable to new development such as the Project, including reducing transportation noise to a level that does not jeopardize health and welfare, protecting areas that are presently quiet from future noise impact, and encouraging landscaping and vegetative berms along area roadways as a means of increasing the absorption of noise energy and separation distance.

The Noise Element Policy 4 states: "Reduce the present and future impact of excessive noise from transportation sources through judicious use of technology, planning, and regulatory measures."

A complete policy consistency analysis for the Project is provided in Section 5.9, Land Use.

Malibu Local Coastal Plan:

The Malibu LCP policies applicable to the Project include the following:

P25: Protect adjacent neighborhood areas, to the extent feasible, from noise, visual and traffic impacts from new recreation areas.

Los Angeles County Noise Ordinance

For stationary noise sources located close to residential uses, Los Angeles County has adopted a detailed Noise Ordinance. Noise from one land use crossing the property line of an adjacent property is regulated by Section 12.08.390 of the Los Angeles County Code. These standards are expressed in terms of a mean (50th percentile or L_{50}) noise level, which is the noise level allowed for up to 30 minutes in any hour. Some short-term noise levels may exceed the 50th percentile standard, up to a maximum of 20 dB above the allowable mean. A breakdown of the Los Angeles County Noise Ordinance Exterior Standards is featured in Table 5.10-7 below.

The Los Angeles County Noise Ordinance allowable exterior noise levels for various land uses are shown in Table 2. A mean noise level of 50 dB L_{50} (50th percentile, or "L_{50}") by day and 45 dB L_{50} for residential areas at night is the standard applicable at the nearest existing homes to the Project site. Although the Project site is zoned Resort Recreation, the residential noise standard applies at any off-site residential uses. However, if these noise levels are already exceeded by ambient noise levels, then the ambient level becomes the standard. The ordinance also establishes the maximum allowable noise exposure for all land uses. In residential areas, daytime noise exposure is not to exceed 70 dB for any period of time, and nighttime noise exposure is not to exceed 65 dB for any period of time. These same standards would presumably apply to the dormitory uses at the Youth Probation Camps to the east or the Department of Corrections Women's Firefighting Camp at Camp 13 to the southwest. However, with greater distance separation for these receivers, the closest residential uses along Mulholland Highway west of the project site represent the point of maximum possible County noise ordinance constraint.

The Los Angeles County Noise Ordinance restricts and regulates hours of construction and levels of construction noise. County Code Section 12.08.440 prohibits construction between 7:00 p.m. to 7:00 a.m. on weekdays, before 8:00 a.m. or after 6:00 p.m. on Saturday, and any time on Sundays or holidays when it would create a noise disturbance across a residential or commercial property line. Section 12.08.440 B regulates construction activity noise levels, the standards of which are shown in **Tables 5.10-5 and Table 5.10-6**. The County Noise ordinance further states the contractor must conduct construction activities in such a manner that the maximum noise levels at the affected buildings will not exceed those levels listed for the activities. All mobile and stationary internal-combustion-powered equipment and machinery are also required to be equipped with suitable exhaust and air-intake silencers in proper working order.

Table 5.10-5
Maximum Hourly Noise Levels from Non-scheduled, Intermittent, and Short-term Operation (Less Than 10 Days) of Mobile Equipment Near Affected Residential Structures

	Single-family Residential (dBA)	Multi-family Residential (dBA)	Semi-residential/ Commercial (dBA)
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75	80	85
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60	64	70

Table 5.10-6
Maximum Hourly Noise Levels for Repetitively Scheduled and Relatively Long-term Operation (Period of 10 Days or More) of Stationary Equipment

	Single-family Residential (dBA)	Multi-family Residential (dBA)	Semi-residential/ Commercial (dBA)
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	60	65	70
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays.	50	55	60

Title 12, Chapter 12.08, of the County Code contains regulations regarding noise criteria, specific noise

restrictions, exemptions, variances and information regarding violations and enforcement.
The County Noise Ordinance provides maximum exterior noise level standards for four general noise zones and establishes maximum exterior noise levels for each zone. These noise zones are:

1. Noise-Sensitive Areas—Noise-sensitive zones are designated by the County Health Officer.
2. Residential Properties—This category includes all types of residential developments and properties subject to residential zoning.
3. Commercial Properties—This category includes all types of commercial developments and also includes properties subject to commercial zoning classifications.
4. Industrial Properties—This category includes all properties developed with manufacturing uses and industrial zoning.

As indicated in **Table 5.10-7**, for each of these zones, the County Noise ordinance states exterior operational noise levels caused by project-related on-site fixed sources (i.e., point noise sources) shall not exceed the specified levels, or the ambient noise level, whichever is greater, when the ambient noise level is determined without the noise source operating. These standards are based on the duration of the noise. Thus, the louder the noise, the shorter the duration such noise can last. To define these specific durations of noise, the noise metrics used include L50, L25, L8.3, L1.7, and Lmax. As described above, these metrics are based upon a 1-hour timeframe which indicates exceedances of 50, 25, 8.3, and 1.7 percent of the time, plus the maximum sound level during that time period.

Table 5.10-7
Los Angeles County Exterior Noise Standards

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Exterior Noise Level[a] dBA
I	Noise-Sensitive Area[b]	Anytime	45
II	Residential Properties	10:00 P.M. to 7:00 A.M. 7:00 A.M. to 10:00 P.M.	45 50
III	Commercial Properties	10:00 P.M. to 7:00 A.M. 7:00 A.M. to 10:00 P.M.	55 60
IV	Industrial Properties	Anytime	70

[a] This Table is used by the County to develop noise standards based on the duration of the noise source. These standards are described below.
Standard No. 1 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 30 minutes in any hour. Standard No. 1 shall be the applicable noise level; or, if the ambient L_{50} exceeds the forgoing level, then the ambient L_{50} becomes the exterior noise level for Standard No. 1.
Standard No. 2 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 15 minutes in any hour. Standard No. 2 shall be the applicable noise level from Standard 1 plus 5 dBA; or, if the ambient L_{25} exceeds the forgoing level, then the ambient L_{25} becomes the exterior noise level for Standard No. 2
Standard No. 3 shall be the exterior noise level which may not be exceeded for a cumulative period of more than five minutes in any hour. Standard No. 3 shall be the applicable noise level from Standard 1 plus 10 dBA; or, if the ambient $LB_{8.3}$ exceeds the forgoing level, then the ambient $L_{8.3}$ becomes the exterior noise level for Standard No. 3.
Standard No. 4 shall be the exterior noise level which may not be exceeded for a cumulative period of more than one minute in any hour. Standard No. 4 shall be the applicable noise level from Standard 1 plus 15 dBA, or, if the ambient $L_{1.7}$ exceeds the forgoing level, then the ambient $L_{1.7}$ becomes the exterior noise level for Standard No. 4.
Standard No. 5 shall be the exterior noise level which may not be exceeded for any period of time. Standard No. 5 shall be the applicable noise level from Standard 1 plus 20 dBA; or, if the ambient L_0 exceeds the forgoing level, then the ambient L_0 becomes the exterior noise level for Standard No. 5.
[b] Not defined in the County Noise ordinance. To be designated by the County Health Officer.
Source: Los Angeles County Ordinance No. 11743, §12.08.390

Los Angeles County Vibration Ordinance

The County of Los Angeles Vibration Ordinance, Los Angeles County Code Section 12.08.560, establishes maximum vibration thresholds during construction activities within the County.

Section 12.08.560 of the Los Angeles County Code prohibits the operation of any device that creates vibration above the vibration perception threshold (motion velocity of 0.01 inch per second over the range of 1 to 100 hertz at or beyond the property boundary on private property, or at 150 feet from the source if on a public space or public right-of-way).

5.10.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the County of Los Angeles Environmental Checklist Form (Initial Study), the Project would be considered to have a significant noise impact if it would cause:

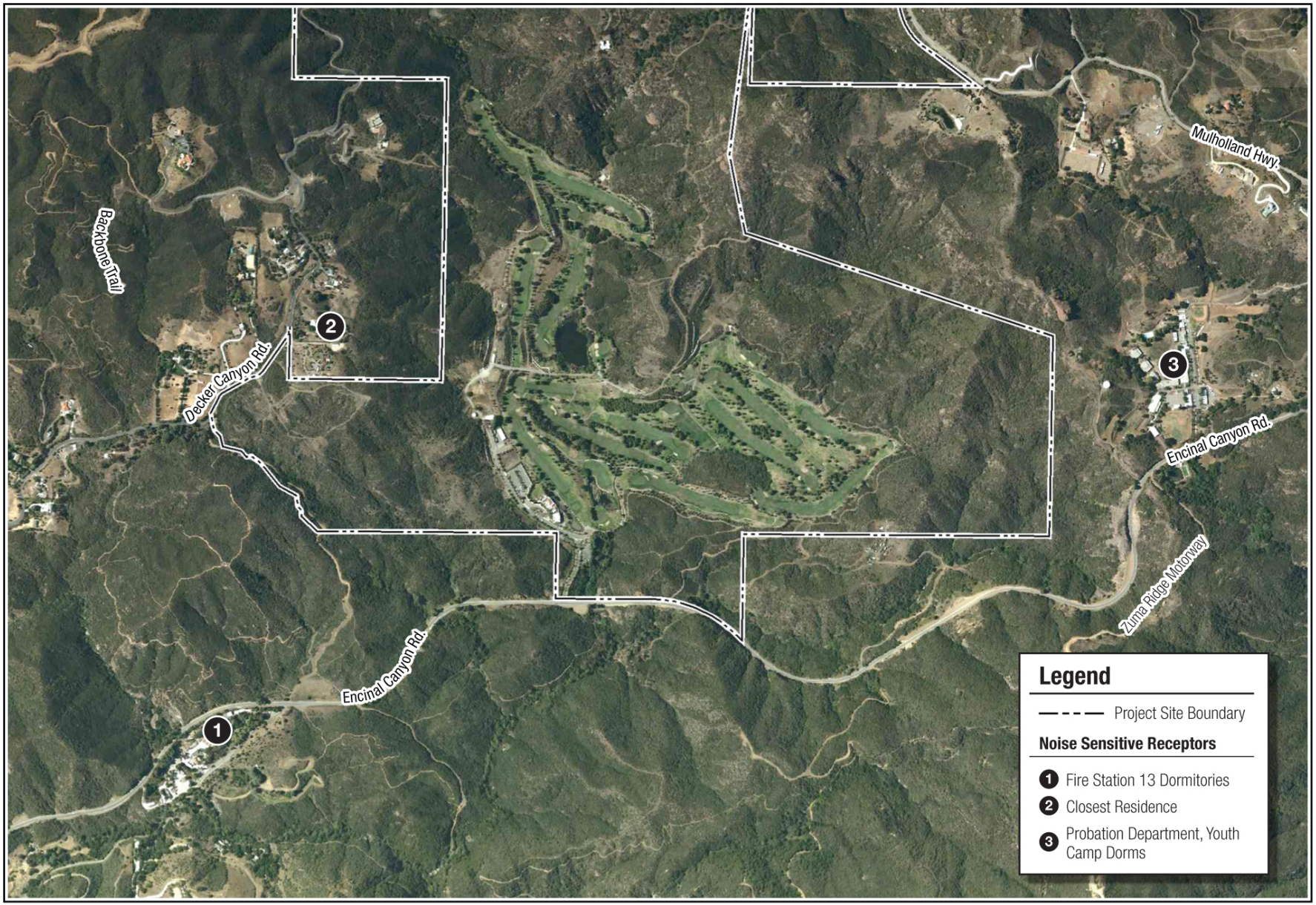
- Exposure of persons to, or generation of, noise levels in excess of standards established in the County General Plan or noise ordinance (Los Angeles County Code, Title 12, Chapter 12.08) or applicable standards of other agencies;
- Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from parking areas;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from amplified sound systems;
- Exposure of persons residing or working in the project area to excessive noise levels for a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or public use airport; or
- Exposure of persons residing or working in the Project area to excessive noise levels for a project located within the vicinity of a private airstrip.

5.10.4 Project Impacts

The Project site is not located near a public or private airport or airstrip, railroads, freeways, heavy industrial areas or other uses that could generate high background noise levels. The Project site is located within an unincorporated area of Los Angeles County, near the City of Malibu, where the majority of the surrounding area is generally comprised of naturally vegetated landscapes interspersed with a variety of low-density residential and institutional uses. The primary sources of noise anticipated to affect the Project site and the surrounding area would result from Project construction and the addition of vehicular traffic along Encinal Canyon Road with Project operations.

Sensitive Receptors

Sensitive receptors are noise sensitive land uses where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, churches, and senior care facilities are considered noise sensitive. **Figure 5.10-2** shows the location of sensitive receptors near the Project site. The nearest sensitive receptors to the Project site are single-family residences located along the northern and western Project site boundary. The nearest of these residences is located approximately 1,200 feet west of the Project development area. A County youth detention facility (Camp Kilpatrick) is located approximately 2,000 feet east of the Project site. The remainder of adjoining lands consists of public or private open space.



Aerical Source: GoogleEarth Pro, 2008.

THE MALIBU INSTITUTE PROJECT EIR

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Noise Sensitive Receptors

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FIGURE 5.10-2

Noise Impacts

Construction Noise

The existing Malibu Golf Club would be closed during construction activities; therefore this evaluation of potential Project construction noise impacts has been limited to potential effects on off-site sensitive receptors.

Threshold: Would the Project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Off-Site Short-Term Construction Noise

Short-term construction noise impacts, which are dominated by large, earth-moving equipment, tend to occur in discrete phases and vary markedly because the noise strength of construction equipment ranges widely as a function of the equipment used and its activity level. Therefore, construction activities are treated separately in the County Code because they do not represent a chronic, permanent noise source. Project construction activities that would create short-term noise near the Project site would be generated on the southern and central portions of the site in connection with site preparation and construction of the development, primarily from heavy equipment used for demolition and/or earth-moving.

Earth-moving equipment is recognized to be the noisiest, with noise measurements ranging up to about 90 dB(A) at 50 feet from the source. Spherically radiating point sources of noise emissions are atmospherically attenuated by a factor of 6 dB per doubling of distance, or about 20 dB in 500 feet of propagation. The loudest earth-moving noise sources may therefore sometimes be detectable above the local background beyond 1,000 feet from the construction area. An impact radius of 1,000 feet or more pre-supposes a clear line-of-sight and no other machinery or equipment noise that would mask Project construction noise. However, with buildings and other barriers, such as the surrounding terrain, to interrupt line-of-sight conditions, the potential "noise envelope" around individual construction sites is reduced. Construction noise impacts are, therefore, somewhat less than predicted under idealized input conditions. However, construction noise exposure can increase when several pieces of equipment operate in close proximity. Due to the logarithmic nature of decibel addition, two equally loud pieces of equipment would be +3 dB louder than either one individually. Three simultaneous sources are +5 dB louder than any single source. Thus, while a piece of construction equipment may average noise levels that are perhaps 5 dB less than at peak power, simultaneous equipment operation can still yield an apparent noise strength equal to any individual source at peak noise output. Whereas the average heavy equipment reference noise level is 85 dB, short-term levels from either peak power or from several pieces operating in close proximity can be as high as 90 dB.

Since point sources of noise emissions are atmospherically attenuated by a factor of 6 dB per doubling of distance, the loudest construction activities would require almost 280 feet of distance between the source and a nearby receiver to reduce the peak 90 dB source strength to the generally acceptable 75 dB exterior exposure level specified in the County Building Code. With regard to the Project site, the distance necessary to achieve acceptable noise attenuation during construction activities would be satisfied as the distance between any nearby receptors and the proposed development area of the Project site would exceed this 280-foot measurement as shown in Figure 5.10-2. As stated above, the nearest sensitive receptors would be residences accessed via Mulholland Highway, which are located west of the Project development area at a minimum distance of 1,200 feet from the proposed development area. Therefore, construction noise impacts at off-site receptors would be less than significant (**Class III**).

Nevertheless, mitigation measures MM5.10-1 through MM5.10-3 are provided to further reduce these less than significant impacts.

Operational Noise

Threshold: Would the Project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from parking areas?

Traffic Noise Impacts

Long-term traffic noise concerns from the development of the Project site center primarily on mobile source emissions on Project area roadways. These concerns were addressed using the California specific vehicle noise curves (CALVENO) in the federal roadway noise model (the FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108). The model calculates the Leq noise level for a particular reference set of input conditions, and then makes a series of adjustments for site-specific traffic volumes, distances, roadway speeds, or noise barriers.

"Substantial" for noise analyses is generally a +3 dB increase because humans are not able to readily discern noise level differences of less than 3 dB under ambient conditions. The +3 dB threshold is typically applied to traffic (roadway, airport, rail, etc.) sources because such sources are exempt from local ordinance control. However, a +3 dB increase requires a doubling of traffic volumes because of the logarithmic nature of the decibel scale. For this Project, a substantial impact is assumed to occur if the project causes a +3 dB CNEL increase in traffic noise and the Los Angeles County Compatibility Guidelines for Exterior Noise of 60 dB CNEL (single-family) or 65 dB CNEL (multi-family and transient lodging) are exceeded.

The results shown in **Tables 5.10-8 and 5.10-9** summarize the calculated 24-hour CNEL level at 50 feet from the roadway centerline along Project adjacent roadway segments. Two time frames were evaluated: existing conditions with and without Project; and build-out with and without Project. The noise analysis utilized data from the Project traffic analysis, prepared in December of 2012, by Associated Transportation Engineers, for this Project.

Table 5.10-8
Traffic Noise Impact Analysis
(dB CNEL at 50 feet from centerline)

Segment	Existing	Existing + Project	Future	Future + Project
Kanan Road north of Mulholland	69.6	69.9	70.3	70.5
Encinal Canyon Road Clubhouse to Mulholland	57.9	60.6	58.4	60.9
Encinal Canyon Road west of Clubhouse	57.7	58.1	57.9	58.3

Table 5.10-9
Project Traffic Noise Impact Analysis
(dB CNEL at 50 feet from centerline)

Segment	Project Only Impacts Existing	Project Only Impacts Future	Cumulative Impacts
Kanan Road north of Mulholland	0.3	0.3	0.9
Encinal Canyon Road Clubhouse to Mulholland	2.7	2.5	3.0
Encinal Canyon Road west of Clubhouse	0.4	0.4	0.6

As seen in Tables 5.10-9 and 5.10-10, the Project would not cause the roadway segment to exceed the +3 dB CNEL significance threshold. The largest Project-related noise increase, shown in Table 5.10-9, is +2.7 dB CNEL at 50 feet from the roadway centerline along Encinal Canyon Road south of Mulholland Highway near the Project site.

With approximately 65% of Project traffic expected to use Kanan Road to the 101 Freeway, Kanan Road traffic volumes would be larger than those on Encinal Canyon Road to Pacific Coast Highway. However, Project traffic noise impacts only would be expected to create a +0.3 dB CNEL noise increase at 50 feet from the Kanan Road centerline, as shown in Table 5.10-9. Project traffic noise impacts to Encinal Canyon Road and Kanan Road, thus, would not expose surrounding property to high background noise levels.

The Project's traffic study, discussed in Section 5.13, Traffic and Access, estimated that the Project would generate an increase of 998 average daily trips (ADT). The additional noise resulting from this increase in traffic volume was analyzed to determine if the Project would measurably alter the existing traffic noise environment. Traffic noise impacts are based upon the relationship between traffic volumes and noise levels, which is logarithmic, in that a substantial change in traffic volumes is required to create any perceptible change in noise levels. To generate a significant increase in traffic noise of 3 dB or greater, the Project would have to result in a doubling in traffic volumes. As there are approximately 1,010 vehicles per day (ADT) currently on Encinal Canyon Road near Clubhouse Drive, as reported by the Project traffic consultant, the addition of 998 new trips as a result of the Project's implementation would be slightly less than double the existing traffic volumes on Encinal Canyon Road. These new trips could cause a +2.7 dB CNEL traffic noise increase at 50 feet from the roadway centerline this impact is less than the +3 dB CNEL significance threshold. Additionally, the only sensitive uses located along this roadway segment are the Camp Fred Miller and Camp Vernon Kilpatrick youth probation camps. The nearest recreational area for these facilities is approximately 440 feet from the Encinal Canyon centerline. Future "with project" traffic noise levels of almost 61 dB CNEL at 50 feet from the Encinal Canyon centerline decay to less than 47 dB CNEL at this setback distance. This noise level is much less than the recommended recreational exterior recreational compatibility threshold of 65 dB CNEL for transitional living. Therefore, impacts to ambient noise levels in the Project vicinity from the additional traffic generated by the Project would be considered less than significant (**Class III**).

Traffic noise impacts to on-site Project uses from Encinal Canyon Road would not expose the Project site to high background noise levels. As noted earlier, observed noise measurements, even immediately along Encinal Canyon Road, indicate existing noise levels of 58 dB at 50 feet from the centerline. At the nearest proposed on-site use (security/information building), approximately 550 feet from Encinal

Canyon Road, existing traffic noise would decrease to less than 42 dB CNEL. The calculated with project traffic noise level of almost 61 dB at 50 feet from centerline would attenuate to 45 dB at the security/information building, which would be below the significance threshold of 50-70 dB for office buildings. Therefore, traffic noise on arterial roadways would not expose proposed on-site uses to noise levels in excess of recommended compatibility noise guidelines and would be considered less than significant (**Class III**).

With regard to parking lot activity and the potential for on-site noise impacts, the greatest amount of activity that could generate such impacts would be from an on-site event. Of the 387 total parking spaces to be shared between the Malibu Institute and the golf course, the majority of the spaces are located along the western perimeter where the nearest structure is a residence located 1,200 feet away from the closest proposed Institute use. Even if all 387 vehicles were to arrive in the same hour and depart in the same hour, the associated traffic noise would be less than 56 dB Leq at 50 feet from the source. The decrease of this noise to the nearest off-site residence at 1,200 feet west of the Project site reduces the noise level to 21 dB Leq assuming soft site propagation conditions as undeveloped vegetated open space exists between the parking area and this sensitive receptor, in addition to the parking area being a diffuse area source. As such, noise related to the parking area would not be perceptible at the nearest off-site sensitive use and therefore would be less than significant upon noise levels within the Project vicinity (**Class III**).

Stationary Noise Impacts

Threshold: Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from amplified sound systems?

Sources of stationary noise during the Project's operation would include the continued use of the existing PA system to announce golf-related information, outdoor events, and associated parking lot activity. All of these activities are already conducted on the existing Project site and, to date, have not generated complaints from neighboring uses. The Project proposes to continue hosting occasional outdoor events. Potential noise impacts from the use of amplified music for outdoor events and parking lot activity are analyzed below.

Noise generated from outdoor amplified music can be as loud as 80 dB at a measured reference distance of 20 feet from the music or conversation source. Under line-of-sight conditions, spreading losses would reduce this noise level to 36 dB within 1,200 feet of the activity with undeveloped site conditions (undeveloped open space and vegetation as opposed to paved surfaces). Thus, amplified music would be lower than the daytime and nocturnal noise standard. However, since nocturnal background levels in the area are so low, amplified music could be clearly audible at night even if noise ordinance standards were not exceeded. Therefore, if the Project uses outdoor amplified music or public address systems, mitigation measure MM5.10-4 has been included to ensure use of outdoor amplified equipment would end before 10:00 p.m. If the event were held inside, no time restriction would be necessary, as the building would provide 15 dB noise attenuation with open windows and up to 30 dB with closed windows. No time restrictions for events held outside without the use of amplified music would be required. With the incorporation of mitigation, noise impacts from the use of a PA system, or occasional outdoor events held at the Project site would be reduced to less than significant upon ambient noise levels in the Project vicinity (**Class II**).

Vibration Impacts

Threshold: Would the Project result in exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

Construction Activity Vibration

Construction activities generate ground-borne vibration when heavy equipment travels over unpaved surfaces or when it is engaged in soil movement. The effects of ground-borne vibration include discernable movement of building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. Within the "soft" sedimentary surfaces of much of Southern California, ground vibration is quickly damped out. Since vibration is typically not an issue, very few jurisdictions have adopted vibration significance thresholds. Vibration thresholds have been adopted for major public works construction projects, but these relate mostly to structural protection (cracking foundations or stucco) rather than to human annoyance.

Vibration is most commonly expressed in terms of the root mean square (RMS) velocity of a vibrating object. RMS velocities are expressed in units of vibration decibels. The range of vibration decibels (VdB) is as follows:

65 VdB - threshold of human perception;
72 VdB - annoyance due to frequent events;
80 VdB - annoyance due to infrequent events; and
100 VdB - minor cosmetic damage.

Los Angeles County is one of only a few jurisdictions that have adopted a numerical performance standard for vibration. Although this standard is more likely applicable to stationary equipment, it could be applied to mobile equipment. The County standard (Ordinance 11778 Section 12.08.560) is 0.01 inches per second, which equates to 80 VdB.

To determine potential impacts of the Project's construction activities, estimates of vibration levels induced by the construction equipment at various distances are presented in **Table 5.10-10**.

Table 5.10-10
Approximate Vibration Levels Induced by Construction Equipment

Approximate Vibration Levels (VdB)					
Equipment	25 feet	50 feet	100 feet	500 feet	1,000 feet
Large Bulldozer	87	81	75	65	55
Loaded Truck	86	80	74	64	54
Jackhammer	79	73	67	57	47
Small Bulldozer	58	52	46	36	26
Source: FTA Transit Noise & Vibration Assessment, Chapter 12, Construction, 2006.					

On-site construction equipment that will create the maximum potential vibration is a large bulldozer. The stated vibration source level in the FTA Handbook for such equipment is 81 VdB at 50 feet from the source. With typical vibrational energy spreading loss, the Los Angeles County vibration standard of 0.01 inches per second is met at 56 feet. At the closest residential use at more than 1,000 feet from the

proposed development area, the vibration level would dissipate to 55 VdB, which is below the threshold of human perception. Similar to noise impacts, a doubling of vibration sources by operating an additional piece of identical equipment, results in a +3 VdB increase in vibration levels. At this rate of increase, the simultaneous operation of four or more of the largest bulldozers onsite at the point of the development footprint nearest to any residence would result in vibration levels that would still remain below human perception at that distance, and well below levels that would result in an annoyance. Construction activity vibration impacts would thus be less than significant (**Class III**). Nevertheless, mitigation measure MM5.10-1, which has been recommended to minimize noise impacts from Project construction activities, would further reduce construction vibration impacts.

Operational Vibration Impacts

Golf course operations will entail use of small powered equipment that will operate hundreds of feet from off-site residences and create imperceptible vibration. Site-related traffic is the only source of potential vibration impact at off-site sensitive uses. The vibration level associated with a passing automobile on a paved road is typically 0.001 inch/second (FTA Manual, FTA-VA-90-1003-06, May, 2006), at 50 feet from the centerline. The County Vibration Ordinance perception threshold is 0.01 inch/second, or ten times less stringent than typical vehicular pass-by traffic. Operation vibration impacts would be less than significant (**Class III**).

Air Travel Noise Impacts

Threshold: Would the Project result in exposure of persons residing or working in the project area to excessive noise levels for a project within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or public use airport?

Threshold: Would the Project result in exposure of persons residing or working in the Project area to excessive noise levels for a project within the vicinity of a private airstrip?

The Project site is not located within an airport land use plan area and is not within two miles of a public or private airport or airstrip, and, therefore, noise impacts related to air travel would be less than significant (**Class III**).

5.10.5 Cumulative Impacts

Traffic Noise

Analysis of the cumulative traffic noise impacts compared the "future with project" noise levels with "existing no project" scenario. The largest cumulative traffic noise increase is +3.0 dB CNEL on Encinal Canyon Road between Clubhouse Drive and Mulholland Highway at a distance of 50 feet from the roadway centerline, as seen in Table 5.10-9. This roadway segment is predominantly bounded by open space areas, and no residences or other sensitive receptor structures are located within 50 feet of the roadway centerline. Therefore, Project-only traffic noise impacts and cumulative traffic noise impacts would be less than significant (**Class III**).

Stationary & Construction Noise Impacts

"Point" noise sources such as mechanical equipment (e.g., pumps, HVAC, etc.) or heavy construction equipment are rapidly attenuated by geometrical spreading losses at a rate of 6 dB or more per distance doubling. Possible cumulative noise impacts from other developments require a close proximity of activities. None of the identified cumulative projects in the Cumulative Projects Table of Section 4.0, Environmental Setting, are sufficiently close to the Project site as to generate any potential cumulative

noise impacts from either stationary or construction activity noise sources. Cumulative construction activity noise impacts could result if there were extensive on-road trucking needed to move cut or fill for the Project. However, the proposed amounts of cut-and-fill for the Project are projected to be balanced on-site and, therefore, would not require on-road trucking. Cumulative noise impacts would be less-than-significant (**Class III**).

Vibration Impacts

Project-related vibration from construction or operation would be imperceptible outside the project boundary. Therefore, cumulative vibration impacts will be less-than-significant (**Class III**).

5.10.6 Mitigation Measures

Construction Noise

MM5.10-1 All construction and general maintenance activities, except in an emergency, shall be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday and the hours of 7:00 a.m. to 7:00 p.m. on Saturday. Construction activities shall be prohibited on Sunday and legal holidays except for emergency maintenance or repair.

MM5.10-2 All on-site construction equipment shall be equipped with noise shielding and muffling devices. All equipment shall be properly maintained in accordance with manufacturers' specifications to assure that no additional noise, due to worn or improperly maintained parts is generated.

MM5.10-3 All construction staging areas shall be located at least 500 feet from the nearest homes at which point peak noise levels would have diminished by at least 20 dB from their near-source maximum levels

Operational Noise

MM5.10-4 Use of outdoor amplified music, sounds, or public address systems shall cease by 10:00 p.m.

5.10.7 Residual Impacts

The Project's noise impacts would be less than significant (**Class III**). Therefore, the Project would not generate significant and unavoidable noise impacts.

5.11 PUBLIC SERVICES

This section describes the potential impacts of the Project on fire and sheriff protection services in Sections 5.11.1 and 5.11.2, respectively.

5.11.1 Fire Protection

5.11.1.1 Existing Conditions

This section describes existing wildfire hazards in and around the Project site, and fire protection/emergency services provided by The Los Angeles County Fire Department (LACFD), which oversees fire prevention requirements for developments and provides firefighting and ambulance services within the Project vicinity.

Wildfire Hazard

The Santa Monica Mountains are subject to a significant wildfire hazard as evidenced by the frequency and extent of wildfires recorded between 1991 and 2011, where the mountainous terrain within an eight-mile radius of the Project site has burned twelve times in the last ten years[1]. Fires are a recurrent phenomenon in the Santa Monica Mountains and have burned approximately 70,000 acres since 1990. The Project site's location in the Santa Monica Mountains presents fire safety and emergency management issues that are common to development located along a wildland urban interface.[2]

Wildfire Hazard Classifications

The LACFD ranks the Project site and surrounding areas of the Santa Monica Mountains as Fire Zone 4, the highest fire hazard category in the County. Public Resources Code Sections 4201-4204 direct the California Department of Forestry and Fire Protection (CAL FIRE) to map fire hazard within State Responsibility Areas (SRA), based on relevant factors such as fuel, terrain, and weather. The zones are referred to as Fire Hazard Severity Zones (FHSZ), and provide the basis for application of various mitigation strategies to reduce risks to buildings associated with wildland fires, and relate to requirements for building codes designed to reduce the ignition potential to buildings in the wildland-urban interface zones. The Project site and surrounding area is within a Very High Fire Hazard Severity Zone (VHFHSZ), the zone of highest severity.[3]

The area of the Santa Monica Mountains surrounding the Project site is susceptible to wildfires because of the presence of prevailing hazardous environmental conditions. The conditions include: 1) the characteristic Mediterranean climate pattern, punctuated at various times of year by hot windy weather conditions; 2) the fire adaptations of prevailing vegetation; 3) the overall steepness of slopes in the Santa Monica Mountains; and 4) the frequency of fires caused by human activity.

Climate

The climate of southern California is classified as a Mediterranean type in which hot summer droughts are followed by winter seasonal rainfall. Considerable plant growth occurs during the spring and early

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1 CAL Fire: Los Angeles County and Ventura County FHSZ maps at: http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_maps.php. Accessed: November 8, 2012.

2 National Park Service, Santa Monica Mountains Recreation Area at: http://www.nps.gov/gis/applications/documents/samo/samo_fmo.htm, Accessed: November 8, 2012.

3 CAL FIRE Fire Resources and Assessment Program, Los Angeles County Fire Hazard Severity Zones in SRA [map], November 6, 2007.

summer following the rainy season. The long hot, dry summers subject vegetation to prolonged periods of moisture stress at times when wildfire is most likely.

Local diurnal surface air flows are commonly suppressed during early summer seasons by descending dry air within generally prevailing subtropical high-pressure cells. With the onset of fall, middle-latitude air circulation patterns gain prominence as surface winds influenced by cyclonic systems of alternating high and low pressure cells move southerly and gain sway over California. From late September into December, and occasionally extending into January and February, strong winds, locally known as the Santa Ana winds, emerge when high pressure systems develop over interior deserts and the Great Basin. Clockwise circulation from these systems causes wind to descend to lower coastal elevations generally in offshore directions. As winds descend in elevation toward the coasts they become hotter and correspondingly, the relative humidity levels also fall. As winds pass over the coastal mountains and funnel through mountain passes they become gusty and may create strong erratic patterns.

The climate patterns that govern the day-to-day weather conditions for the Santa Monica Mountains vary between inland locations and the coastal-facing foothills. Daily temperature extremes that are experienced towards the interior of the Santa Monica Mountain crests (on the San Fernando Valley side of the mountains, for example) are ameliorated by the presence of cool ocean waters of the California Pacific current along the coast. Relatively higher humidity levels, as well as coastal fogs and mist, which are products of the cooler ocean waters, also act to lessen typical early dry season vegetation moisture stress conditions at lower elevations nearer the coast. The emergence of windy weather would raise and exacerbate fire hazard levels in the project vicinity and throughout the mountains at any time of year. During times of off-shore Santa Ana winds, any apparent localized less-severe fire hazard conditions near the coast can be eliminated by persistent dry hot winds in a matter of days.

Weather Conditions

Wildfires that flare up at any time of year can pose a hazard to property and prove difficult to contain, but especially so if they occur on days when winds are gusting. This combined with the range in elevation of terrain, steepness of slopes, prolonged summer droughts, and fire-adapted vegetation of the Santa Monica Mountains contribute to the high level of fire hazards and difficulties faced by fire-fighters when dealing with wildfires.

The most critical "fire weather" occurs when high atmospheric pressure cells form over interior, upland desert regions of California and the Great Basin and countervailing low-pressure cells form offshore, usually at the end of summer. At such times, Santa Ana winds flow downhill at increasing speed and continually gain in temperature through air compression as the surface wind approaches sea level. As air flows from the north and northeast in off-shore directions, its relative humidity also drops, sometimes to single digit relative humidity readings, causing live-fuel moisture content of chaparral and coastal sage vegetation, as well as moisture contents of exotic landscape species, to fall to critically low levels.

The combination of these extreme fire weather factors accounts for the fact that most large fires occur during periods of strong Santa Ana winds and that most of the acreage burned in the Santa Monica Mountains happens in months when Santa Ana winds occur. Half of the acreage burned in the Santa Monica Mountains since 1925 has burned during the month of October and 90% of the acreage burned has burned during the months of September through December.[4]

[4] NPS, Final Environmental Impact Statement for Fire Management Plan, for the SMMNRA. 2005.

Vegetation/Fuel Biomass

The natural vegetation associations in areas with Mediterranean climate, such chaparral and coastal sage scrub communities in the Santa Monica Mountains, share some significant traits in that they inevitably contain assemblages of plants that have a propensity to burn on an intermittent basis and that recurrent fire has developed into an ecological factor indispensable to survival of the vegetation.

Native chaparral, scrub, and herbaceous vegetation growth is relatively robust and most rapid in the spring at times that coincide with, and follow, the times of year with occurrences of precipitation and cooler temperatures when moisture efficiency is also at its highest. This period of growth is then followed by intense summer droughts that cause plants to accumulate dead plant material annually during their dormant stages. A succession of dormant seasons results in fuel-loading through an incremental accumulation of volatile plant material. This vegetative response to summer drought produces conditions that will increase the intensity of potential fires, and thereby increase the susceptibility of fire hazard between fire events.

Many species of chaparral and coastal sage communities, such as that found within the area surrounding the Project site, invite fire through the production of plant materials with large surface-to-volume ratios and volatile oils, in addition to periodic die-back of vegetation, surviving periodic fires by sprouting and germination of seeds stimulated by fire.[5] Soon after fires, sprouting occurs from roots, dormant bulbs, and root crowns of many plants. Seeds of woody plants germinate prolifically following fire. Herbaceous plants (grasses and flowering annuals and perennials) typically increase in relative abundance when brush and woody plants are reduced by fire. Herbaceous plants create flashy fuels that may heighten the possibility of a rapid spread of lower intensity fires in subsequent years. Fire frequency tends to be highest within areas covered by coastal sage communities, as they tend to accumulate more herbaceous plants annually than do areas containing woody chaparral shrubs.

The general area in which the Project site is located contains a variety of relatively undisturbed biotic communities including coastal sage scrub, chaparral, redshank chaparral, native and non-native grassland, oak and walnut woodland, and riparian woodland. Intact stands of chaparral and coastal scrub cover the undeveloped portions of the Project site that extend northerly to front along Mulholland Highway and the southern half of the site extending south of Encinal Canyon Road and are contiguous with equivalent undisturbed vegetation on adjacent private and publicly-owned properties (a straight-line distance of approximately 1.4 miles). Additionally, chaparral and coastal scrub surrounds the developed areas of the golf course, extending onto steep slopes on all sides and continuous with the same habitats in the surrounding area and also primarily occupy the upper and lower Trancas Canyon watershed where communities are developed and relatively undisturbed in the eastern and western portion of the property. Coastal sage and chaparral vegetation communities are classified by the LACFD as highly combustible.

Slope and Topography

The approximately 650-acre Project site lies almost entirely within the upper watershed area of Trancas Canyon, with the exception of a small, northerly extension of the Project site that spans the drainage divide and falls into the upper watershed of an unnamed tributary to the Carlisle Canyon watershed. Topographically, the site is situated in a bowl created by the crest of the Upper Trancas Canyon drainage basin. The on-site topography ranges in elevation from peaks that reach 1,900 feet to 2,300 feet above mean sea level (MSL) in the northeast and northwest, to valley bottom elevations that fall to approximately 1,300 feet above MSL. To the southeast, adjacent mountain ridges have steep slopes and

[5] Ainsworth and Doss, *Natural History of Fire and Flood Cycles*, California Coastal Commission, 1995.

range from 1,400 feet to 1,900 feet above MSL. Landforms southwest of the site have gentler slopes and range from 1,400 feet to 1,700 feet above MSL.

Topography influences wildfire to such an extent that slope conditions often become the critical fire factor in landscapes. Conditions such as the length of slopes, slope steepness, and directional exposure (slope aspect), and/or the overall ruggedness of terrain each influence the potential intensity of and/or rates at which wildfire may spread. Terrain surface configuration also affects wind speed and direction. Most importantly, slope steepness influences the speed of fire spread. Up-slope fires move significantly faster than down-slope fires because of an up-slope "wind effect" which accelerates the spread of fire.

Slope steepness and the ruggedness of terrain also affect fire-fighting accessibility and response times. As slope gradients increase, the ability to utilize fire trucks and bulldozers to directly attack fires decreases. Hand crews are likewise less likely to establish fire-containment lines in areas of excessively steep slopes due to lack of easy accessibility and safety concerns. Development of spot fires ahead of fire-lines and the hazards of rolling and blowing firebrands become progressively more serious as slope increases. Slopes over 40 percent may contribute significantly to the fire hazard when they impede the ability of the responding fire-fighting agencies to effectively contain fires on them.

Slopes within the Project site have gradients that are generally less than or close to 15 percent in the existing golf course and its immediate peripheral areas. Other notable areas with less than 15 percent slope are situated in higher elevated terrain in a southwestern portion of the site and a higher elevated northerly portion of the site. The area containing less than 15 percent slopes in the southwestern portion of the site occurs where the property's terrain climbs more gradually in elevation from the Trancas Canyon floor in a westerly direction to front along Mulholland Highway (northerly of Clarke Ranch Road). In an up-raised plateau-like portion of the site, northerly of the floor of Trancas Canyon, an east-west trending, somewhat intermittent belt of terrain with slopes of less than 15 percent occurs that is most easily accessed from Mulholland Highway. Collectively, areas within the Project site with slope gradients of less than 15 percent comprise approximately 150 acres of the site (covering 22 percent of the site) and slopes between 15 to 24.99 percent occupy 80.6 acres of the site (12 percent of the site). Additionally, slopes between 25 to 50 percent occupy 254.8 acres of the site (38 percent of the site) and slopes 51 percent and greater occupying 188.4 acres of the site (28 percent of the site).

As outlined in **Table 5.11-1**, the potential for fire-fighting success and the tactics employed may be dependent in large measure upon the range of slope gradients encountered. Slope conditions throughout the Santa Monica Mountains, such as those found at and around the Project site, commonly create difficulties of access to fire-fighters and limit the range of fire-fighting tactics that may be employed. Almost half of the 240,000 acres that make up the Santa Monica Mountain range are comprised of slopes with gradients in excess of 35 percent[6].

[6] Ratke, et al., *Fire History of the Santa Monica Mountains*, 1982.

Table 5.11-1
Potential for Fire-Fighting Success and Tactics

Slope Class	Potential for Fire-Fighting Success and Tactics
Less than 20%	Optimal chances for success of combating fires utilizing direct attack methods with all-wheel drive fire trucks, bulldozers, hand crews, and aerial resources, including fixed-wing tankers.
21 - 40%	Moderate feasibility for controlling fires by direct attack with all-wheel drive fire trucks, bulldozers, hand crews, helicopters. Use of fixed-wing aerial tankers limited by ruggedness of terrain.
41 - 60%	Limited feasibility for controlling fires as slopes are typically beyond operating capability of all-wheel drive fire trucks. Direct fire-fighting tactics utilizing bulldozers and hand crews are possible, but become increasingly difficult of hand crews and helicopters. Use of fixed-wing aerial tankers becomes highly restricted.
Greater than 60%	Low feasibility for controlling fires. Slope gradients largely beyond operating capability of bulldozers. Attack methods become more indirect. Hand crews and helicopters become primary tools.
Sources: Malibu/SMMNRA Plan EIR, Los Angeles County Department of Regional Planning, 1981. NPS, Final Environmental Impact Statement for Fire Management Plan, for the SMMNRA, 2005.	

In the event of "firestorms" occurring during extreme fire-weather conditions, wildfires driven onto the Project site by strong offshore Santa Ana winds would likely be difficult to control or stop. Firestorms that gain a foothold in the steep naturally vegetated terrain north of the golf course would be most difficult to combat and would pose the greatest wildfire risk to the Project site. During large firestorms driven by Santa Ana winds, the spread of fire is not controlled by the presence of younger vegetation classes, as all age classes of vegetation tend to burn. The spread of such large fires typically stop when there is a notable change in the weather combined with changes in fuel type, or the fires effectively burn out. All development proposed for the Project is situated in areas of the site that have been graded, leveled, and filled in the past to accommodate the site's existing development. Consequently, none of the proposed Project development areas would pose difficulties of access by firefighting crews and equipment as a result of prevailing slope conditions.

Under the Fire Management Plan adopted by the National Park Service (NPS) for the Santa Monica Mountains National Recreation Area (SMMNRA), the best defense of the developed areas in the mountains and the protection of all structures along the urban/wildland interface is the presence of a defensible space in the form of a cleared fuel break and/or mandated fire clearance area. Effective fuel breaks serve a dual purpose in that they protect urban interface areas from wildland fires and they protect wildlands from fire starts on the urban side of the interface. According to the Fire Management Plan adopted by the NPS for the SMMNRA, the most suitable option/measure that can be undertaken to protect structures against wildfire lies in the establishment and maintenance of well-designed fuel breaks/fire clearance areas around the perimeter of developed areas, which are currently employed at the Project site.

Los Angeles County Fire Department

The Malibu Golf Club receives its fire protection and paramedic services from the LACFD. Of the County's fire stations located throughout Malibu and the Santa Monica Mountains, Fire Station No. 72, located at 1832 Decker Canyon Road to the south in the City of Malibu, is the closest to the Project site. The station is 1.8 miles away and serves the Project site. Fire Station 72 is staffed with a 3-person engine

company; 1-Fire Captain, 1-Fire Fighter Specialist and 1-Fire Fighter. Fire Camp 13 is 0.75 miles from the Project site at 1250 South Encinal Canyon Road but, despite being closer to the site than Fire Station 72, does not provide all of the essential services of a fire station and therefore is not a first-responder resource. Although crews at Fire Camp 13 play a supportive role in wildland fire prevention and suppression, the camp is not staffed with fire fighters and does not respond to incidents in developed areas. Fire Station 99, located 3.6 miles south of the Project site at 32550 Pacific Coast Highway, also in the City of Malibu, is the second due station for the Project site.[7] The locations of these facilities are shown in **Figure 5.11.1-1**.

Overall, the LACFD, which provides fire services within the unincorporated Los Angeles County areas around Malibu and within the City of Malibu,[8] would provide fire protection and paramedic services to the Project. Emergency response units are dispatched as needed to an incident anywhere in the LACFD territory based on distance and availability. The average response time by Engine 72, at Fire Station 72, to the Project site is six minutes and twenty seconds, which is within the Department Guidelines for the Project area.[9]

Fire Safety Compliance Measures

The California Fire Code, County of Los Angeles Fire Code and Regulations, Malibu Local Coastal Program Land Use Plan, and General Plan Open Space and Safety Elements set forth officially established standards, policies, and goals for the construction, design, and distribution of fire suppression facilities in addition to policies regarding hillside management, coordination with agencies in fire hazard areas and vegetation management in wildfire hazard areas. Policies applicable to the Project are featured in the Regulatory Setting section below.

Fuel Modification Plan

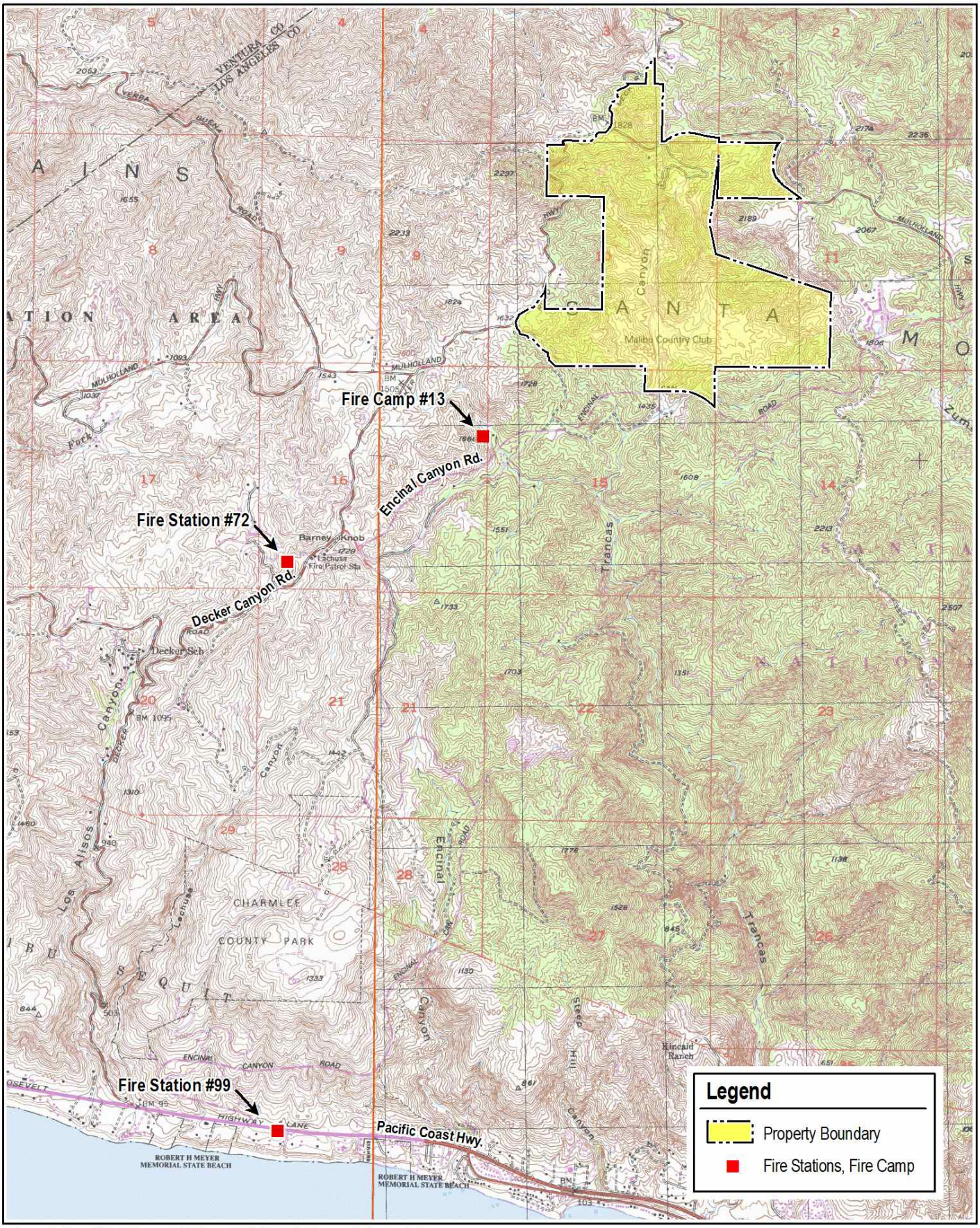
In view of the recurrence of large wildfires that have encroached upon the areas adjacent to the Project site, fuel modification activities are currently implemented at the Project site, including selective clearing and thinning of vegetation along the perimeter edges of the golf course and clubhouse. To this end, the Malibu Golf Club complies with LACFD requirements and implements recommended actions upon the conclusion of annual fuel modification area inspections. Fuel modification and landscape maintenance activities are conducted annually by the Malibu Golf Club staff and by seasonal workers.

Fire Flow

"Fire flow" pertains to the performance capacity of water lines to supply water during emergencies and is generally defined as the quantity of water available or needed for fire protection over a given period of time in a specific area of need. Fire flow attributes are normally measured in terms of line pressure, rate of flow (i.e., gallons per minute), and duration over which prescribed volumes of water can be delivered at designated pressures. The quantity of water necessary for fire protection varies by land use type, building size and type, lot size, life hazard, occupancy, the degree or level of fire hazard, and other factors.

The LACFD provides standards for fire flow, as well as for fire hydrants, in Regulation #8: Fire Flow and Hydrant Requirements. These standards ensure the adequacy of, and access to, fire protection water. The

[7] Letter correspondence with Frank Vidales, Acting Chief, Forestry Division, Prevention Services Bureau, October 25, 2012.
[8] City of Malibu, Fire Services at: http://www.malibucity.org/index.cfm/fuseaction/detail/navid/501/cid/15973/. Accessed: January 15, 2013.
[9] Ibid.



Source: Portions of Triunfo Pass and Point Dume U.S.G.S. 7.5 Min. Topographic Quadrangle Maps..

THE MALIBU INSTITUTE PROJECT EIR

ENVICOM CORPORATION

Fire Station Locations

0 1,500 3,000 Feet

FIGURE 5.11.1-1

Department's Fire Prevention Engineering Section reviews building plans and applies fire flow requirements based on the fire hazard severity zone, lot size, type and square footage of buildings. Fire flow requirements within Very High Fire Hazard Severity Zones can range from 1,000 gallons-per-minute (gpm) to more than 5,000 gpm for multiple residential, commercial, apartments, private schools, and industrial uses. Fire flows are measured at 20 pounds per square inch residual pressure.[10]

5.11.1.2 Regulatory Setting

State

California Fire Code

Chapter 5, Fire Service Features, of the 2010 California Fire Code includes requirements for new development regarding access for fire-fighting apparatus and personnel, and fire protection water supplies (fire-flow).

Local

Los Angeles County Fire Department Fire Prevention Regulations: Fire Flow and Hydrant Requirements

The LACFD has indicated that the Project must comply with Fire Department Regulation No. 8: Fire Flow and Hydrant Requirements. This regulation provides the standards for fire flow, hydrant spacing and specifications.

Los Angeles County – Fire Code (Title 32)

Title 32 is the Fire Code in the Los Angeles County Code, which establishes regulations affecting or relating to structures, processes, premises, and safeguards regarding fire hydrant systems, water supply, fire equipment access, posting of fire equipment access, parking, lot identification, weed abatement, combustible brush and vegetation that represents an imminent fire hazard, debris abatement, combustible storage abatement including flammable liquid storage, hazardous material storage and use, open-flame and open-burning, and burglar bars at State-regulated mobile home and special occupancy parks within the jurisdiction of the Fire Department as per California Health and Safety Code Sections 18691 and 18873.5.

Los Angeles County General Plan

The County of Los Angeles General Plan Conservation and Open Space Element (adopted November 25, 1980) states "our society places high value on the protection of human life," and includes a Policy Statement (No. 24) to "manage development in hillside areas to protect their natural and scenic character and to reduce risks from fire, flood, mudslides, erosion and landslides".

The County of Los Angeles General Plan General Goals and Policies (adopted November 25, 1980) includes Policy Statements No. 54 to "promote the full use of existing services systems in order to gain maximum benefit from previous public investments" and No. 58 "to maintain high quality emergency response services."

[10] LACFD, Regulation#8: Fire Flow and Hydrant Requirements, December 15, 2004,

Malibu Local Coastal Program Land Use Plan

The Malibu Local Coastal Program (LCP) Land Use Plan, which is part of the Los Angeles County Local Coastal Program and was certified by the California Coastal Commission in December 1986, provides policies for development within the Malibu Coastal Zone. The LCP policies applicable to the Project include the following:

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.

P156: Continue to evaluate all new development for impact on, and from, fire hazard.

P157: Continue present requirements for fire retardant roofing in fire hazardous areas (Fire Zone 4).

P158: Continue to enforce code requirements for clearance or reduction of flammable vegetation for a minimum distance of 100 feet around any residential structure in a fire hazard area (Fire Zone 4). Encourage use in landscaping of fire-retardant plant species.

P159: Continue present requirements on all new development for emergency vehicle access and fire-flow water supply as determined by the Forester and Fire Warden until such time as alternative mitigation measures providing an equivalent degree of safety are developed and implemented.

P162: Encourage the establishment of a closure policy for public recreation areas during periods of extreme fire hazard.

P188: Consistent with other policies of the LUP, encourage the development and maintenance of alternative access routes to each mountain and coastal community for use during emergencies such as earthquakes or fires.

P234: Continue to require all new developments to demonstrate that an adequate water supply for fire protection is available based on the location of development, type of construction, spacing of structures, fire hazards, and so on.

5.11.1.3 Thresholds of Significance

Based on the County of Los Angeles Environmental Checklist Form (Initial Study), the Project would create a significant adverse impact related to wildfire hazards or fire protection services if the Project would:

- Create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for fire protection.

5.11.1.4 Project Impacts

Threshold: Would the Project create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for fire protection?

The Project would provide overnight accommodations for conference attendees and the general public in 40 bungalows totaling 109,140 square feet, educational and meeting facilities, a clubhouse with a wellness center, a restaurant and lounge, a swimming pool, a golf pro-shop and grill, and associated support facilities, including a maintenance building, golf cart storage barn, a warehouse, and a security/information building. In total, the Project proposes a combined 225,087 square feet of structures, which would replace the existing 12,475-square foot clubhouse and cart with the proposed educational and meeting facilities of the Malibu Institute building, and also remove 11,160 square feet of existing structures including maintenance sheds associated with the Malibu Golf Club and an abandoned residence located in the northern portion of the Project site. An existing 875-square foot caretaker's residence located on the northern portion of the property along Mulholland Highway would be retained by the Project for use as a caretaker's residence. At completion, the Project would result in a total net increase of 201,452 square feet of structures on the Project site. All of the proposed improvements would be constructed within the previously disturbed areas of the Malibu Golf Club and would be clustered within an approximate 20-acre development area in the southern portion of the Project site. The LACFD has established a fire flow requirement of up to 20 psi at a rate of 2,000 gpm for 2 hours. This is due to the buildings being equipped with an approved fire sprinkler system, which qualifies them for reduced fire flow requirements. Additionally, the Project would be situated amid areas already accessible by emergency vehicles, allowing for the use of standard firefighting techniques. Internal circulation pathways will be provided with ample width, clearance, turnaround areas, and access to structures, for emergency response vehicles, subject to approval by LACFD. The helipad, as mentioned above, would be relocated to an area preferred by the LACFD on an existing cleared pad adjacent to the golf course and a fire hydrant would be added in the vicinity of the helipad for the purpose of filling helicopter water tanks during emergency wildland fire-fighting activities. The relocation of the emergency use helipad would increase the site's defensibility from wildfires by providing a designated location for LACFD helicopters to acquire water for water drops.

The Project would include procedures to enhance fire safety. It would implement a fuel modification plan to minimize the risks of wildfire ignition near the Project, and create a defensible space around the proposed structures. The preliminary fuel modification plan for the Project has been approved by the LACFD and is provided in Appendix I. The plan adheres to the LACFD's Fuel Modification Plan Guidelines regarding the delineation of four separate fuel modification zones and the required maintenance practices to be performed in these zones. The zones are as follows: Zone A – Setback Zone, Zone B – Irrigated Zone, Zone C – Native Brush Thinning Zone and a Fire Access Road Zone. [11]

Zone A, the Setback Zone, would generally extend 20 feet beyond the edge of any combustible structure, accessory structure, appendage or projection. Portions of the Project site within this zone would provide adequate defensible space in a fire environment and plant species approved for installation into this zone would be inherently highly fire resistant and spaced appropriately. Species not allowed within this zone would be within 30 or more feet of combustible structures and might require removal if existing on site.

[11] Fuel Modification Plan Guidelines, Los Angeles County Fire Department, July 2011; Preliminary Fuel Modification Plan for the Malibu Institute Project, 2013.

Zone B, the Irrigated Zone, would generally extend from the outermost edge of Zone A to 100 feet from the structure. Similar to that of Zone A, areas in this zone would consist of specifically selected fire resistant plants to be spaced appropriately, except specimen native plants may be approved to remain if properly maintained for adequate defensible space and if annual grasses and weeds are to be maintained. Also, the 30-foot minimum buffer between combustible structures and target species, in addition to regulations regarding irrigation and where to implement vegetation, would be similar as well with the exception of the height of ground covers and allowance for incorporating trees. However, there are provisions for slope coverage in this zone, which may be required where replacement landscape planting with ornamental or native species may be required to meet minimum slope coverage requirements of the County agencies or other Landscape or Hillside ordinances.

Zone C, the Native Brush Thinning Zone, would generally extend from the outermost edge of Zone B up to 200 feet from the structure. Similar to Zone B, trees and both native and ornamental plant species would be allowed within this zone per the stated requirements (for issues regarding height, spacing, etc.). Additional practices required for and specific to this zone would include thinning and clearance activities for native vegetation.

The Fire Access Road Zone would extend a minimum of 10 feet from the edge of any public or private roadway that may be used as access for fire-fighting apparatuses or resources. In this zone, flammable growth would be cleared and removed for a minimum of 10 feet on each side of the Fire Access Roads. Fire access roads, driveways and turnarounds would be maintained in accordance with fire code, with the roads themselves required to have unobstructed vertical clearance for a width of 25 feet. Landscaping and native plants within the Fire the Fire Access Road Zone would be appropriately spaced and maintained to provide safe egress in wildland fire environments. All trees, unless otherwise approved, would be planted far enough from structures and Fire Department access as to not overhang any structure or access at maturity.

According to the plan, routine maintenance would be performed regularly in all zones and include activities such as removal and thinning of undesirable combustible vegetation, reduction of fuel load through pruning and thinning, removal of litter, and the incorporation of manual and automatic irrigation systems.

All structures within the Project would be located along paved, all-weather access roads and fire lanes would be provided via Clubhouse Drive and Trancas Lakes Driveway located in the southern portion of the Project site. Each element of the Project would be served by water provided by the Las Virgenes Municipal Water District. Fire-safety measures, such as fuel modification zones employed by the proposed Fuel Modification Plan and the Project's required adherence to all applicable code and ordinance requirements for construction, access, water mains, fire flows and hydrants required of all the new development, would be implemented to prevent or decrease the risk of accidental occurrence and/or spread of wildfires along the wildland interface of the developed areas of the Project site. Additionally, the proposed location of the new helipad, which has been approved by the LACFD, would improve firefighting capabilities for the Project and the surrounding properties by providing a safe area for helicopters to land within the Project site and gather water for water drops employed when defending against wildfires. Given the past history of wildfire prevention at the Malibu Golf Club and the required implementation of the fire prevention design features and measures discussed above, the Project's development areas would be defensible from wildfires.

Fire protection currently serving the area is adequate for the existing development and land use. In the absence of a cumulative impact, this Project would not have a significant impact on Fire Department

services.[12] However, as each additional development creates greater demands on existing resources, the Project would generate a cumulative impact to fire protection services, to which the payment of a Development Impact Mitigation Fee would be required.[13] The Consolidated Fire Protection District Developer Fee Program enforces a Development Impact Mitigation Fee, which is imposed on all new development within the Consolidated Fire Protection District's three Areas of Benefit, of which the Project site is located within Area of Benefit 1, to fund fire protection and emergency medical services. Area of Benefit 1 contains the Cities of Malibu, Calabasas and Agoura, the Santa Monica Mountains and includes all unincorporated areas within the Area boundary. The County of Los Angeles adopted an updated Developer Fee Program for the benefit of the Consolidated Fire Protection District November 27, 2012, to be effective February 1, 2013. The current Developer Fee Program for Area of Benefit 1 provides for collection of $0.9292 per square foot for new floor area development. Administration and collection of the Developer Fee within the territorial limits of Area of Benefit 1 is the responsibility of the Consolidated Fire Protection District of Los Angeles County. The developer fee revenues supplement funds available to the Consolidated Fire Protection District of Los Angeles County to provide for the acquisition, construction, improvement and equipping of facilities necessary for the District to deliver fire protection services within the County's Areas of Benefit.[14] Although the Project would develop land uses in an area subject to wildfires, its occupants and/or property would be adequately protected from wildfires by incorporation of sprinkler systems, green roofs, adequate emergency vehicle access, fuel modification zones for vegetation management, and emergency helicopter access. With these features, the potential for wildfire impacts to occupants/structures related to the Project's location within a high fire hazard area would be less than significant (**Class III**).

Since most wildfires reported in the Santa Monica Mountains are caused by human activity, this section considers the possible increase in wildfires that might occur in the Project vicinity as a result of the additional visitors that would use the on-site facilities. Factors which contribute to minimizing potential wildfire impacts include: 1) the design(s) of the Project site plan(s), 2) mandatory compliance with various LACFD fire safety requirements, and 3) fuel modification and brush clearance practices required by the LACFD.

The Project would not place new structures within undeveloped areas containing native vegetation. All new buildings would be developed within areas accessible by emergency equipment vehicles. Where the Project's structures would be situated within 200 feet of hillside areas containing native vegetation, the LACFD regulations requiring brush clearance and establishment of landscaping utilizing native species with fire retardant properties would be applied. When created, new manufactured slopes at any of the internal development areas would be planted with fire retardant ornamental and/or native vegetation. Additional provisions regarding vegetation and maintenance activities are featured in the fuel modification plan, discussed above, and would be employed at the Project site. All proposed Project structures would comply with applicable State or County Fire Code requirements.

The increase in the number of visitors to the Project site with completion of the Project would not substantially increase the possibility of an occurrence of human-caused wildfires following the implementation of the above-mentioned plan and provisions. Therefore, the Project would result in a less than significant impact regarding the potential for an increase in the occurrence of wildfires (**Class III**).

The Project's design and development plans would incorporate fire safety features and comply with applicable County Fire Code requirements and ordinances pertaining to building construction, site access,

[12] Letter correspondence with Frank Vidales, Acting Chief, Forestry Division, Prevention Services Bureau, October 25, 2012.
[13] Personal communication with Loretta Bagwell, Planning Division, Los Angeles County Fire Department, January 16, 2013.
[14] City of Malibu Council Agenda Report, Agenda Item #4A, January 6, 2009

proximity to water mains, the adequacy of fire-flows, and the location of adequate numbers of fire hydrants. The Project would include fire alarms, firewalls and dampers, and detector devices in accordance with the State Fire Marshall requirements. Fire lane access throughout the development area, adequate turning radii for fire equipment, and turnarounds for fire protection equipment would be incorporated into the Project design subject to review and approval by the LACFD. Water for fire service, as mentioned earlier, would be supplied to the Project site by existing and proposed water lines. One public fire hydrant would be installed, as mentioned above, near the proposed helipad to maintain sufficient fire flow.

Existing fire protection staff levels and equipment would adequately accommodate the demands for typical fire protection anticipated from the Project and, therefore would not require the provision of additional staff and/or fire protection facilities. The LACFD also provides paramedic services (non-transport); in the event patient transport to a hospital is required, that function is provided by a private ambulance company, which would also be adequately accommodated by the internal circulation driveways and site access, as would firefighting apparatus. Thus, impacts on existing fire protection/emergency services would be considered less than significant (**Class III)**.

5.11.1.5 Cumulative Impacts

Section 4.0, Environmental Setting, features a list of related projects within the surrounding Cities of Malibu and Agoura Hills. Development and occupancy of the Project in combination with related projects in the Cities of Malibu and Agoura Hills would have cumulative, but minimal, adverse impacts on LACFD facilities, equipment, and manpower in that each additional development creates greater demands on existing resources, which would increase the cumulative impact this Project would have on LACFD services. However, each related project would be appraised by the reviewing agencies responsible for evaluating project consistency with applicable land use plans. Each project also would be required to mitigate its individual impacts on fire protection services. Provided all applicable codes, and policies were followed, and required project-specific mitigation measures MM 5.11.1-1 through MM 5.11.1-6 were implemented, cumulative impacts upon fire services would be reduced to less than significant levels (**Class II**).

As discussed above, the number of wildfires in the Santa Monica Mountains has risen with increased development and human activities within the mountains and canyons. Therefore, the cumulative effect of additional development, such as that of the Project, in this area could further increase the occurrence of wildfires. This effect is potentially significant but would be mitigated to less than significant levels by project-specific mitigation measures MM 5.11.1-1 through MM 5.11.1-6, which would require the incorporation of fire prevention mechanisms in structures such as alarms and sprinklers, payment of the Consolidated Fire Protection District's Developer Fee to fund fire protection and emergency medical services serving the Project site, and the establishment of an updated fuel modification plan (**Class II**).

5.11.1.6 Mitigation Measures

The Project is not anticipated to result in any Project-specific significant impacts related to wildfire hazards or increased demands for fire protection services. However, the Project would contribute incrementally to cumulative significant impacts related to wildfire hazards and demands for fire protection. The following mitigation measures would reduce these impacts to less than significant levels.

MM5.11.1-1 The Project shall pay the fee required by the Consolidated Fire Protection District's Developer Fee Program for new residential and commercial construction to support fire stations and apparatus located within the City of Malibu that provide fire suppression and

emergency services to the Project site, which is within Area of Benefit 1.

MM5.11.1-2 The Project shall comply with the applicable Uniform Fire Code (UFC) and LACFD ordinance requirements for development located in high fire danger areas regarding the following: building construction methods and materials; the ease of site access; the adequacy of water mains to maintain adequate fire-flow pressures and volumes; the location and numbers of fire hydrants; the use of indoor sprinklers and sensors; the re-vegetation of all manufactured slopes with fire retardant (native) landscaping; and brush clearance.

MM 5.11.1-3 The Applicant shall install and test, or bond for all required fire hydrants prior to recordation of the Final Map for the Project.

MM 5.11.1-4 The Applicant shall obtain approval from LACFD of a final "Fuel Modification Plan" for the Project prior to commencement of construction.

MM 5.11.1-5 The Applicant shall provide detailed site plan maps and facilities drawings of the completed facilities and areas for the Project to the LACFD, which clearly illustrate access routes, building recognition/identification numbers/names, addresses, building and parking structure floor plans, the locations of emergency exits, and any other pertinent information that would facilitate LACFD response.

MM 5.11.1-6 The Project shall comply with all applicable State Fire Marshall requirements for the installation of fire alarms, firewalls and dampers, and detector devices.

5.11.1.7 Residual Impacts

The Project would not result in a significant increased demand for fire protection/emergency services, would not increase significantly the potential for wildfires, and would not decrease the defensibility of the Project site from wildfires (**Class III**). The Project would, however, contribute to significant cumulative impacts to wildfire occurrence and fire and emergency services. Yet, these impacts would be reduced to a less than significant level with the implementation of the mitigation measures identified above (**Class II**). Thus, the Project would not result in any significant unavoidable adverse impacts.

5.11 PUBLIC SERVICES

5.11.2 Police Protection

5.11.2.1 Existing Conditions

Police protection and enforcement services are currently provided to the Project site by the Los Angeles County Sheriff's Department (LACSD). The various protection and law enforcement functions of this department are described below.

Los Angeles County Sheriff's Department

Law enforcement within unincorporated portions of Los Angeles County, including the Project site, is provided by the LACSD. In addition to serving unincorporated areas such as the portion of the Santa Monica Mountains containing the Malibu Golf Club, the LACSD also provides contract services to 40 cities within the County, including the City of Malibu.

The Project would be served by the LACSD's Lost Hills/Malibu Station, which is located 8.8 miles to the northeast of the Project site at 27050 Agoura Road in the City of Agoura Hills. The station currently serves a population of 88,749 within a 178.6-square mile area. The station has approximately 135 sworn deputies to serve the cities of Agoura Hills, Calabasas, Hidden Hills, Westlake Village, and Malibu, as well as the adjacent unincorporated area. [15]

The LACSD daily staffing varies from day to day. As the Project site is in the unincorporated County area, there is not a minimum daily staffing requirement as there is in a contract city.[16] The LACSD has indicated by letter that the Project "is not expected to have a significant impact on Sheriff Department resources or operations. However, due to the relatively remote location of the Project site, extended response times for calls for service can be expected."[17] The LACSD's response time to the Project site is 10 minutes for emergency calls, 18.5 minutes for priority calls, and 39.2 minutes for routine calls. Although the Project does not pose any unique law enforcement problems, there exists the potential for traffic accidents on the roads surrounding the Project site during busier time periods such as on weekends and during the summer.[18] Discussion of the Project's potential traffic impacts are discussed further in Section 5.13, Transportation and Traffic.

5.11.2.2 Regulatory Setting

Local

Los Angeles County – General Plan Goals and Policies

The County of Los Angeles General Plan General Plan Goals and Policies Element (adopted November 25, 1980) includes the following policies applicable to the Project:

Policy No. 54 – Promote the full use of existing services systems in order to gain maximum benefit from previous public investments.

[15] Email Communication with Sgt. Phillip D Brooks, LACSD 2012.
[16] *Ibid*.
[17] Gary T.K. Tse, County of Los Angeles Sheriff's Department, Letter to Los Angeles County Department of Regional Planning, July 19, 2013.
[18] Email Communication with Sgt. Phillip D Brooks, LACSD 2012.

Policy No. 57 – Improve the quality and accessibility of critical urban services including crime control, health, recreational and educational services.

Policy No. 58 – Maintain high quality emergency response services. Los Angeles County – Code of Ordinances.

Los Angeles County Code

Section 22.74.030 of Chapter 22.74, Law Enforcement, of the County Code imposes a law enforcement facilities mitigation fee on new residential, commercial, office, and/or industrial development projects. The amount of the fee is based upon the findings and conclusions set forth in the "Santa Clarita-North Los Angeles County Law Enforcement Facilities Fee Study, October 29, 2007," and shall not exceed the reasonable cost of providing law enforcement facilities for such residential, commercial, office and/or industrial development projects. It is a uniform fee within each law enforcement facilities fee zone based on the estimated cost of providing the projected law enforcement facility needs in each such zone.

5.11.2.3 Thresholds of Significance

Based on the County of Los Angeles Environmental Checklist (Initial Study), the Project would result in a significant impact on police protection if it would:

- Create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection.

5.11.2.4 Project Impacts

Threshold: Would the Project create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for police protection?

Short-Term Construction Phase Impacts

Law enforcement impacts during the construction phase of a project are often associated with the potential theft of construction materials/equipment or traffic enforcement for heavy construction vehicles. Such impacts are not anticipated during the construction phases of the Project because construction would be located within private property away from public roadways. Furthermore, traffic enforcement on public roads for heavy construction vehicles is not anticipated to be substantial as the movement of grading and/or heavy construction vehicles would be confined typically to the Project site as grading would be balanced on-site. The demand for law enforcement services generated by the Project during construction could be accommodated by existing LACSD staffing levels. Accordingly, no significant short-term law enforcement impacts would occur during construction of the Project (**Class III**).

Operational Impacts

Implementation of the Project would result in the addition of 48,164 square feet of educational and meeting facilities, overnight visitor accommodations in 40 bungalow units providing 160 bedrooms for visitors and measuring a total of 109,140 square feet, a 30,147 square feet clubhouse, golf proshop and

grill measuring 12,104 square feet and support facilities including a maintenance building (10,500 square feet), warehouse (4,623 square feet), golf cart storage barn (9,162 square feet), and a security/information building (477 square feet), all located within the previously disturbed area of the existing Malibu Golf Club. In total, the Project proposes a combined 225,087 square feet of structures, which would replace the existing 12,475-square foot clubhouse and cart with the proposed educational and meeting facilities of the Malibu Institute building, and also remove 11,160 square feet of existing structures including maintenance sheds associated with the Malibu Golf Club, and an abandoned residence located in the northern portion of the Project site. An existing 875-square foot caretaker's residence located on the northern portion of the property along Mulholland Highway would be retained by the Project for use as a caretaker's residence. At completion, the Project would result in a total net increase of 201,452 square feet of structures on the Project site. The bungalows would provide overnight accommodations, and would cause temporary and minor increases in the area's population size which could result in an increase in demand for law enforcement services. However, as stated in the LACSD's letters in response to the NOP for the Project, and to provide comment on the Administrative Draft EIR, the Project would have no effect on staffing or response times and thus would not require the provision of additional staff and/or sheriff protection facilities. Additionally, no unique law enforcement problems are anticipated. Thus, the Project's impact on LACSD services would be less than significant (**Class III**).

5.11.2.5 Cumulative Impacts

Implementation of the Project, in addition to the related projects listed in Section 4.0, would increase the number of visitors and employees within the service area of the Lost Hills/Malibu Sheriff's Station. However, according to LACSD, staffing levels of law enforcement are adequate to meet the needs of the Project and that of the related projects as well.[19]

The LACSD expressed concern regarding the cumulative traffic levels on roadways within the vicinity of the Project site, in that the surrounding roads are not adequate for high volumes of traffic. However, as stated in Section 5.13, Traffic and Access, cumulative traffic impacts would be less than significant, and as such, the Project would not result in a significant contribution to cumulative traffic impacts on roadways and intersections. Therefore, cumulative impacts are considered to be less than significant (**Class III**).

5.11.2.6 Mitigation Measures

No mitigation measures are required.

5.11.2.7 Residual Impacts

The Project would not result in a significant increased demand for police protection services (**Class III**).

[19] E-mail Communication with Sgt. Phillip D Brooks, LACSD 2012.

5.12 RECREATION

This section describes the potential impacts of the Project on recreational facilities, including potential physical impacts on existing parks, recreational facilities, and trails in the Project vicinity.

5.12.1 Existing Conditions

The Project site is located within the south-central section of the Santa Monica Mountains National Recreation Area and in the Santa Monica Mountains Coastal Zone Planning Area[1]. Established in 1978, the Santa Monica Mountains National Recreation Area is a unit of the National Parks System, has over twenty different landowner types and more than seventy stakeholder groups, and is one of the largest protected areas of the Mediterranean-type ecosystem in the world containing multiple hiking and biking trails.[2] The Santa Monica Mountains Conservancy works with the National Parks Service (NPS) and the California Department of Recreation and Parks ("State Parks") "to cooperatively acquire and manage the parks in the Santa Monica Mountains Recreation Area, to protect all resources within the parks, and to provide for the enjoyment of all public parkland within the National Recreation Area without regard to governmental ownership."[3]

Within the Santa Monica Mountains, the Project site is located within Trancas Canyon. This wild coastal canyon, most of which is currently under public ownership, is largely undisturbed by adjacent development, contains endangered species and rare perennial streams, and features the Backbone Trail, a public trail described in detail below.[4]

Existing Parks & Recreational Areas

The Project site is currently developed with a privately-owned 18-hole golf course, built in the 1970s, which covers 118 acres and features supporting amenities such as a clubhouse, a restaurant/grille, a bar, and associated maintenance structures. Although privately owned, the Malibu Golf Club is open to the public and offers daily green fees, annual memberships, golf lessons, special events for golfers, and a practice netted area providing multiple hitting stations. The Malibu Golf Club hosts several golf tournaments every year and operates Monday through Sunday from 6:00 a.m. to 6:00 p.m. with some evening events at the clubhouse extending to 10:00 p.m.

Public Recreational Facilities

The public recreational facilities surrounding the Project site mainly provide passive recreational opportunities such as hiking and picnicking. In total, there are ten public recreational facilities near the Project site: the Charmlee Wilderness Park, Malibu Creek State Park, Rocky Oaks Park, Arroyo Sequit Park, Decker Canyon Camp, Trancas Canyon Park, Lake Eleanor Open Space, Malibu Springs, Triunfo Creek Park, and The Circle X Ranch. Only one facility, the Trancas Canyon Park, offers active recreational opportunities. All of these facilities are discussed in detail below with regard to their proximity to the Project site and amenities provided. The locations of existing parks and trails in the Project area are shown in **Figure 5.12-1**.

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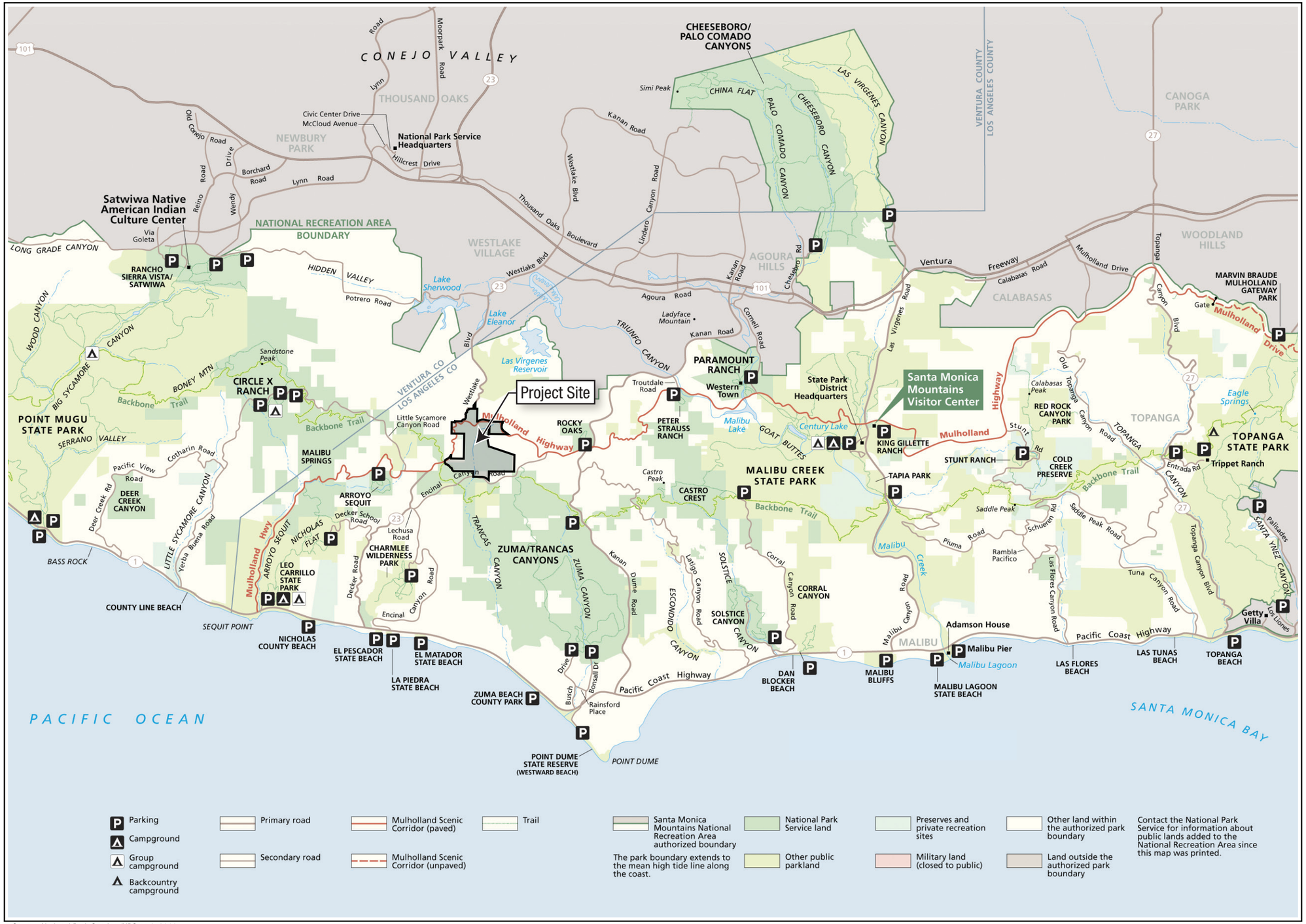
1 National Park Service, Santa Monica Mountains National Recreation Area, Plan Your Visit at: http://www.nps.gov/samo/planyourvisit/index.htm, Accessed: October 22, 2012.

2 Ibid.

3 Santa Monica Mountains Conservancy, "Our Partners," website: http://smmc.ca.gov/partners.html, Accessed: October 22, 2012.

4 National Park Service, Santa Monica Mountains National Recreation Area, General Management Plan: Environmental Impact Statement, Volume 1 of 2. July 2002.



Source: National Park Service (NPS.gov), 2012.

ENVICOM CORPORATION

Existing Parks and Trails

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FIGURE 5.12-1

California State Parks

The Malibu Creek State Park, which includes over 7,000 acres[5] is located approximately 8 miles east of the Project site in the Santa Monica Mountains National Recreation Area. The main entrance and parking are located at 1925 Las Virgenes Road south of the City of Calabasas. This park features hiking, fishing, bird-watching and horseback-riding opportunities and also contains two campground facilities: the Malibu Creek Family Campground and the Malibu Creek Group Camp Walk-In. The Malibu Creek Family Campground provides drinking water, flush toilets, showers, 62 tent/RV spaces, 26 tent-only spaces, a dump station, fire rings, and allows pets at the campground site. The Malibu Creek Group Camp Walk-In also provides drinking water, flush toilets, showers, tent spaces, a dump station, fire rings, allows pets at the site and can accommodate 10-50 people.[6]

Santa Monica Mountains National Recreation Area

The Santa Monica Mountains National Recreation Area (SMMNRA) encompasses 153,250 acres and has over 500 miles of trails for hiking, biking, and horseback riding. The National Park Service, California State Parks and the Santa Monica Mountains Conservancy jointly administer the public parklands within the SMMNRA. These lands include the following parklands.

Zuma/Trancas Canyons, located immediately south of the Project site, offers open space with multi-use trails for hiking, biking, and equestrian use. There is a year-round creek and panoramic coastal views.

The Arroyo Sequit Park, which measures 155 acres, is located approximately 2.1 miles west of the Project site in the SMMNRA within land owned by the National Park Service, and features an intermittent stream, a loop trail and meadows visitors can access for passive recreational opportunities.

The Rocky Oaks Park is located approximately 2.3 miles northeast from the Project site in the SMMNRA within land owned by the National Park Service. The park is approximately 200 acres in size and contains a diversity of wildlife habitats, including a pond, oak woodland, grassland, coastal sage scrub and chaparral communities. Currently, the park is an undeveloped space serving as a refuge for wildlife, where visitors can relax, picnic, stroll and view wildlife.

The Circle X Ranch sits on 1,655 acres and is approximately 4.9 miles from the Project site in the SMMNRA. It is located northwest of the Project at 12896 Yerba Buena Road and is operated by the National Park Service.[7] Facilities offered at this campground site are picnic tables, vault toilets, drinking water, fire grates and a ranch house that provides a meeting room, kitchen, restrooms with showers, a fireplace and lounge area.

Malibu Springs is located approximately 3 miles west of the Project site in the SMMNRA within land owned by the National Park Service. It features multiple hiking trails for visitors. The main trail is not heavily utilized, as there is limited parking at the bottom of the trail.

City of Malibu Parks

The Charmlee Wilderness Park is owned and operated by the City of Malibu, measures 532 acres, and is located approximately 2.2 miles southwest of the Project site. It features picnic areas, hiking trails, native

[5] Malibu Creek State Park Preliminary General Plan/Draft EIR, November 2003. Page 1-2.
[6] National Parks Service, Santa Monica Mountains: Camping Facilities & Fees at: http://www.nps.gov/samo/planyourvisit/camping2.htm. Accessed: October 23, 2012.
[7] National Parks Service, Santa Monica Mountains: Camping Facilities & Fees at: http://www.nps.gov/samo/planyourvisit/camping2.htm. Accessed: October 23, 2012.

plant displays and a nature center in addition to programs for volunteers, schools and group nature programs.

Trancas Canyon Park, also owned and operated by the City of Malibu, is a 6-acre park located approximately 3.4 miles south of the Project site, and features an athletic practice field, a Western-themed children's playground, picnic tables, restrooms and a dog park.

Los Angeles City Recreation and Parks District

Decker Canyon Camp is owned and operated by the City of Los Angeles Department of Recreation and Parks. It is located approximately 3.5 miles southwest of the Project site. It is a year-round facility with a 38-acre tent camping site that provides accommodations for a total of 150 campers. Each site provides flush toilets, showers, wood and charcoal stoves, tables, benches and areas suitable for pitching tents in addition to a large fire circle and areas for large group activities and playing volleyball. At this time, however, the camp is being renovated and is not currently available for use.[8]

Conejo Open Space Conservation Agency (COSCA)

Triunfo Creek Park is located approximately 4.2 miles north-northeast of the Project site. It measures 600 acres and provides deep oak woodland, native grasslands and other natural open spaces. The Park provides access to hiking trails on the Westlake Vista parcel, which is owned and managed by the Conservancy, but the main feature of the Park is the Pentachaeta Trail, named after the *Pentachaeta lyonii* flower.

Private Recreational Facilities

There is one private recreational area near the Project site: the Biggest Loser Fitness Ridge. The Biggest Loser Fitness Ridge is located approximately 2.7 miles east of the Project site and is a weight loss spa and resort providing fitness, aerobic and workout facilities, hiking, tennis and basketball courts and swimming, in addition to educational amenities geared toward health and wellness.[9]

Trails in the Project Vicinity

The Backbone Trail is located approximately 0.3 to 0.4 miles to the west of the Project site and stretches along the crests of ridges that are aligned east/west mostly on public land to the south of Encinal Canyon Road. The trail originates in Will Rogers State Historic Park and culminates in Point Mugu State Park, passing through the Zuma/Trancas Canyons and Malibu Creek State Park. The Backbone Trail segment within the Zuma/Trancas Canyons open space is designated as National Park Service land.[10] The Zuma Ridge Trail, which begins at Encinal Canyon Road approximately 0.98 miles east of the Project site, intersects with the Backbone Trail where it then extends south along a ridgeline into the Zuma/Trancas Canyon open space.[11]

Camp 13 Trail is 0.75 mile long unauthorized trail with a trailhead immediately south of the Project site's entrance from Encinal Canyon Road. It extends southward into Zuma/Trancas Canyons and is a connector trail to the Backbone Trail. As indicated on National Park Service Draft Trail Alternatives maps (not adopted at this time), this trail route would be closed under proposed low- and medium-use trail

[8] City of Los Angeles Department of Parks and Recreation, Decker Canyon Camp (Santa Monica Mountains), at: http://www.laparks.org/dos/camps/decker.htm. Accessed: October 31, 2012.
[9] The Biggest Loser Resort at Fitness Ridge in Malibu website accessed at http://www.biggestloserresort.com/weight-loss-resort/welcome-to-malibu-california April 15, 2013.
[10] National Park Service, About the Backbone Trail, Accessed: September 26, 2012.
[11] National Park Service, Santa Monica Mountains, TMP Conceptual Trail Policy Alternatives, Maps 1 (West) & 2 (Middle), at: http://www.nps.gov/samo/parkmgmt/trail-planning-conceptual-trail-policy-alternatives.htm. Accessed: December 19, 2012.

management alternatives. Under a proposed high use alternative, this trail would be given an authorized designation as a connector to the Backbone Trail.[12] Additionally, the City of Malibu General Plan describes a proposed new trail, the Trancas Canyon Lateral Trail, to be located 0.44 miles south of the Project site that would connect the Backbone Trail with Pacific Coast Highway and Zuma Beach.[13]

Competing Golf Courses in the Project Vicinity

There are three private and two public golf courses in the vicinity of the Project site. The nearest golf course is at the Sherwood Lake Club, a private club, located at 341 Williamsburg Way in Thousand Oaks. This facility offers golf, tennis, swimming, dining and entertainment. The par-3 golf course was designed by Jack Nicklaus and has three sets of tees open for use by beginners, juniors and expert golfers.

The Sherwood Country Club's golf course, also private, is located 3.5 miles north-northeast of the Project site at 320 West Stafford Road in Thousand Oaks. This facility provides an 18-hole Jack Nicklaus signature golf course, driving range, golf clubhouse, tennis clubhouse, pool, gymnasium, fitness facility and full-service spa.

The Westlake Golf Course is open to the public. It is located 4.9 miles north-northwest of the Project site at 4812 Lakeview Canyon Road in Westlake. This course offers a 40-stall night-lighted driving range, pro-shop, snack bar, fully stocked bar, nine professional golf instructors and a practice putting and chipping green. The course also can provide rental clubs for play on the course or driving range.

The Lindero Country Club, a private golf course with a driving range open to the public, is located 11.1 miles north-northeast of the Project site at 5819 Lake Lindero Drive in Agoura Hills. The Lindero Country Club offers a 2,000-yard, 9-hole executive golf course, tennis courts, junior-olympic sized pool, cabanas, banquet hall and a bar and grill.

The Los Robles Greens Golf Course is a public golf course located approximately 11.8 miles north of the Project site at 299 South Moorpark Road in Thousand Oaks. The Los Robles Greens Golf Course has a 6,274 yard, par 70, 18-hole golf course, pro shop, snack bar, full bar and grill, 22,000-square foot banquet facility and clubhouse, community center, golf tournaments and leagues and a driving range.

Additional Competing Golf Courses

There are seven area golf courses that would be considered to be within the same competitive market as the Malibu Golf Club. The nearest of these is Tierra Rejada Golf Club. The Tierra Rejada Golf Club is located 18 miles north of the Project site at 15187 Tierra Rejada Road in Moorpark. This public facility provides an 18-hole course designed by Robert E. Cupp, a practice range, pro shop, and grill.

The Rustic Canyon Golf Course is located 21 miles north of the Project site at 15000 Happy Camp Canyon Road in Moorpark. This public facility provides an 18-hole course created by Hansen Golf Design, a pro shop, practice facilities, and grill.

The Moorpark Country Club is located 24 miles north of the Project site at 11800 Championship Drive in Moorpark. This facility provides a 27-hole course (three nines) designed by Peter Jacobsen and Jim Hardy. The 20,800 square foot clubhouse can host up to 425 guests and offers amenities including a golf shop and restaurant.

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[12] Ibid.

[13] City of Malibu General Plan, Section II. Elements of the General Plan, Chapter 2.0 Open Space and Recreation Element, 2.3 Description of Existing Recreation Facilities.

The Lost Canyons Golf Club is located 29 miles north of the Project site at 3301 Lost Canyons Drive in Simi Valley. This public facility provides two 18-hole golf courses designed by Pete Dye and Fred Couples, a clubhouse, practice facilities, pro shop, and restaurant.

The Sterling Hills Golf Club is located 32 miles northwest of the Project site at 901 Sterling Hills Drive in Camarillo. This public facility provides an 18-hole golf course and a 12,000 square foot clubhouse including a golf shop, full bar, and restaurant.

The Angeles National Golf Club is located 43 miles northeast of the Project site at 9401 Foothill Blvd in Sunland. This public facility provides an 18-hole golf course designed by the Nicklaus Design Group, clubhouse including a restaurant, bar, banquet facilities, event lawn, golf pro shop, and snack bar.

The Robinson Ranch Golf Club is located 51 miles northeast of the Project site at 27734 Sand Canyon Road in Santa Clarita. This public facility provides two 18-hole golf courses designed by Ted Robinson Sr. and Jr., a 25,000 square foot clubhouse, fine dining restaurant, banquet for up to 300 guests, private dining room, and terrace lounge.

5.12.2 Regulatory Setting

Federal

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) of 1990 (42 United States Code Section 12181) prohibits discrimination on the basis of disability in public accommodations and state and local government services. Pursuant to the ADA, the Architectural and Transportation Barriers Compliance Board issues guidelines to ensure that facilities, public sidewalks, and street crossings are accessible to individuals with disabilities. Recreational facilities proposed as part of the Project must comply with ADA requirements.

State

Quimby Act (1975)

The 1975 Quimby Act (California Government Code Section 66477) gave cities and counties the authority to adopt ordinances requiring developers to set aside land, donate conservation easements, or pay fees for park improvements. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities. The goal of the Quimby Act is to require developers to help mitigate the impacts of property improvements.

Local

County of Los Angeles General Plan

According to the County of Los Angeles General Plan, Conservation and Open Space Element, the adopted standard for acres of recreational space is four acres per 1,000 persons. The County's park system, including facilities that are owned, operated and maintained by the County, includes a total of 650 acres of local parkland and 26,816 acres of regional parkland, which totals 27,480 acres and therefore does not meet this requirement for the total County population of 9,998,056 residents[14]

[14] Los Angeles County General Plan, Public Review Draft, 5/2012; United States Census Bureau, State and County Quick Facts, Los Angeles County at: http://quickfacts.census.gov/qfd/states/06/06037.html. Accessed: January 16, 2013.

The following are the Los Angeles County Conservation and Open Space Element's policies from the Los Angeles County General Plan regarding recreation applicable to this Project:

Policy No. 7: Preserve significant ecological areas and habitat management areas by appropriate measures including preservation, mitigation and enhancement; and

Policy No. 27: Provide low intensity outdoor recreation in areas of scenic and ecological value compatible with protection of these natural resources.

Malibu Local Coastal Program Land Use Plan

Malibu Local Coastal Program (LCP) Land Use Plan, which is part of the Los Angeles County Local Coastal Program and was certified by the California Coastal Commission in December 1986, provides policies for development within the Malibu Coastal Zone. The LCP lists policies and standards for protection of recreational resources within Los Angeles County in Section 4.1 Recreation and Coastal Access. The following policies are applicable to the Project:

P1: Provide recreational opportunities to meet the variety of recreation demands.

P2: Provide for passive and educational, as well as active, recreational opportunities.

P14: Program recreational use to minimize the adverse impact on natural elements.

P16: Require that entrance roads, parking facilities, and other necessary development in recreation areas be designed to maintain environmental and visual compatibility with the surrounding area.

P17: Encourage the development of commercial recreational and visitor-serving facilities at suitable locations which provide convenient public access, adequate infrastructure, convenient parking, and, when feasible, which are focused at locations where existing low cost recreational uses will be enhanced. Such uses shall not displace existing recreational uses unless a comparable replacement area is provided. Existing parking areas serving recreational uses shall not be displaced unless a comparable replacement area is provided or alternative means of improving access to the recreational area are assured, such as improved public transit facilities or services. Among other sites, encourage development of commercial recreational and visitor-serving facilities at two development centers (Malibu Civic Center and Point Dume-Paradise Cove) and at one sub-center (mouth of Topanga Canyon).

P18: Encourage commercial recreational development which supplies recreational uses not publicly available.

P19: Ensure that the types and intensities of commercial recreational uses are environmentally compatible with the area and the site.

P22: Site and design recreation-serving commercial uses to minimize traffic hazards and disruption of residential areas.

P24: Design public recreational facilities to minimize the impact on neighboring communities. Similarly, design new land divisions to minimize impacts of residential use on neighboring recreational land.

P25: Protect adjacent neighborhood areas, to the extent feasible, from noise, visual and traffic impacts from new recreation uses.

5.12.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the County of Los Angeles Environmental Checklist Form (Initial Study), a project would have a significant impact on recreation and recreational facilities if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated;
- Include neighborhood and regional parks or other recreational facilities or require the construction or expansion of such facilities, which would have a substantial adverse physical effect on the environment;
- Interfere with regional open space connectivity.

5.12.4 Project Impacts

The Project would provide a remodeled, public 18-hole golf course and introduce overnight accommodations for as many as 320 guests within the Santa Monica Mountains and the SMMNRA. In addition, the Project would provide other recreational opportunities, such as a wellness center, a pro-shop, a swimming pool and a clubhouse for the use of overnight guests. The existing 18-hole public golf course on-site would be closed temporarily during construction, but once re-opened would continue to operate as a public golf facility.

Threshold: Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

While the golf course is closed, an increase in the use of other nearby public golf courses may occur. Since the closure of the golf course would be temporary, however, it would not result in permanent impacts to public golf courses located nearby. At buildout, the Project's recreational amenities would minimize use of off-site recreational facilities by overnight guests by providing onsite recreational opportunities. The Project would not result in an increase in population in the area and therefore would not be expected to increase use of neighborhood parks or public facilities for active recreation. An increase in use of area hiking trails could result from the provision of overnight accommodations in the Santa Monica Mountains; however, such use would be a passive recreation activity and would not cause substantial deterioration to regional recreational facilities. With regard to impacts during Project construction, access to the Backbone Trail via the unauthorized use of the Camp 13 trailhead might be temporarily impacted from traffic generated during construction activities. Though unlikely, if access to the Backbone Trail were temporarily obstructed during these activities, there are two separate entrances located on Encinal Canyon Road 0.42 miles to the west and 0.54 miles to the east from the Camp 13 trailhead location which the public could use. Therefore, the Project's impacts on recreational facilities would not be significant (**Class III**).

Threshold: Would the Project include neighborhood and regional parks or other recreational facilities or require the construction or expansion of such facilities, which would have a substantial adverse physical effect on the environment?

The Project would include the development of recreational facilities, including a remodel of an existing golf course open to the public, and the construction of a fitness/wellness center and outdoor swimming pool provided as amenities for overnight guests. The potential for the Project's provision of these recreational facilities to result in adverse physical effects on the environment is evaluated along with the other proposed Project components. As the Project site is currently occupied by a public golf facility, the remodeled golf course would not result in adverse impacts relative to existing conditions, particularly in regards to water supply as the golf course would be reconstructed with water saving features to reduce potable water use for irrigation by 32 percent as well as providing recycled water to supplement irrigation supplies. The fitness/wellness center would be located within the proposed clubhouse structure and as such potential impacts related to these recreational facilities are considered within each issue area related to development and operation of that Project component. As the fitness/wellness center and swimming pool are provided as amenities for overnight guests, these facilities would not increase the number of guests onsite and thus would not result in adverse impacts not evaluated as part of this DEIR. Additionally, guests would access these Project features via onsite pedestrian or electric cart paths, therefore these facilities would not result in additional traffic to or from the site. A discussion and analysis of the significance of the construction and operation of the Project's recreational facilities is provided as part of the overall Project evaluation, which has concluded that any impacts would be less than significant or less than significant with mitigation. Impacts requiring mitigation are summarized in Section 1.0 Executive Summary, and include impacts related to Aesthetics, Air Quality, Biology, Cultural Resources, Geology, Hazards, Hydrology and Water Quality, Land Use, Noise, Public Services, Traffic and Access, and Utilities. Mitigation has been identified to reduce any potential impacts from this Project to less than significant; therefore, impacts related to provision of recreational facilities would be less than significant with mitigation (**Class II**).

Threshold: Would the Project interfere with regional open space connectivity?

The Project does not propose development of any areas not currently developed, and would preserve over 450 acres of undeveloped open space. Therefore, the Project's impacts related to open space connectivity would be less than significant (**Class III**).

5.12.5 Cumulative Impacts

As the County continues to grow, there will be an increasing need to provide recreational opportunities to meet the cumulative needs of County residents. The Project would not include any residential units and therefore would not increase population, however, it would provide a recreational amenity that would be available to residents of the vicinity including new residents resulting from cumulative development in the area. As the Project would not increase the demand for off-site recreational facilities, with the potential exception of an increase in passive use of regional trails, the Project would not result in an increase in demand for recreational facilities in the County, and cumulative impacts would be less than significant (**Class III**).

5.12.6 Mitigation Measures

The Project's impacts related to off-site recreation facilities would be less than significant. Project impacts related to development of recreation facilities as part of the Project are less than significant or less than significant with mitigation. Identified mitigation measures related to development and operation

of the recreation facilities are provided within each issue area of this EIR where applicable, as well as in Section 1.0, Executive Summary.

5.12.7 Residual Impacts

The Project's impacts related to off-site recreation facilities would be less than significant. Project impacts related to development of recreation facilities as part of the Project are less than significant or less than significant with mitigation provided. Therefore, there are no residual impacts related to recreation facilities.

5.13 TRAFFIC AND ACCESS

This section describes the potential impacts of the Project on traffic and access. The analysis is based on the Traffic and Circulation Study for the Project prepared by Associated Transportation Engineers (ATE) dated March 15, 2013, which is included in Appendix I.

5.13.1 Existing Conditions

Environmental Setting

The Project site is located at 901 Encinal Canyon Road within the Santa Monica Mountains in an unincorporated area of Los Angeles County and is currently occupied by the Malibu Golf Club. The Project site is located northwest of the City of Malibu, and south of the City of Westlake Village. The Project site encompasses approximately 650 acres, with development concentrated in the southern portion of the Project site near Encinal Canyon Road. The existing development includes an 18-hole golf course, a clubhouse, and a restaurant with bar, which are open to the public.

The Project site is accessed by Clubhouse Drive from a non-signalized intersection with Encinal Canyon Road, a designated secondary highway,[1] which includes a deceleration lane for right turns into the Project site from the north, and a left turn lane pocket for vehicles approaching the Project site entrance from the southwest. The two residences in the northern portion of the Project site are accessed from Mulholland Highway, an existing Parkway[2] and designated County Scenic Highway.[3]

The Project site currently provides 174 public parking spaces plus an additional 12 parking spaces for staff use located at the existing maintenance building.

Project Study Area

A Memorandum of Understanding (MOU) between Los Angeles County Department of Public Works Traffic and Lighting Division, and ATE on behalf of Malibu Associates, LLC (Applicant) was prepared to determine the scope of work required to provide an analysis of the Project's traffic impacts. A copy of the MOU, dated August 23, 2012, is provided with the Traffic and Circulation Study in Appendix I. The study area for the Project includes intersections within the vicinity pursuant to the MOU, as well as intersections in the adjacent jurisdictions of the City of Agoura Hills and the City of Malibu, which would likely be used for access to the Project site. The intersections studied are listed in **Table 5.13-1**.

[1] Los Angeles County GIS Data Portal, Master Plan of Highways updated August 15, 2012, accessed at http://egis3.lacounty.gov/dataportal/2012/11/26/master-plan-of-highways/, May 14, 2013.
[2] ibid.
[3] California Department of Transportation (CALTRANS), Officially Designated State Scenic Highways website, accessed at http://www.dot.ca.gov/hq/LandArch/scenic/schwy.htm, May 14, 2013.

Table 5.13-1
Study Area Intersections

Intersection	Jurisdiction
Decker Canyon Road (SR 23)/Lechusa Road	Los Angeles County
Lechusa Road/Encinal Canyon Road	Los Angeles County
Encinal Canyon Road/Clubhouse Drive	Los Angeles County
Mulholland Highway/Kanan Road	Los Angeles County
U.S. 101 NB Ramps-Canwood Street/Kanan Road	City of Agoura Hills
U.S. 101 SB Ramps-Roadside Drive/Kanan Road	City of Agoura Hills
Pacific Coast Highway (SR1)/Kanan Dume Road	City of Malibu

Existing Street Network

The Project site is served by a network of highways, arterial streets and collector streets, as illustrated in **Figure 5.13-1**. The major components of the street network (study area) that would provide access to the Project site are described below:

U.S. Highway 101, located north of the Project site, is a multi-lane interstate highway serving the Pacific coast between the City of Los Angeles and the State of Washington. Access between the site and U.S. Highway 101 is provided via the Westlake Boulevard (SR 23) interchange to the west, and the Kanan Road (County Highway N9) interchange to the east.

State Route 1 (Pacific Coast Highway), is a state highway that extends along the Pacific coast, and follows an east-west orientation in the vicinity of the Project. Pacific Coast Highway (PCH) connects the City of Oxnard on the west to the City of Santa Monica on the east.

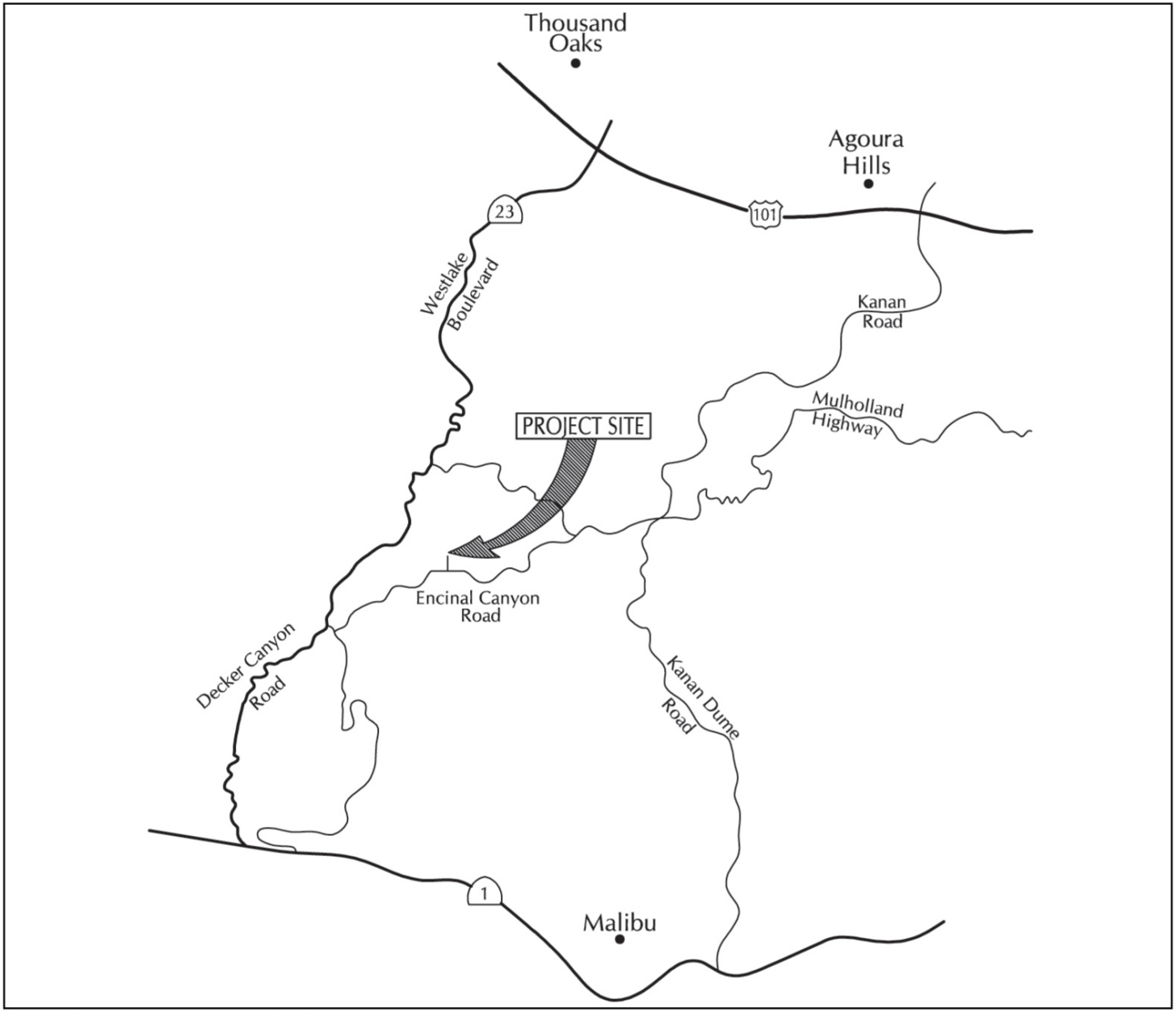
State Route 23, located west of the Project site, is a two-lane State Highway that extends as Westlake Boulevard from the Thousand Oaks area on the north to the western Malibu region on the south. South of its intersection with Mulholland Highway, SR 23 continues as Decker Canyon Road until its terminus at PCH.

Kanan Road (Los Angeles County Limited Secondary Highway N9), a designated major highway located east of the Project site, is a two-lane County-maintained highway in the Project vicinity that extends south from the Agoura Hills area to the central Malibu region. South of its intersection with Mulholland Highway, the roadway continues as Kanan Dume Road until its terminus at PCH.

Mulholland Highway, a parkway and County designated Scenic Highway, is a two-lane roadway located north and west of the Project site, traversing the northern portion of the Project site. This highway serves as a connector between the northeastern terminus of Encinal Canyon Road and Kanan Road. Mulholland Highway is also coincident with a portion of State Route 23 along the northwestern portion of the Project boundary.

Encinal Canyon Road, designated as a secondary highway and located south of the Project site, is a two-lane road that extends southwesterly from Mulholland Highway until its terminus at the PCH. Encinal Canyon Road provides access to the Project via its connection with Clubhouse Drive.

Lechusa Road, located southwest of the Project site, is a two-lane roadway of approximately one-tenth mile in length that connects Decker Canyon Road (SR 23) to Encinal Canyon Road.



Source: Associated Transportation Engineers, March 2013

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Existing Street Network and Project Location

FIGURE 5.13-1

Clubhouse Drive is a private drive that serves as the entryway for the Malibu Golf Club from its connection with Encinal Canyon Road. This roadway only provides access to the Project site and is not used as a public thoroughfare for traffic other than guests and employees of the Malibu Golf Club.

Existing Street Network Operations

Existing Roadway Operations

Existing average daily traffic (ADT) volumes for the roadway segments within the study area were determined by traffic counts conducted in September of 2012. Roadway operating conditions, as well as intersection operations, are typically described in terms of Level of Service (LOS) by designating a rating of A through F based on the volume to capacity ratio. The ratings indicate the quality of traffic flow and range from LOS A, indicating free flow with minimal congestion, to LOS F, indicating forced flow and extreme congestion. More complete definitions of each LOS rating are provided in Appendix I.

Figure 5.13-2 presents the existing ADT volumes on roadways in the study area. **Table 5.13-2** presents the existing LOS for the study area roadways segments. As shown in Table 5.13-1, the study area roadways currently operate at LOS A.

Table 5.13-2
Existing Roadway Segment Levels of Service

Roadway Segment	Roadway Classification	Number of Lanes	Acceptable Capacity [a]	Existing ADT	LOS
Encinal Canyon Road @ Clubhouse Drive	Limited Secondary Highway	2	18,000	1,010	LOS A
Kanan Road n/o Mulholland Highway	Limited Secondary Highway	2	18,000	8,900	LOS A

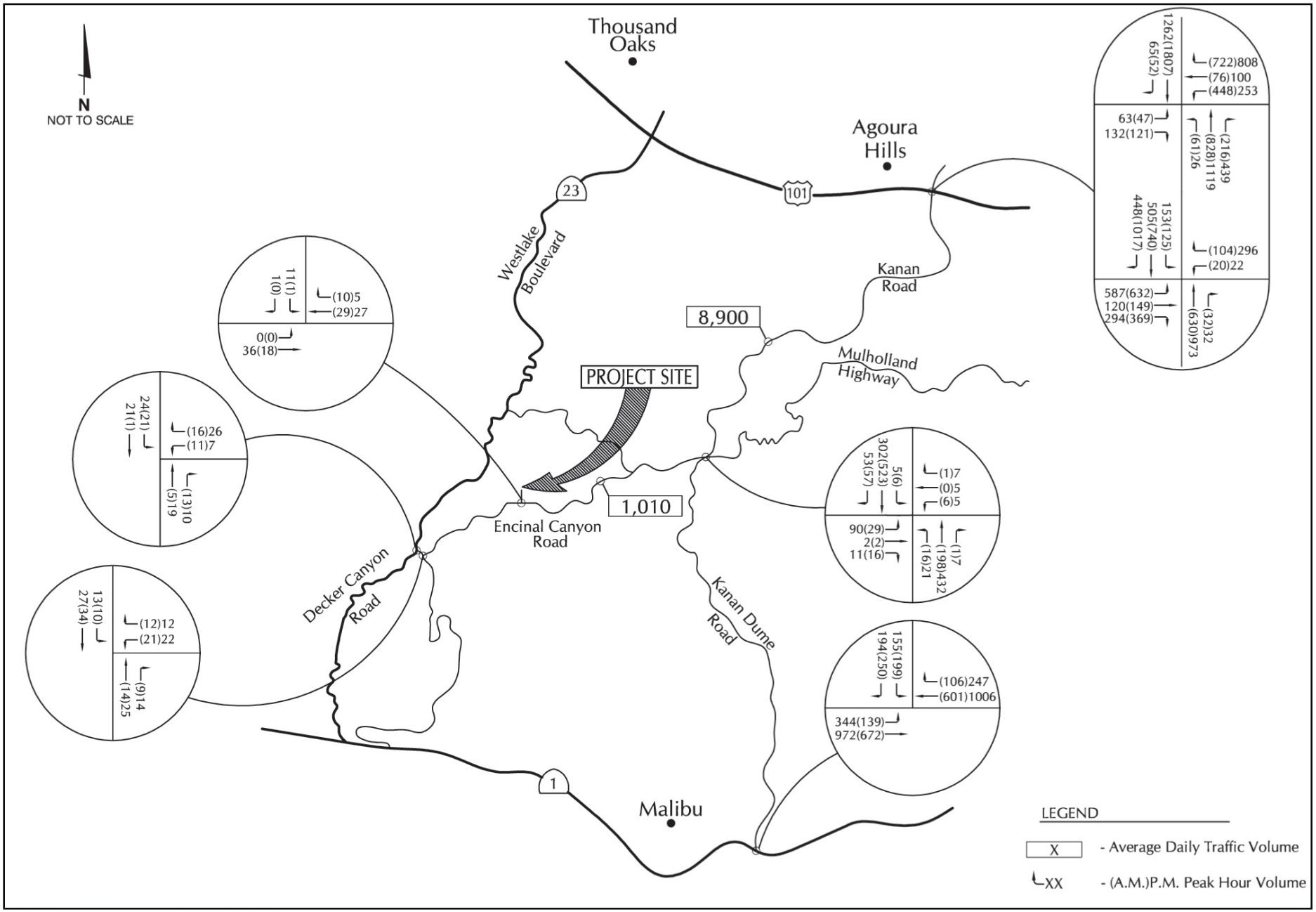
[a] For LOS E operations

Existing Intersection Operations

Because traffic flow on arterial roadways is most constrained at intersections, detailed traffic flow analysis focuses on the operating conditions of critical intersections during peak travel periods. As discussed above, the Project's traffic analysis addressed potential traffic impacts at the key intersections listed in Table 5.13-1.

Existing A.M. and P.M. peak hour traffic volumes for the key intersections were derived from traffic counts collected for this study in September 2012 and March 2013 as well as data obtained from the City of Malibu. The existing A.M. and P.M. peak hour traffic volumes for the key intersections within the study area are shown on Figure 5.13-2, and the existing traffic controls and lane geometries for intersections in the study area are shown in **Figure 5.13-3**. LOS for intersections in the study area were calculated using the Intersection Capacity Utilization (ICU) methodology pursuant to Los Angeles County, City of Agoura Hills, and City of Malibu traffic study requirements, with the results shown in **Table 5.13-3**.

As shown in Table 5.13-3, all of the intersections in the study area currently operate in the LOS A to LOS C range during peak periods, which is considered acceptable based on County standards.



Source: Associated Transportation Engineers, March 2013

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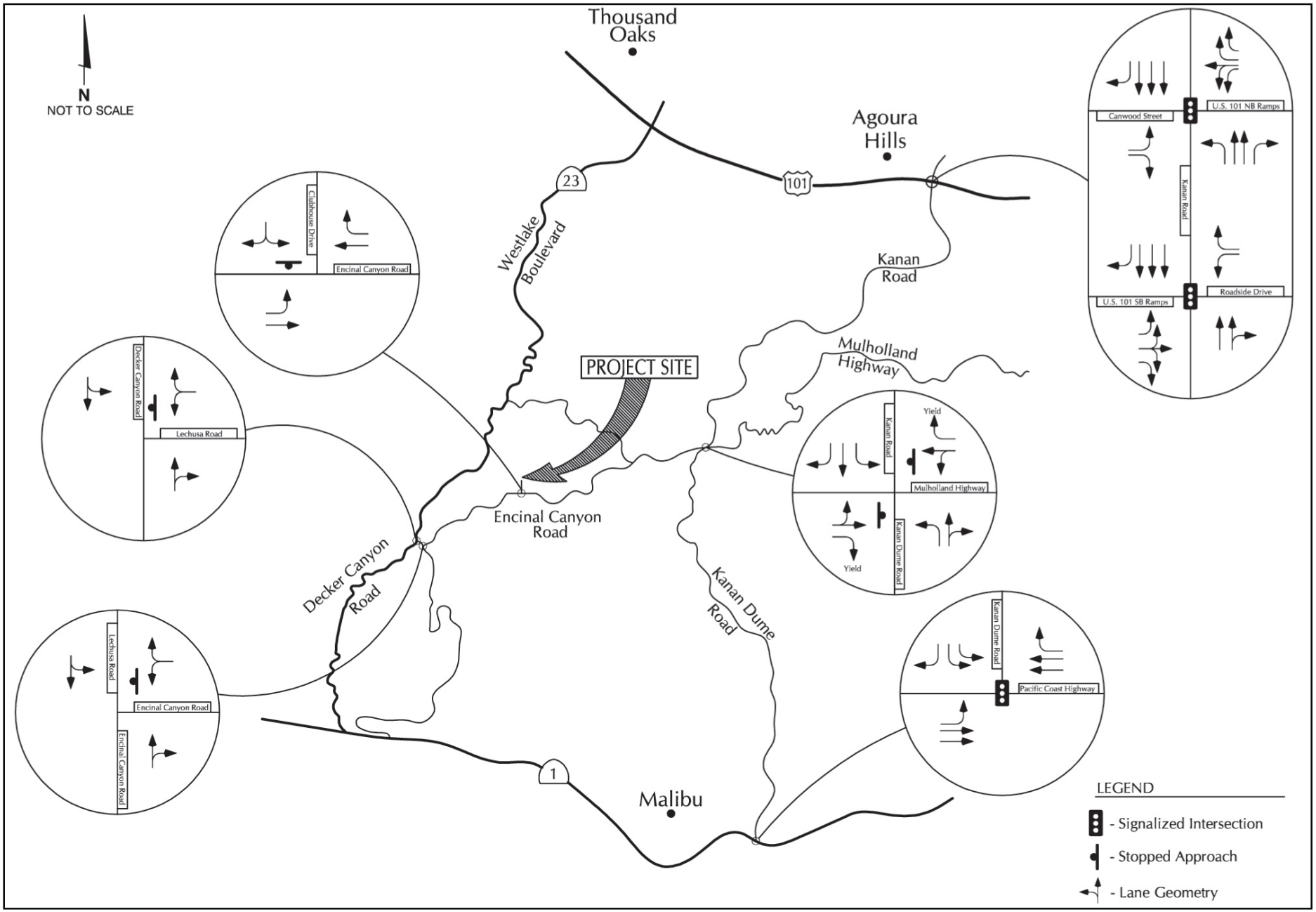
Existing Traffic Volumes

FIGURE 5.13-2



Source: Associated Transportation Engineers, March 2013

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Existing Lane Geometries and Traffic Controls

FIGURE 5.13-3

Table 5.13-3
Existing Intersection Levels of Service

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		V/C	LOS	V/C	LOS
Decker Canyon Road (SR 23)/Lechusa Road	2-way Stop	0.142	**A**	0.167	**A**
Lechusa Road/Encinal Canyon Road	2-way Stop	0.163	**A**	0.170	**A**
Encinal Canyon Road/Clubhouse Drive	2-way Stop	0.119	**A**	0.131	**A**
Mulholland Highway/Kanan Road	2-way Stop	0.460	**A**	0.441	**A**
U.S. 101 NB Ramps-Canwood Street/Kanan Road	Signal	0.688	**B**	0.629	**B**
U.S. 101 SB Ramps-Roadside Drive/Kanan Road	Signal	0.481	**A**	0.615	**C**
Pacific Coast Highway (SR1)/Kanan Dume Road	Signal	0.437	**A**	0.677	**B**

5.13.2 Regulatory Setting

State

California Department of Transportation (Caltrans) has primary jurisdiction over improvements to SR-23 (Decker Canyon), which is within the Project study area and is part of the roadway network that would provide access to the Project.

Local

Southern California Association of Governments (SCAG)

On April 4, 2012, the Regional Council of the Southern California Association of Governments (SCAG) adopted the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Towards a Sustainable Future. The RTP includes goals and policies applicable to transportation that emphasize mobility, sustainability, and integrated planning. The RTP also includes a Sustainable Communities Strategy (SCS) to address the requirements of SB 375 regarding greenhouse gas reduction targets.

Los Angeles County Congestion Management Program

As required under Proposition 111 (1990), every county in California is required to develop a Congestion Management Program (CMP) that looks at the links between land use, transportation and air quality. On October 28, 2010, the Metropolitan Transportation Board adopted the 2010 CMP for Los Angeles County. The 2010 CMP summarizes the results of 18 years of CMP highway and transit monitoring and 15 years of monitoring local growth. CMP implementation guidelines for local jurisdictions are also contained in the 2010 CMP.

County of Los Angeles General Plan

The most recently adopted Transportation Element of the Los Angeles County General Plan (last updated November 1980) includes policies to guide the establishment and maintenance of efficient roadways, mass transit systems, and non-motorized travel infrastructure. Although the Project does not propose to construct public roadways or other transportation facilities, and the rural location and steep inclines of existing roadways are not conducive to non-motorized commuting, the Project would include a shuttle service to provide transportation for guests from regional airports to the site.

The Transportation Element of the General Plan contains the following policies applicable to the Project:

Policy No. 20: Encourage greater use of public transit to special-purpose centers and recreational facilities.

Policy No. 25: Develop alternative transportation systems and procedures which will effectively reduce vehicle miles traveled (VMT) by automobiles.

A complete policy consistency analysis for the Project is provided in Section 5.9, Land Use.

Malibu Local Coastal Program Land Use Plan

Malibu Local Coastal Program (LCP) Land Use Plan, which is part of the Los Angeles County Local Coastal Program and was certified by the California Coastal Commission December 1986, provides the following policies regarding traffic and access for development within the Malibu Coastal Zone;

P187: Limit access locations onto major roads that serve as primary access routes to major recreation areas or provide alternative road improvements (e.g., turning lanes or consolidated driveways), in order to avoid reducing their capacities.

P188: Consistent with other policies of the LUP, encourage the development and maintenance of alternative access routes to each mountain and coastal community for use during emergencies such as earthquakes or fires.

P189: Develop parking facilities for bicycles, motorcycles, and public transit at recreation areas to encourage the use of these modes of transportation.

P191: Encourage use of public transit modes (bus or van pool service) by commuters to metropolitan Los Angeles to reduce congestion of Pacific Coast Highway during peak hours

P193: Permit improvement of roads only where such roads provide legal access to parcels which are already legally developed or which may be developed consistent with other policies of the LUP, including Watershed Plans where necessary.

P216c: Adequate parking shall be provided for all new development according to the LUP standards

Los Angeles County Code

The Los Angeles County Code establishes parking requirements for residential, institutional, commercial and industrial development.

With regard to construction traffic, the County Code prohibits noise-generating construction activities between the hours of 7:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, and anytime on Sundays or legal holidays if such noise would create a noise disturbance across a residential or commercial real property line.

5.13.3 Thresholds Of Significance

Based on Appendix G of the CEQA Guidelines and the County of Los Angeles Environmental Checklist Form (Initial Study), the Project would result in a significant impact if it would:

- Conflict with an applicable plan, ordinances or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program (CMP), including, but not limited to, level of service standards and travel demand measures, or other standards established by the CMP for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; and
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

An additional significance threshold was identified in the Initial Study prepared for this Project, which indicates that the Project would have a significant impact on traffic and access if it would:

- Result in parking problems with a subsequent impact on traffic conditions.

Applicable Plans and Policies Thresholds

The Project study area includes three jurisdictions: the County of Los Angeles, the City of Agoura Hills, and the City of Malibu. The thresholds of significance for each of these jurisdictions establishing measures of effectiveness for the performance of the circulation system are outlined below. The Project's consistency with applicable land planning policies is addressed in Section 5.9, Land Use.

County of Los Angeles

The County of Los Angeles has established criteria to be used to evaluate a project's traffic impacts[4] for roadways within its jurisdiction related to a project's effect on the performance of the circulation system. Under these criteria, the Project would result in a significant impact on traffic if it would increase the volume to capacity ratio of Los Angeles County roadways or intersections enough to equal or exceed the thresholds outlined in the Los Angeles County Traffic Report Guidelines. Potential traffic impact issues and their associated significance criteria provided by the County are discussed below.

For the unincorporated areas of the County, a project would be considered to have a significant impact to 2-lane roadways, such as those in this Project's study area, if it would result in an increase in the roadway's traffic volume that would be equal to or exceed the percentages presented in **Table 5.13-4**.

[4] County of Los Angeles Department of Public Works, *Traffic Impact Analysis Report Guidelines*, January 1, 1997.

Table 5.13-4
Los Angeles County Two-Lane Roadway Impact Thresholds

Pre-Project LOS [a]	Significance Threshold
	Project Increase (Peak Hour)
C	4%
D	2%
E/F	1%
[a] The County does not provide criteria for determining significance of traffic impacts to two-lane roadways with existing LOS of A or B.	

Based on the County's criteria, a project would result in significant intersection impacts if the project-related increase in the volume to capacity ratio (V/C) equals or exceeds the following thresholds listed in **Table 5.13-5.**

Table 5.13-5
Los Angeles County Intersection Impact Thresholds

Existing Conditions (Pre-Project)		Significance Threshold
LOS [a]	V/C	Project V/C Increase
C	0.71 to 0.80	0.04 or more
D	0.81 to 0.90	0.02 or more
E/F	0.91 or more	0.01 or more
[a] The County does not provide criteria for determining significance of traffic impacts to intersections with existing LOS of A or B.		

City of Agoura Hills

A significant impact at a signalized intersection would occur if the Project would increase traffic demand by:

- 4 percent of greater (V/C increase is greater than or equal to 0.04) at a facility that would operate at LOS C with Project-generated traffic volumes.
- 2 percent of greater (V/C increase is greater than or equal to 0.02) at a facility that would operate at LOS D with Project-generated traffic volumes.
- 1 percent of greater (V/C increase is greater than or equal to 0.01) at a facility that would operate at LOS E/F with Project-generated traffic volumes.

City of Malibu

A significant impact would result if an intersection operating at LOS D, E, or F with a V/C ratio of greater than 0.800 would experience a Project-related V/C ratio increase equal to, or greater than, 0.020.

Los Angeles County Congestion Management Program Impact Threshold

A traffic impact would be considered significant if a project would increase traffic demand on a CMP facility by 2 percent of capacity (V/C greater than or equal to 0.02), causing LOS F (V/C greater than 1.00). If a facility is already at LOS F, a significant impact would occur if a project would increase traffic demand by 2 percent of capacity (V/C is greater than or equal to 0.02).

5.13.4 Project Impacts

The Project would develop a sports-oriented educational retreat and would include construction of new facilities, removal of most existing buildings, and remodeling the existing golf course. The Project would include an educational/conference building, overnight guest accommodations consisting of 40 bungalows (providing a total of 160 bedrooms), a golf-oriented clubhouse, and a pro-shop and grill, as well as associated maintenance and storage facilities. The redesigned 18-hole golf course, clubhouse and restaurant would continue to be open to the public, however, public use of the proposed facilities could decrease compared to existing conditions as the remodeled golf course would give priority to overnight guests of the Malibu Institute.

The Project would not change vehicular access to the Project site, which would continue to be accessed by Clubhouse Drive from a non-signalized intersection with Encinal Canyon Road.

The Project would provide a shuttle service for guests of the educational retreat, using a fleet of shuttle vans, to provide group transport to and from Los Angeles area airports (primarily the LAX and Burbank Airports), as well as transport local groups located in the greater southern California area. The shuttle service would operate on a reservation system for specific times when the facility is booked for the educational retreat events. This analysis does not assume credit for the anticipated reduction in trips to the Project site resulting from the provision of a shuttle service in order to provide a conservative analysis.

The Project would provide onsite parking consisting of 387 parking spaces on surface lots that would be located in a centralized location in the southwest portion of the Project site. Internally, each of the Project's facilities would be accessible by pedestrian or electric cart paths.

Threshold: Would the Project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Pursuant to the Los Angeles County Traffic Impact Analysis Report Guidelines,[5] the following traffic scenarios were analyzed:

- Existing Conditions (Year 2012)
- Existing + Project
- Cumulative (Existing + Related Projects)
- Cumulative (Existing + Related Projects) + Project

Trip Generation and Distribution

Construction Traffic

During construction, the existing Malibu Golf Club would be closed, including the golf course, clubhouse, and restaurant, which would eliminate existing traffic generation under current conditions. Based upon Institute of Transportation Engineers (ITE) generation rates for golf courses, the existing facilities could generate a total of 643 ADT. The Project would not require import/export soil hauling, as all grading quantities would be balanced onsite. Construction period traffic would therefore consist of

[5] Los Angeles County Department of Public Works, Traffic Impact Analysis Report Guidelines, January 1997.

commuting workers accessing the site and material delivery vehicles, which would be offset by reductions due to cessation of current operations.

Construction phasing is not determined at this time; however, activities can be divided into three distinct components consisting of, the remodeled golf course, the bungalows, and other structures. As workers on each specific component would largely be employed by a single company, and due to the remoteness of the Project site, it is likely that workers will actively participate in carpooling to the site.

1. Golf Course - The remodeled golf course would typically require a crew of about 20-25 workers over a period of 10-12 months for earthwork, followed by approximately two months for irrigation installation with approximately 35 workers. Most equipment would be delivered onsite in the first two weeks utilizing 8-10 truck-trailers for the delivery (one truck per day on average). The equipment would remain onsite for the entire construction period, and then would be removed over a two-week period similar to the initial delivery utilizing 8-10 truck-trailers.
2. Bungalow Construction - The bungalow structures would be built off site in modular form and assembled on-site. This would minimize the crews needed and duration of onsite construction. Delivery of the bungalow components for each unit would require approximately five large trucks, which would result in a total of 200 truck trips accessing the site to deliver 40 units over an estimated two-month period (approximately 5 per day). Approximately 12-15 workers would be required onsite during the delivery of these components. Because the components would be substantially built in factories off-site, onsite construction would consist of assembly, electrical, and various finishing activities to be accomplished by 10-15 workers and would occur over a 3-6 month duration.
3. Buildings constructed onsite - The Malibu Institute building, clubhouse, and other buildings constructed onsite will require an average of 10 workers per day for each building, which an expected maximum of a 40 person crew per day at peak activity. Material deliveries for these structures would range between 10-15 trucks per week on a schedule of about 8-10 months.

Assuming a worst-case scenario of peak activity for each component occurring on the same day, the Project construction period would result in a maximum of 90 workers onsite in a single day, with a maximum average of 9 delivery trucks per day. As stated earlier, many construction workers likely would carpool to the site. Additionally, most of the worker commute trips would occur outside of the peak hour periods for weekday traffic since construction workers generally would arrive prior to 7:00 A.M. and end their work day before 4:00 P.M. The majority of the material delivery and hauling trips also would be scheduled outside of the peak hour periods.

For an estimation of construction traffic impacts, a trip generation estimate for the estimated maximum workforce to access the site for any single day is shown below:

90 construction workers @ 1.5 workers per vehicle = 60 vehicles per day
Average daily material deliveries = 9 vehicles per day
69 vehicles @ 2 trips per vehicle (1 inbound + 1 outbound) = 138 ADT

As the current operations of the existing Malibu Golf Club would cease during construction, the 138 ADT for construction traffic would be more than offset by the reduction of existing traffic generation. Weekend traffic would be reduced even further as minimal construction would occur on Saturdays and no construction would occur on Sundays, while closure of the Malibu Golf Club would reduce weekend traffic generation by an even larger amount than weekday reductions.

As discussed above, construction traffic typically would avoid the A.M. and P.M. peak hours, and thus would not result in significant increases in Volume/Capacity (VC) ratios for intersections in the study area for those peak hours. Based on the above analysis, including the temporary nature of construction activity, the off-peak hours during which most construction traffic would occur, and the accompanying reduction in existing traffic due to closure of the Malibu Golf Club, Project construction period impacts would be less than significant (**Class III**).

Operational Traffic

Trip generation estimates were developed for the Project based on the rates presented in the Institute of Transportation Engineers (ITE) Trip Generation report.[6] The peak hour trip generation rates for Resort Hotel (Land Use Code #330) were selected as the best fit for the proposed educational retreat because the resort hotel rates are based on studies of facilities that provide extensive amenities where guests are more likely to stay on-site rather than leave for activities. The ITE report does not provide an ADT rate for Resort Hotels; therefore an ADT rate for the Project was derived from ITE Hotel rates (Land Use Code #310) as modified by the Resort Hotel peak hour trip rates.

At the request of Los Angeles County Department of Public Works staff, trip generation estimates were developed assuming the Project would provide 160 individual rooms, although individual bedrooms within the 40 bungalows would not be rented out individually. This assumption likely overstates the trip generation rate, as guests staying within one bungalow potentially would travel together rather than arriving in separate vehicles. Furthermore, this analysis assumes no credit for a proposed shuttle service to area airports to provide transportation for groups of guests that would be staying onsite. Application of the ITE Resort Hotel rates also likely overestimate trip generation for the Project given the remote location of the Project site in the western Santa Monica Mountains as well as the unique operations proposed for the educational retreat. As discussed in Section 3.0, Project Description, the Malibu Institute would be designed to accommodate groups that would use the facility for multi-day educational retreats. Thus, application of the ITE Resort Hotel rates produce higher trip estimates than anticipated given the remote location of the facility and the fact that guests would be attending educational seminars and would travel off-site with less frequency than a typical resort hotel.

The trip generation rates developed for this Project are shown in **Table 5.13-6**. The table also displays the trip generation calculations for the Project using the rates developed for this study. As shown in Table 5.13-6, the Project would generate a net additional 998 ADT, including 59 A.M. peak hour trips and 78 P.M. peak hour trips, which would use the surrounding roadway network.

While the remodeled golf course would be open to the public, public usage likely would decrease with the Project, as guests staying at the resort facility would have first priority to rounds of golf. In order to provide a conservative analysis, this analysis assumes no credit for the anticipated reduction in trips for the golf course, and therefore, for this evaluation, the traffic associated with public use of the golf course is assumed to remain the same as under existing conditions. Likewise, traffic related to maintenance of the proposed redesigned 18-hole golf course is assumed to remain the same as under existing conditions regarding employees of the existing 18-hole golf course. For reference, Table 5.13-6 includes a trip generation estimate for the remodeled golf course, offset by the existing ADT generated by the existing golf course, with a net increase indicating that the golf course traffic is considered to be a Project site baseline condition.

[6] Trip Generation, Institute of Transportation Engineers, 8th Edition, 2008.

Table 5.13-6
Malibu Institute Project Trip Generation

Land Use	Size	ADT		A.M. Peak Hour		P.M. Peak Hour	
		Rate	Trips	Rate	Trips (In/Out)	Rate	Trips (In/Out)
Golf Course (Existing)	18 Holes	35.74[a]	643	N/A	11 (10/1)	N/A	17 (5/12)
Resort Hotel (Proposed)	160 Rooms	6.24 [b]	998	0.37	59 (42/17)	0.49 [c]	78 (34/44)
Total Future Trips			*1,641*		*70 (52/18)*		*95 (39/56)*
Net New Trips			**998**		**59 (42/17)**		**78 (34/44)**

N/A – Trip information is based on peak hour traffic count data collected at existing site.
[a] ITE Average Daily Traffic Rate for Golf Course.
[b] ITE does not provide an ADT rate for Resort Hotels. The ADT rate is derived from ITE Hotel rates (Land Use Code #310) based on the relationship between ADT and PM peak rates for Hotel use, then applying the factor (12.74) to the PM rate for Resort Hotel (0.49). The ADT rate for ITE Hotel Rooms is 12.74 x P.M. peak hour rate. Thus, ADT rate for Resort Hotels = 12.74 x 0.49 = 6.24.
[c] ITE Resort Hotel PM peak hour rate.

Trip Distribution

Trip distribution percentages were developed for the Project based on travel routes to and from the population centers of the City of Malibu and traffic flows observed at the Encinal Canyon Road/Clubhouse Drive intersection. The trip distribution percentages are shown in **Table 5.17-7**. The analysis found 90 percent of traffic accessing the Project site uses Kanan Road via Mulholland Highway and Encinal Canyon Road, and 10% uses the Decker Canyon Road (SR 23) via Lechusa Road and Encinal Canyon Road. The Project trip distribution for the A.M. and P.M. peak hours is shown in **Figure 5.13-4**.

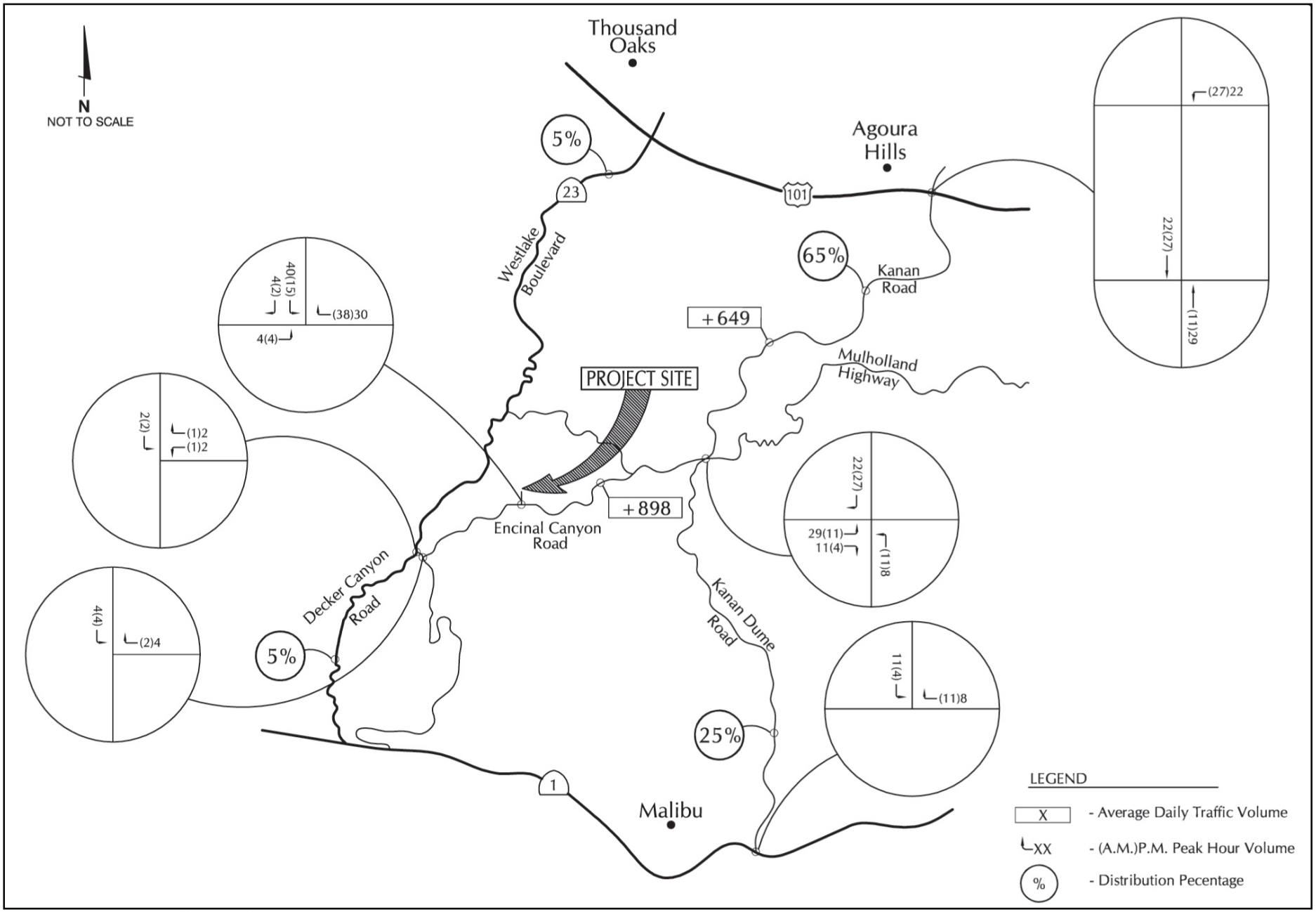
Table 5.13-7
Project Trip Distribution Percentages

Origin/Destination	Direction	Percentage
Kanan Road	North (to U.S. 101/Agoura Hills)	65%
	South (to SR1/Malibu-Santa Monica)	25%
Decker Canyon Road (SR 23)	North (to U.S. 101/Thousand Oaks)	5%
	South (To SR1/Malibu	5%

Existing + Project Impacts

Existing + Project Roadway Operations

The traffic volumes on roadways in the study area that would result from implementation of the Project in addition to the existing conditions were compared to traffic volumes under existing conditions alone. As shown in **Table 5.13-8**, the roadways in the study area are forecast to operate at LOS A with Existing + Project traffic volumes. The Project would therefore not significantly impact the roadway segments in the study area based on County thresholds.



Source: Associated Transportation Engineers, March 2013

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Project Trip Distribution and Assignment

FIGURE 5.13-4

Table 5.13-8
Existing + Project Roadway Operations

Roadway Segment	ADT				LOS	Project Impact?
	Acceptable Capacity [a]	Existing	Project Added	Existing + Project		
Encinal Canyon Road @ Clubhouse Drive	18,000	1,010	+ 898	1,908	LOS A	No
Kanan Road n/o Mulholland Highway	18,000	8,900	+ 649	9,549	LOS A	No

[a] For LOS E operations

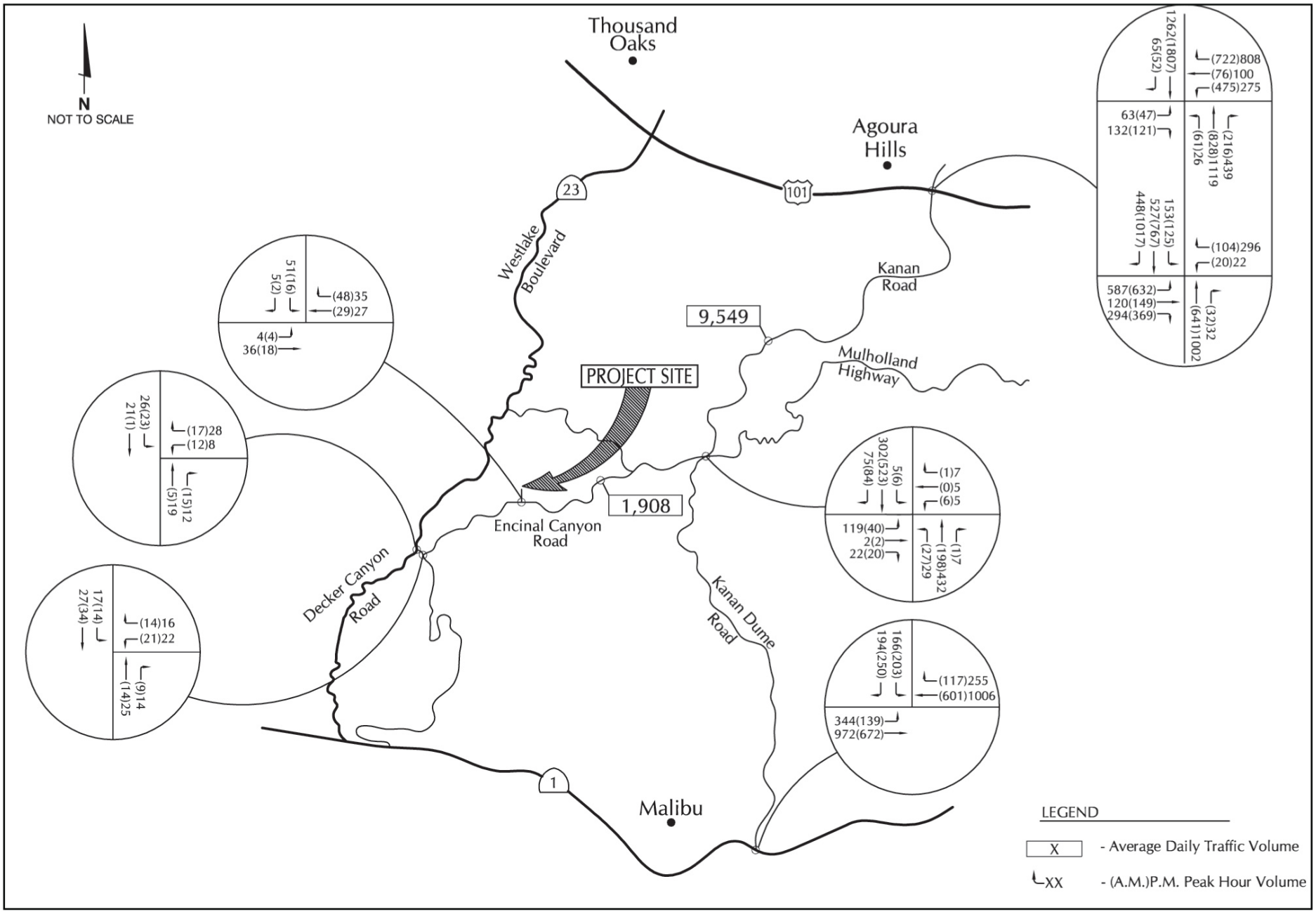
Existing + Project Intersection Operations

The LOS for intersection operations in the study area were calculated for Existing + Project levels of service and are presented in **Tables 5.13-9 and 5.13-10** which show LOS for A.M. and P.M. peak hours, respectively, as compared to existing conditions. These results are depicted graphically in **Figure 5.13-5**. As shown in the Tables 5.13-9 and 5.13-10, the intersections in the study area are forecast to operate at LOS A to LOS C during peak hour periods with Existing + Project traffic. Therefore, the Project's traffic additions would not result in a significant impact to the area intersections under this scenario based on County thresholds.

Table 5.13-9
Existing + Project Levels of Service - A.M. Peak Hour

Intersection	V/C / LOS		Project Added		Project Impact?
	Existing	Existing + Project	Trips	V/C [a]	
Decker Canyon Road (SR 23)/ Lechusa Road	0.142/LOS A	0.146/LOS A	6	0.004	No
Lechusa Road/Encinal Canyon Road	0.163/LOS A	0.166/LOS A	6	0.003	No
Encinal Canyon Road/Clubhouse Drive	0.119/LOS A	0.129/LOS A	59	0.010	No
Mulholland Highway/Kanan Road	0.460/LOS A	0.474/LOS A	53	0.014	No
U.S. 101 NB Ramps-Canwood Street/Kanan Road	0.688/LOS B	0.698/LOS B	27	0.010	No
U.S. 101 SB Ramps-Roadside Drive/Kanan Road	0.481/LOS A	0.483/LOS A	38	0.002	No
Pacific Coast Highway (SR1)/Kanan Dume Road	0.437/LOS A	0.438/LOS A	15	0.001	No

[a] Change in V/C ratio calculated based on percent change in entering traffic volumes.



Source: Associated Transportation Engineers, March 2013

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Existing + Project Traffic Volumes

FIGURE 5.13-5

Table 5.13-10
Existing + Project Levels of Service - P.M. Peak Hour

Intersection	V/C / LOS		Project Added		Project Impact?
	Existing	Existing + Project	Trips	V/C [a]	
Decker Canyon Road (SR 23)/ Lechusa Road	0.167/LOS A	0.171/LOS A	8	0.004	No
Lechusa Road/Encinal Canyon Road	0.170/LOS A	0.176/LOS A	8	0.006	No
Encinal Canyon Road/Clubhouse Drive	0.131/LOS A	0.158/LOS A	78	0.027	No
Mulholland Highway/Kanan Road	0.441/LOS A	0.459/LOS A	70	0.018	No
U.S. 101 NB Ramps-Canwood Street/Kanan Road	0.629/LOS B	0.629/LOS B	22	0.000	No
U.S. 101 SB Ramps-Roadside Drive/Kanan Road	0.615/LOS B	0.621/LOS C	51	0.006	No
Pacific Coast Highway (SR1)/Kanan Dume Road	0.677/LOS B	0.681/LOS B	19	0.004	No
[a] Change in V/C ratio calculated based on percent change in entering traffic volumes.					

As shown in Tables 5.13-8 through 5.13-10, the study area intersections are forecast to operate at LOS C or better during the peak hour periods with Existing + Project traffic. Therefore, traffic increases generated by the Project would not result in traffic levels on roadways in the study area that equal or exceed the thresholds of Los Angeles County, the City of Agoura Hills, and the City of Malibu. As such, the Project's potential traffic impacts on the roadway network in the Project site vicinity would be less than significant (**Class III**).

Threshold: Would the Project conflict with an applicable congestion management program (CMP), including, but not limited to, level of service standards and travel demand measures, or other standards established by the CMP for designated roads or highways?

The nearest CMP intersection to the Project site is the Kanan Dume/PCH intersection, located in the City of Malibu. As stated above in section 5.13.3, Thresholds of Significance, a project would be considered to cause a significant impact on a CMP facility if it increased traffic by 2 percent of capacity (V/C of 0.02 or more), that either caused a LOS F (V/C of more than 1.00), or exacerbated an existing LOS F condition. The traffic analysis indicates that this intersection is forecast to operate at LOS C under Cumulative and Cumulative + Project traffic volumes, and the Project's traffic additions would not increase the intersection V/C ratio by 2 percent or more as shown in section 5.13.5. Therefore, the Project's potential impact to the CMP facility would be less than significant (**Class III**).

Threshold: Would the Project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The Project is not located in the vicinity of a public or private airport and as such would have no impact on air traffic patterns. An onsite helipad would be relocated as part of the Project, however this facility would be provided exclusively for emergency operations, to be accessed by the Los Angeles County Fire Department and other public agencies during wildfire fighting activities or other potential emergencies, to protect life or property. As such, this Project feature would be exempt from State Heliport Permitting

requirements.[7] This is an onsite relocation of an existing facility, which would not represent any change in frequency or permitted access. No increase in roadway traffic would occur as a result of emergency use of the relocated helipad. As any use of the helipad would be for emergency situations, flight paths and other details related to helicopter landings would be dependent on the nature of the emergency or the location/size of the wildfire being responded to. Such temporary uses would not constitute a change in air traffic patterns; therefore, impacts related to air traffic are less than significant (**Class III**).

Threshold: Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Access to the Project site is provided via Clubhouse Drive, which also provides access to the existing Malibu Golf Club and associated facilities. Clubhouse Drive is 48-feet wide with two 20-foot travel lanes that are separated by an 8-foot raised median. For vehicles entering the site, Encinal Canyon Road provides a dedicated left turn queuing lane for eastbound traffic, and a right turn deceleration lane approaching Clubhouse Drive for westbound traffic. As Encinal Canyon Road follows a relatively straight east-west path along the section where it intersects with Clubhouse Drive, vehicles leaving the Project site have uninterrupted sightlines in either travel direction (approximately 1,000 ft. and 900 ft. to the east and west, respectively). These lengthy sight distances provide sufficient visibility of oncoming traffic, enhancing the safety at the intersection for vehicles to exit the site.

All activities related to the construction, operation, and maintenance of the Project would occur within the Project site boundaries and would not affect off-site traffic or introduce a land use that is incompatible with roadways in the vicinity. The Project does not propose any construction related soil import or export from grading activities that would substantially increase truck traffic. Therefore, the Project would not introduce a condition, either temporary or permanent, that would pose a substantial increase in traffic hazards. Impacts related to this threshold would be less than significant (**Class III**).

Threshold: Would the Project result in inadequate emergency access?

Access to the Project site is provided via Clubhouse Drive, which also provides access to the existing Malibu Golf Club and associated facilities. Clubhouse Drive is 48-feet wide with two 20-foot travel lanes that are separated by an 8-foot raised median. For vehicles entering the site, Encinal Canyon Road provides a dedicated left turn queuing lane for northbound traffic, and a right turn deceleration lane approaching Clubhouse Drive for southbound traffic. Internally, a network of driveways would provide emergency vehicle access to each component of the Project. In addition, as discussed above, an onsite helipad for Fire Department emergency use would be relocated onsite to a more easily accessible area as preferred by the Fire Department. The Project would be required to have the Los Angeles County Fire Department approve the planned onsite access including lane width, distance from buildings, and provision of adequate turnaround areas. See Section 5.11.1, Fire Protection, for further discussion of emergency vehicle access impacts. With required Fire Department approvals, impacts related to emergency access would be less than significant (**Class III**).

[7] The State Aeronautics Act regarding State Heliport Permit requirements specifies an exemption for "Emergency Use Facilities", defined as "an area for accommodating helicopters in support of emergency public safety agency operations, but is not used as a heliport for any other purpose." (Public Utilities Code, section 21662 and Cal. Code of Regs., sections 3527, 3533.) Accordingly, the proposed relocated helipad would not require an additional state permit.

Threshold: Would the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Due to the remote location of the Project site, there are no regularly scheduled public transit operations that serve the site, however, the Project would introduce a shuttle service available by reservation to transport guests to and from area airports. The mountain roads that provide access to the Project site are used by bicyclists for recreation, and area trails are used by hikers and bicyclists. The Project would not interfere with or affect the safety of the roadways or area trails regarding bicycle or pedestrian use. The Project would not conflict with any policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. The Project would promote onsite circulation by foot by providing pedestrian facilities consisting of ample walkways that connect the various components and structures proposed by the Project. Therefore, the Project's impacts regarding consistency with such plans or the performance of such facilities would be less than significant (**Class III**).

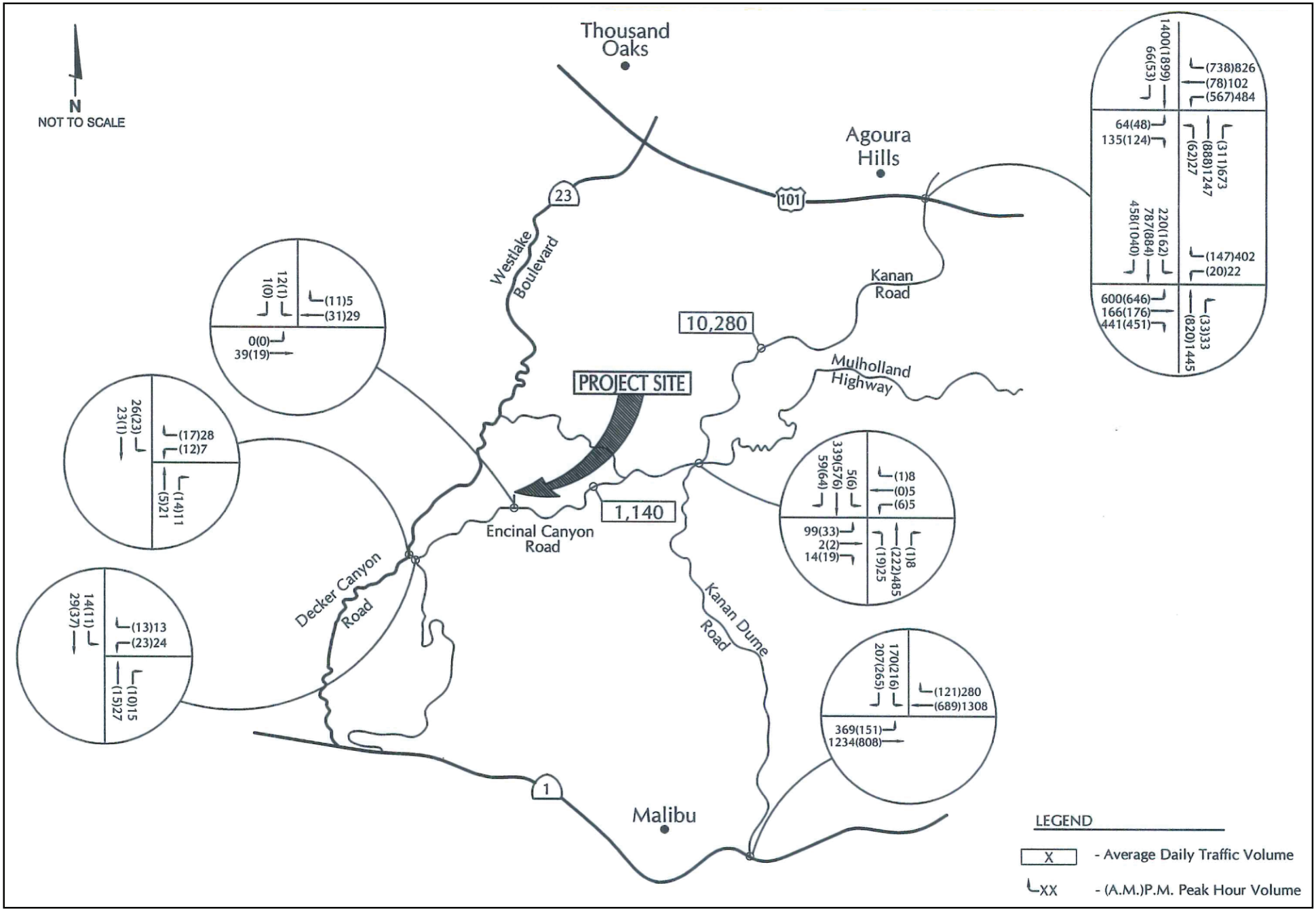
Threshold: Would the Project result in parking problems with a subsequent impact on traffic conditions?

During construction, ample parking area would be provided onsite for workers, material delivery vehicles, and equipment staging areas either within existing parking lots or in other disturbed areas onsite. As such, no construction related parking would occur along roadsides and would not impact traffic conditions. Once operational, the Project would provide a total of 387 parking spaces to be shared between Project uses, i.e., the Malibu Institute and the golf course. The total parking supply meets the County's Zoning Ordinance parking requirements for the individual uses for each land use proposed as shown in Table 3-2 (378 spaces), however, the centralized location of the parking lots does not satisfy the County's parking requirements for each proposed facility on a lot by lot basis (The County Zoning Ordinance parking requirements are included in Appendix I). The Application therefore requests a parking permit to authorize shared parking between the Malibu Institute and its associated facilities and the golf course to allow the 387 total spaces proposed to satisfy the overall parking requirements for the Project. The Project would provide ample walkways and cart paths to allow guests to access each of the proposed facilities by foot or electric carts, thereby eliminating the need for visitors to use private vehicles for circulation within the site, or to park adjacent to specific Project components. The Project's parking demands could be significantly less than the code requirements due to the provision of a shuttle system as described above in Section 5.13.4, reducing the use of personal transportation to the site, and thus parking demands. As this Project would provide onsite parking areas during construction, and operational parking spaces in excess of the total amount required for the overall site; with County authorization of shared parking for the overall Project site, the Project would not introduce parking along area roadways and thus, parking impacts on traffic conditions would be considered less than significant (**Class III**).

5.13.5 Cumulative Impacts

Cumulative Traffic Forecasts

Cumulative traffic volume forecasts were developed based on a list of approved and pending projects located within the surrounding areas of Los Angeles County as well as the cities of Malibu and Agoura Hills. The complete list of related projects is included in Appendix I. Trip generation estimates for the cumulative projects were developed based on rates contained in the ITE Trip Generation report, which were then added to the Existing volumes, and the resulting "Cumulative" Traffic Volumes are presented



Source: Associated Transportation Engineers, September 13, 2013

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Cumulative Traffic Volumes

FIGURE 5.13-6

on **Figure 5.13-6**, and, pursuant to the policy of the County Department of Public Works, are used as the cumulative traffic volumes for the cumulative traffic impact analysis.

Cumulative + Project Traffic Impacts

Cumulative + Project Roadway Operations

The Cumulative and Cumulative + Project roadway forecasts are compared in **Table 5.13-11** to identify potential impacts based on the County's roadway standards. **Figure 5.13-7** depicts the Cumulative + Project volumes, which consist of the Existing + Related Projects + Project traffic volumes. This analysis does not assume any intersection or roadway improvements would be provided as mitigation for the identified related projects. As shown in Table 5.13-11, the roadways in the study area are forecast to operate at LOS A with Cumulative + Project traffic volumes. Therefore, the Project would not contribute to significant cumulative roadway impacts based on County thresholds.

Table 5.13-11
Cumulative + Project Roadway Operations

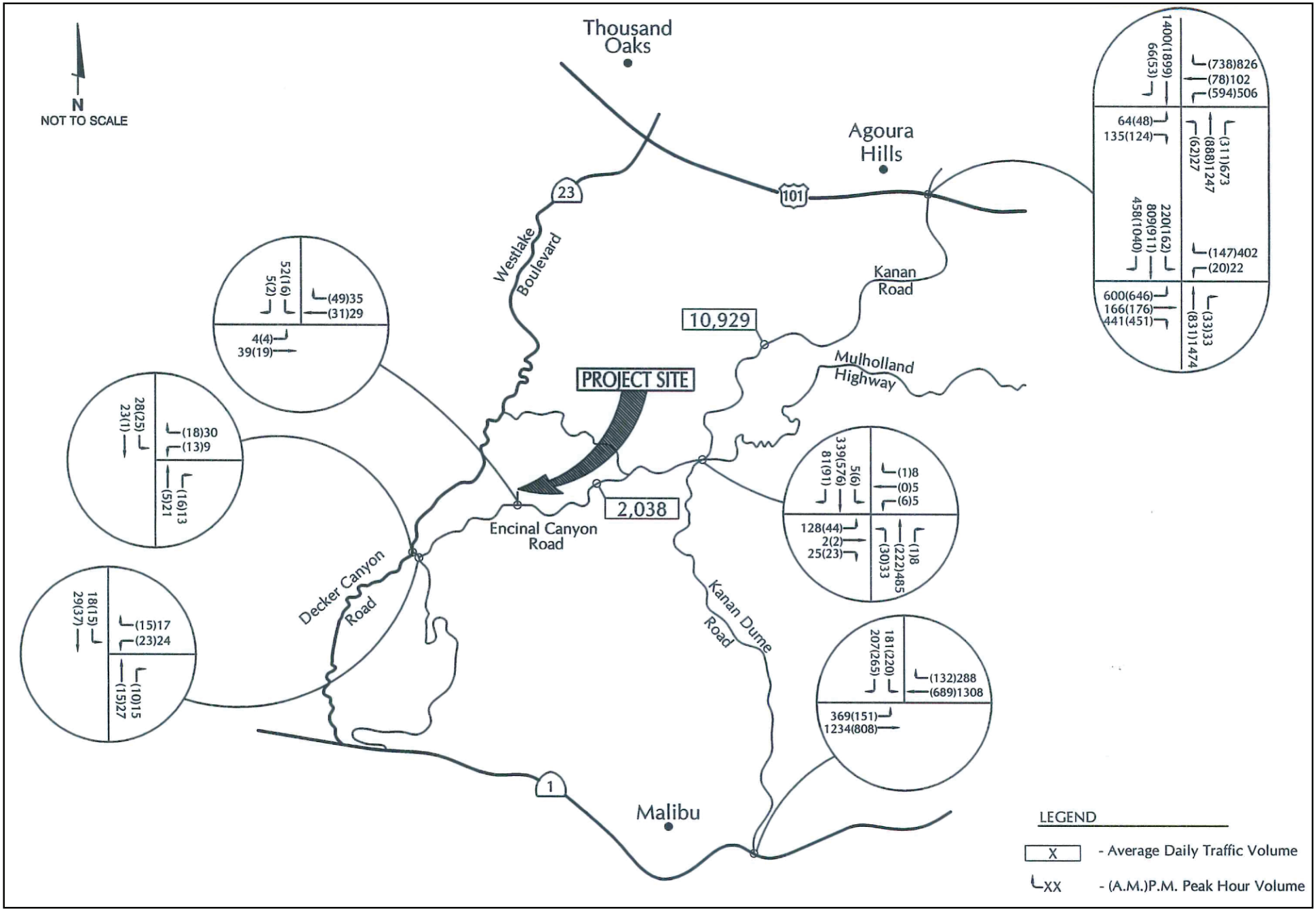
Roadway Segment	ADT				LOS	Project Impact?
	Acceptable Capacity [a]	Cumulative ADT	Project Added	Cumulative + Project		
Encinal Canyon Road @ Clubhouse Drive	18,000	1,140	+ 898	2,038	LOS A	No
Kanan Road n/o Mulholland Highway	18,000	10,280	+ 649	10,929	LOS A	No
[a] For LOS E operations						

Cumulative + Project Intersection Operations

To determine whether the Project would contribute to a cumulative impact to intersection operations, the LOS was calculated for intersections in the study area assuming the Cumulative and Cumulative + Project traffic volumes. **Tables 5.13-12 and 5.13-13** present the Cumulative + Project LOS for the intersections in the study area, which are also shown on Figure 5.13-7. Based on the County's thresholds, the Cumulative + Project would generate cumulative impacts at the U.S. 101 NB Ramps/Kanan Road intersection during the A.M. peak period, and the U.S. 101 SB Ramps/Kanan Road and PCH/Kanan Road intersection during the P.M. peak hour period. Although the Project's impacts are being evaluated based on the County's thresholds, the intersections with potentially significant cumulative impacts involve state highways subject to Caltrans requirements, and are located within the City of Malibu or the City of Agoura Hills, and would be subject to requirements of those municipalities.

As shown by the data in Tables 5.13-12 and 5.13-13, two of the three potentially significantly impacted intersections in the study area are forecast to operate at LOS C or better under the Cumulative + Project traffic volumes. Caltrans and the Cities of Agoura Hills and Malibu consider LOS C operations acceptable, therefore, the Project's impacts at the U.S. 101 NB Ramps/Kanan Road intersection during the A.M. peak period, and the PCH/Kanan Road intersection during the P.M. peak hour period would be less than significant, and mitigation measures at these locations would not be required.

The U.S. 101 SB Ramps/Kanan Road intersection is forecast to operate at LOS D under Cumulative (Existing + Related Projects) + Project traffic volumes, which is considered unacceptable based on



Source: Associated Transportation Engineers, March 2013

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Cumulative + Project Traffic Volumes

FIGURE 5.13-7

Caltrans and the City of Agoura Hills operating standards, and as such, the Project's cumulative impacts at this intersection would be potentially significant before mitigation (**Class II**). Implementation of mitigation measure MM 5.13-1, which would require the Project contribute its fair share to fund planned improvements at the U.S. 101 SB Ramps/Kanan Road intersection, would reduce the Project's contribution to this cumulative impact to less than significant.

Table 5.13-12
Cumulative + Project Levels of Service - A.M. Peak Hour

Intersection	V/C / LOS		Added V/C Cumulative + Project	Project Impact?	Project Added	
	Existing	Cumulative[a] + Project			Trips	V/C [a]
Decker Canyon Road (SR 23)/ Lechusa Road	0.142/LOS A	0.146/LOS A	0.004	No	6	0.004
Lechusa Road/Encinal Canyon Road	0.163/LOS A	0.166/LOS A	0.003	No	6	0.003
Encinal Canyon Road/Clubhouse Drive	0.119/LOS A	0.129/LOS A	0.010	No	59	0.010
Mulholland Highway/Kanan Road	0.460/LOS A	0.484/LOS A	0.024	No	53	0.014
U.S. 101 NB Ramps-Canwood Street/Kanan Road	0.689/LOS B	0.747/LOS C	**0.058**	**Yes[b]**	27	0.009
U.S. 101 SB Ramps-Roadside Drive/Kanan Road	0.481/LOS A	0.553/LOS A	0.072	No	38	0.002
Pacific Coast Highway (SR1)/Kanan Dume Road	0.437/LOS A	0.465/LOS A	0.028	No	15	0.001

[a] Cumulative includes Existing + Related Projects
[b] This intersection is located in the City of Agoura Hills, which considers LOS C to be acceptable.
Bolded items indicate a V/C increase that exceeds the County's significance threshold.

Table 5.13-13
Cumulative + Project Levels of Service - P.M. Peak Hour

Intersection	V/C / LOS		Added V/C Cumulative + Project	Project Impact?	Project Added	
	Existing	Cumulative[a] + Project			Trips	V/C [a]
Decker Canyon Road (SR 23)/ Lechusa Road	0.167/LOS A	0.171/LOS A	0.004	No	8	0.004
Lechusa Road/Encinal Canyon Road	0.170/LOS A	0.176/LOS A	0.006	No	8	0.006
Encinal Canyon Road/Clubhouse Drive	0.131/LOS A	0.158/LOS A	0.027	No	78	0.027
Mulholland Highway/Kanan Road	0.441/LOS A	0.480/LOS A	0.039	No	70	0.018
U.S. 101 NB Ramps-Canwood Street/Kanan Road	0.590/LOS A	0.686/LOS B	0.096	No	22	0.007
U.S. 101 SB Ramps-Roadside Drive/Kanan Road	0.615/LOS B	**0.805/LOS D**	**0.190**	**Yes**	51	0.006
Pacific Coast Highway (SR1)/Kanan Dume Road	0.677/LOS B	0.773/LOS C	**0.096**	**Yes[b]**	19	0.004

[a] Cumulative includes Existing + Related Projects
[b] This intersection is located in the City of Malibu, which considers LOS C to be acceptable.
Bolded items indicate a V/C increase that exceeds the County's significance threshold.

5.13.6 Mitigation Measures

Cumulative Impacts

MM5.13-1 The Project shall be required to contribute to the cost of implementing intersection improvements for the U.S. 101 SB ramps/Kanan Road intersection as identified in the Agoura Village Specific Plan EIR as a mitigation measure. The planned improvements would implement widening the northbound approach to provide a third through-lane and restriping the southbound approach to provide an additional left-turn lane. The westbound approach would also be widened to accommodate the dual southbound left-turns.

The Project would contribute a total of 51 peak hour trips to this intersection, which would represent four percent of the 1,123 peak hour trips added to this intersection by the related projects. Therefore, the Project's fair share contribution to these intersection improvements would be four percent of the estimated $169,000 cost, which would be $6,760.00.

5.13.7 Residual Impacts

Implementation of the planned improvements identified in the Agoura Village Specific Plan EIR for the U.S. 101 SB ramps/Kanan Road intersection would improve the cumulative P.M. peak hour operations under the Cumulative (Existing + Related Projects) + Project to LOS C. Therefore, by implementing mitigation measure MM5.13-1 to provide a fair share contribution to fund the cost of the planned improvements, the Project's cumulative impacts would be reduced to less than significant (**Class II**).

5.14 PUBLIC UTILITIES

This section addresses the Project's impacts on utilities, including water supply, wastewater treatment, solid waste disposal, and energy supply. This evaluation is based on the Project's estimated increase in demand for these utilities relative to current demand at the Project site for operation of the existing Malibu Golf Club, and the sufficiency of supplies and capacities of the systems and facilities that would provide service for the Project. As discussed in Section 3.0, Project Description, the Project would be seeking a LEED™ Platinum or equivalent certification for sustainability in design and operation, and as such, would incorporate features that would improve efficiency regarding water use and electricity demand, as well as reductions in solid waste disposal, above standard design requirements. Such features are discussed below in appropriate subsections. This section does not address drainage system impacts, as the site is not served by a public utility drainage system. The Project would provide for collection and treatment of runoff from the site, which would then be released to the mainstem of Trancas Canyon Creek as it leaves the site. Impacts related to the Project drainage are evaluated in Section 5.8, Hydrology.

5.14.1 Water Supply

The information contained within this section examines and describes potential water conveyance and supply impacts of the Project. Since potable water to the Project site is supplied by the Las Virgenes Municipal Water District (LVMWD), this section is primarily based on the LVMWD's 2010 Urban Water Management Plan (UWMP) along with other planning documents from LVMWD, including a Preliminary Water System Design Report for Malibu Institute Development (WSDR), dated March 29, 2013 (**Appendix I**). LVMWD also provided a letter dated November 6, 2012 (included with Appendix I) to the applicant giving assurance the Project would be allowed connection to the system (subject to terms and conditions) and that sufficient water supplies would be available to serve the Project.

5.14.1.1 Existing Conditions

Water Sources

The LVMWD provides potable water service to the Project site. LVMWD's service area is within western Los Angeles County, and includes the incorporated cities of Agoura Hills, Calabasas, Hidden Hills and Westlake Village as well as unincorporated portions of Los Angeles County. The total service area is approximately 122 square miles (74,640 acres). A large portion of the service area is undeveloped land, held in public ownership that will not require water service (35 to 40 percent of the total area is state and national parklands or other open space), while the remaining portion is primarily of mixed residential, commercial, industrial, and agricultural uses.

LVMWD's potable water is provided almost entirely through wholesale purchases from Metropolitan Water District of Southern California (MWD), which imports water from the State Water Project (SWP) and the Colorado River. Currently, the configuration of MWD's distribution system provides LVMWD solely with SWP water originating from northern California through the Sacramento-San Joaquin Bay-Delta. The SWP water is treated at Jensen Filtration Plant in Granada Hills prior to delivery to LVMWD. For potable water storage, and to balance seasonal fluctuations between supply and demand, LVMWD operates the 9,600 acre-foot (AF) capacity Las Virgenes Reservoir supplied with imported water from MWD. The reservoir's evaporation losses are typically offset by surface runoff. Other sources of water generated locally include recycled water from the Tapia Water Recycling Facility (TWRF) used for irrigation, and groundwater from the Russell Valley Basin used to supplement recycled water flows from TWRF.

LVMWD primarily provides water for residential use, while commercial, industrial, and institutional uses comprise approximately eight percent of total usage. In 2009, LVMWD maintained approximately

20,380 water meters and supplied 20,212 AF of water, which is equivalent to 18 million gallons per day (mgd). The 2010 UWMP reported that with a service population of approximately 68,000, this water use equates to an average consumption rate of 264 gallons per capita per day (gpcd)[1]. In 2010, LVMWD supplied 18,591 AF of water, or approximately 220 gpcd,[2] which was lower than the demand that was projected for 2010, primarily due to water conservation requirements imposed by MWD for 2010. For planning purposes, the 2010 UWMP relies on the projected demand for 2010 (based on the maximum 10-year average) of 25,958 acre feet per year (AFY) total, or 307 gpcd, as a baseline for the annual water demand for LVMWD service area.

Potable Water Source

The potable water supply for the Project site consists of surface water originating from the SWP that is treated and distributed by MWD, which acts as a regional water wholesaler.

MWD was formed in 1929 by an act of legislation by the State of California for the purpose of importing supplemental water for domestic and irrigation needs in the area. Since its formation, MWD has expanded to include twenty-seven member cities, agencies and water authorities in six counties on the coastal plain of Southern California. The six counties within the MWD service area include Ventura County, Los Angeles County, San Bernardino County, Riverside County, Orange County and San Diego County.

MWD supplies treated domestic and untreated irrigation water to over 18 million people in Southern California. MWD's water supply comes from the SWP via the California Aqueduct and from the Colorado River via the Colorado River Aqueduct. The configuration of the MWD distribution system currently provides LVMWD solely with SWP water originating from northern California through the Sacramento-San Joaquin Bay-Delta.

Per the 2010 MWD Urban Water Management Plan (UWMP)[3], MWD's entitlement to SWP water is based on a contract with the California Department of Water Resources (DWR) known as the *1960 Contract between the State of California and the Metropolitan Water District of Southern California for a Water Supply*. This contract, initially executed in 1960 and amended numerous times since, requires DWR to make reasonable efforts to secure water supplies for MWD and its other contractors. The contract expires in 2035. At that time, MWD has the option to renew the contract under the same basic conditions. The contract entitles MWD to use up to 48 percent of the quantity of SWP water delivered annually.[4]

According to DWR[5], the reliability of future SWP deliveries will be impacted by factors including climate change, which may alter hydrologic conditions in the State, and ongoing regulatory restrictions on pumping activities imposed to protect endangered and threatened fish species, such as the delta smelt. DWR, through its planning efforts, has provided a framework for adoption of strategies and integrated management to address these supply challenges at statewide, regional and local levels.

DWR has identified global climate change as one of the most significant challenges for management of future water resource availability throughout the state. Climate change has been attributed to measured effects on changing critical factors of California's water supply, including increased temperatures, rises in

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1 LVMWD 2010 *Urban Water Management Plan*, June 2011. Page 5-4.
2 Ibid. Page ES-4.
3 Metropolitan Water District of Southern California. *2010 Regional Urban Water Management Plan*, Nov. 2010, Pg. A.3-15.
4 Ibid. Pg. A.4-47
5 California Department of Water Resources. *State Water Project Final Delivery Reliability Report 2011*, June 2012. Pg. S-1.

sea level, altered patterns of runoff and precipitation, snow pack/melt, river flow, flooding and droughts, among others. For the SWP, climate change has the potential to simultaneously affect the availability of source water and the ability to convey water. Decreased snow pack and higher temperatures accelerating snow melt create a strain on existing systems' capacities to capture runoff in the spring, decreasing deliverables of water during the drier months of the summer season. Rising sea level causes increases in storm surge, flooding and salt-water intrusion into the State's freshwater resources, such as groundwater storage basins and the Sacramento-San Joaquin Delta ("Delta"), a key component of the SWP conveyance system.

Restrictions on pumping of the Delta as part of federal court imposed interim rules for the protection of the delta smelt intended to address the findings of the United States Fish and Wildlife Service 2005 Biological Opinion could also impact supply reliability. Based on delta smelt sampling triggers established in the Biological Opinion, use of the Delta for water conveyance is restricted in an effort to diminish any negative impacts on the delta smelt during its reproductive cycle. This restricted use of the Delta directly impacts water deliveries to the SWP.

Water reliability at the state level is categorized with respect to historical annual precipitation rates as Wet Year, Normal Year, Dry Year and Multiple Dry Year. Annual allocation of SWP water is controlled by DWR. These waters are made available to MWD based on precipitation levels within the watersheds that supply the SWP. MWD maintains reservoirs, which serve to mitigate the impact of a reduction in SWP water delivery. According to the 2010 MWD Urban Water Management Plan, MWD can maintain reliable supplies under Dry Year and Multiple Dry Year conditions through 2035. MWD continues to develop additional SWP groundwater storage and transfers as buffer supplies.

MWD's leadership in Integrated Resource Planning (IRP)[6] has led to the development of a more reliable mix of sources at all levels within the regional water industry. The goal of the 2010 update to the IRP is to stabilize MWD's traditional imported water supplies and establish water reserves for water reliability through the year 2035. The updated IRP takes additional steps by promoting water use efficiency to further ensure reliability. Through a collaborative approach with MWD's 26 member agencies, other utilities, local governments, and interested stakeholder groups, the IRP outlines a strategy to buffer the region from future changing circumstances through accelerated conservation and local supply development. The IRP also advances long-term planning for potential future contingency resources, such as stormwater capture and large-scale seawater desalination.

Recycled Water

The Tapia Water Reclamation Facility (TWRF) is operated jointly by the LVMWD and Triunfo Sanitation District (TSD) as the Las Virgenes –Triunfo Joint Powers Authority. The plant is located on Malibu Canyon Road and provides primary, secondary, and tertiary treatment for wastewater contributed by LVMWD and TSD from their respective service areas. The current design treatment capacity of TWRF is 16 million gallons per day (mgd) but it is undergoing planned modifications to improve nutrient removal capabilities, which will reduce its rated capacity to an average of 12 mgd. Currently, the plant produces about 9.5 mgd during the summer, without supplement from well water. While the Regional Water Quality Control Board (RWQCB) has permitted TWRF tertiary treated water to be used for spray landscape irrigation, agriculture, and industrial uses, LVMWD recycled water is almost exclusively used for landscape irrigation due to limited industrial and agriculture water use within LVMWD's service area. Recycled water supplies are not currently distributed to the Project site, however, the use of recycled water supplies reduces overall demand for potable water supplied by LVMWD.

[6] Metropolitan Water District of Southern California, Integrated Water Resources Plan 2010 Update. October 2010.

Projected Water Supply/Demand Comparison through 2035

LVMWD's UWMP provides an evaluation of the sufficiency of supplies by presenting a comparison of the projected water supplies available for delivery through 2035 with the projected water demands of the LVMWD service area. As potable water demands are supplied entirely through imported water from MWD, the UWMP projected the potable water supply available for LVMWD based on the MWD supply/demand ratio. By applying the same percentage of MWD's projected supplies as compared to projected demands, to the projected demands for the LVMWD, the potable water supplies available for LVMWD use were calculated for each year evaluated through 2035. **Table 5.14.1-1**, **Table 5.14.1-2**, and **Table 5.14.1-3** provide summaries of the expected supply and demand in normal years, single dry years, and multiple dry years, respectively.

Table 5.14.1-1
LVMWD Projected Water Supply and Demand (AFY)
Normal Years

	2015	2020	2025	2030	2035
Potable Water (MWDSC) supply [a]	41,675	43,406	46,941	45,363	43,783
Recycled Water Supply	4,878	6,185	7,493	8,800	9,062
Total Supply	46,553	49,591	54,434	54,163	52,845
Potable Water Demand	**23,951**	**22,034**	**22,787**	**23,504**	**24,190**
Recycled Water Demand	4,878	6,185	7,493	8,800	9,062
Total Demand [b]	28,829	28,219	30,280	32,304	33,252
Surplus/(Shortage)	**17,724**	**21,372**	**24,154**	**21,859**	**19,593**

[a] Based on LVMWD demand projections without conservation efforts, with MWD's percentage of supply to demand applied.
[b] With conservation efforts implemented pursuant to the Water Conservation Act of 2009.
Source: LVMWD Urban Water Management Plan, 2010.

Table 5.14.1-2
LVMWD Projected Water Supply and Demand (AFY)
Single-Dry Year

	2015	2020	2025	2030	2035
Total Supply	37,700	40,709	45,160	45,070	43,755
Total Demand	33,981	33,261	35,690	38,077	39,193
Surplus/(Shortage)	**3,719**	**7,448**	**9,470**	**6,993**	**4,562**

Source: LVMWD Urban Water Management Plan, 2010.

Table 5.14.1-3
LVMWD Projected Water Supply and Demand (AFY)
Multiple Dry Years

Multiple Dry Year No. 1					
	2015	**2020**	**2025**	**2030**	**2035**
Total Supply	34,132	35,979	38,479	39,498	39,384
Total Demand	33,981	33,261	35,690	38,077	39,193
Surplus/(Shortage)	152	2,718	2,788	1,421	190
Multiple Dry Year No. 2					
	2016	**2021**	**2026**	**2031**	**2036**
Total Supply	33,986	36,484	38,973	39,730	39,615
Total Demand	33,837	33,747	36,168	38,300	39,423
Surplus/(Shortage)	149	2,737	2,805	1,430	192
Multiple Dry Year No. 3					
	2017	**2022**	**2027**	**2032**	**2037**
Total Supply	33,839	36,988	39,468	39,961	39,846
Total Demand	33,693	34,233	36,645	38,523	39,653
Surplus/(Shortage)	146	2,755	2,823	1,438	193
Source: LVMWD Urban Water Management Plan, 2010.					

As shown in Tables 5.14.1-1, 5.14.1-2, and 5.14.1-3, LVMWD reports a sufficient supply of imported potable water available during normal years, single dry years, and multiple dry years to meet the service area's projected needs through 2035.

These summaries include two key conservative planning assumptions, which are:

1) The available supply projections from MWD do not include programs that are currently under development which are estimated to increase the imported water supplies by 17 to 39 percent, with emphasis on increasing supply during single and multiple dry years.
2) Demand projections for both potable water and recycled water during single and multiple dry years are assumed to increase by 18%, which is the maximum per-capita demand increase for the period 1990-2009.

Based on the reported positive supply surplus and the conservative planning assumptions incorporated into the methodology, the LVMWD 2010 UWMP has concluded sufficient supplies are available to meet both potable and recycled water demands through 2035 under average, single dry year, and multiple dry year conditions.

Distribution System

Potable Water System

LVMWD's potable water distribution system includes 25 storage tanks, 24 pump stations, and about 339 miles of pipelines. The existing Malibu Golf Club is serviced by LVMWD's highest lift zone, known as the Seminole System (2,153-foot gradient). The Seminole System includes two storage reservoirs, and is supplied from the Backbone System through the Seminole Pump Station, located on Mulholland Highway, west of Malibu Lake. The Seminole Pump Station has a capacity of 2,400 gpm with four 300 HP pumps (3 duty, 1 standby) to convey potable water to storage tanks located north of the Project site. The Seminole system provides potable water for use by the Malibu Golf Club through a pressure reducing station located within the Project site at the northwest corner of the existing golf course.

Recycled Water System

LVMWD's recycled water distribution system consists of 62 miles of pipelines, 3 storage tanks, 3 open reservoirs, and 4 pump stations. A planned extension of the recycled water distribution system to service the Malibu Golf Club was described in the LVMWD's 2007 Integrated Master Plan, however, this extension has not been constructed and has been determined to be economically infeasible at this time.[7] As such, the existing golf course and facilities are not provided recycled water from the LVMWD system.

Existing Water Use (Malibu Golf Club)

The Project site is supplied potable water for domestic and irrigation use by LVMWD. Based on a letter provided by LVMWD, potable water averaging 287.2 AFY is supplied to the Malibu Golf Club, which currently occupies the Project site. The golf course irrigation is supplemented by onsite water wells that provide roughly 15 percent of irrigation needs,[8] which would be approximately 43.08 AFY of additional water used under existing conditions.

5.14.1.2 Regulatory Setting

State

Senate Bill (SB) 610 and Senate Bill 221

SB 610 was enacted in 2001 to ensure communication between water providers and local planning agencies regarding land use decisions for large development projects in the determination of whether sufficient water supplies are available to serve the development project.

For large development projects (e.g., a residential development of more than 500 dwelling units; a shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (sq. ft.) of floor space; a commercial office building employing more than 1,000 persons or having more than 250,000 sq. ft. of floor space; hotels, motels or both, having more than 500 rooms; industrial, manufacturing, or processing plants, or industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 sq. ft. of floor area; mixed-use projects that include one or more of the projects specified in this subdivision; or a development project that would demand an amount of water equivalent to or greater than the amount of water required by a 500 dwelling unit project), the SB 610 process requires the CEQA lead agency to request that the water supplier prepare a Water Supply Assessment (WSA). The water supplier must assemble specified information relating to available water supplies and provide this information to the CEQA lead agency. The lead agency must include the WSA in the CEQA document and make a determination based on the WSA and other information, whether adequate water supplies exist to serve the proposed development project.

Senate Bill 221 also addresses water supply in the land use planning process and focuses on new residential subdivisions in non-urban areas. SB 221 requires submission of a written verification from the water service provider indicating sufficient water supply is available to serve a proposed subdivision, or the local agency must make a specified finding that sufficient water supplies are or will be available prior to completion of a project. SB221 specifically applies to residential subdivisions of 500 units or more. In addition, Government Code section 66473.7(i) exempts "any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediate

[7] LVMWD, Preliminary Water System Design Report for Malibu Institute Development, December 14, 2012
[8] Tom Hix, Personal communication with Envicom, December 10, 2012.

contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses, or housing projects that are exclusively for very low and low-income households."

SB 7 The Water Conservation Act of 2009

In November 2009, Governor Arnold Schwarzenegger signed SB 7, the Water Conservation Act of 2009, to address the State's growing water challenges. SB 7 enacts legislation to reduce urban per capita water use by 20 percent by the year 2020 (referred to as "20x2020") to help ensure reliable water supplies for future generations while restoring the Sacramento-San Joaquin Delta. The bill requires urban retail water suppliers to develop water use targets to achieve the 20 percent reduction goal by 2020 and an interim urban water use target to reduce water use by 10 percent on or before December 31, 2015.

California Urban Water Management Planning Act

The California Urban Water Management Planning Act, California Water Code Sections 10610–10656, addresses several state policies regarding water conservation and the development of water management plans to ensure the efficient use of available supplies. The Act also requires water suppliers to develop water management plans every five years to identify short-term and long-term demand management measures to meet growing water demands during normal, dry, and multiple-dry years. Specifically, municipal water suppliers that serve more than 3,000 customers or provide more than 3,000 AF per year of water must adopt an UWMP.

CALGreen 2010 California Green Building Standards Code

California Code of Regulations, Title 24, Part 11, the *California Green Building Standards Code,* also known as the CALGreen Code, provides regulations to improve public health, safety, and general welfare by enhancing the design and construction of buildings to reduce negative impacts. These regulations, which became effective January 1, 2011, include requirements for mandatory water conservation measures for indoor water use. New developments must use plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by at least 20 percent. These requirements apply to both residential and non-residential construction.

The CALGreen Code also applies to outdoor water use conservation by requiring residential builders to install irrigation systems that automatically adjust water use in response to soil moisture or by rain sensors. Additional requirements for non-residential developments include developing a water budget for landscaping that conforms to the California Department of Water Resources Model Water Efficient Landscape Ordinance (MLO), separate water meter installation for indoor and outdoor water use for developments with landscaped areas between 1,000 sq. ft. and 5,000 sq. ft, (the level at which Water Code Section 535 applies), and irrigation controllers installed for 1,000 and 2,500 sq. ft. of landscaped area (the level at which the MLO applies), that automatically adjust irrigation in response to soil moisture or rainfall.

California Water Code Section 535

Water purveyors that serve 15 or more service connections are required, as a condition of new retail water service (where water service has not been previously provided) on and after January 1, 2008, to install separate water meters to measure the volume of water used exclusively for landscape purposes. This requirement applies to service connections that serve property with more than 5,000 sq. ft. of irrigated landscape.

Regional and Local

Urban Water Management Plan (LVMWD)

Ordinance 01-09-254 - Water Conservation Measures

(a) Customers shall comply with the following water conservation measures:
   (1) Potable water shall not be used to clean or sweep hard surfaces such as sidewalks, walkways, driveways, or parking areas unless the washing is performed with an approved water conservation broom, and only as necessary to protect the public health and safety.
   (2) Restaurants shall serve water only on request of the customers.
   (3) Hotels, motels and other places for commercial transient occupancy shall offer guests who stay more than one night the opportunity to retain towels and linens during their stay.
   (4) Car washing is permitted only with the use of a nozzle having an automatic shut-off.

(b) Customers shall use the following irrigation practices:
   (1) Irrigation shall occur after 5:00 p.m. and before 10:00 a.m., provided no irrigation is permitted during rainfall, provided further, irrigation is not permitted for 24 hours after rainfall in excess of 1 inch.
   (2) Irrigation shall not run off to streets, gutters or adjacent properties.
   (3) The District shall assist in the promotion of water efficient irrigation practices by monitoring compliance with landscaping plans approved by cities and the county under the Water Conservation in Landscaping Act. The District shall notify the city or county with jurisdiction by law if it is determined that a landscaping plan has been breached.

Ordinance 05-10-262 - Water Shortage Response – Water Budgets

(a) A water budget shall be assigned to each potable water customer based on the customer's classification. Water budget shall reflect water supply allocation levels to the District by Metropolitan. The General Manager shall provide each customer with thirty days' notice of the customer's water budget.
(b) Customers who consume no more water than their budget will pay normal rates and charges. Customers who consume more than their water budget will be assessed a surcharge for usage above the budget. Proceeds collected as a result of a surcharge will be used to pay penalties assessed by Metropolitan, and at the discretion of the Board of Directors, may be refunded to customers, and/or stabilize rates, and/or support water conservation programs.
(c) District staff shall process water budget adjustments and appeals pursuant to an appeals process approved by the board of directors.
(d) The water allocation levels for each classification and surcharge rates shall be established by the board from time to time by resolution.

Resolution 05-10-2401 – Water Budget Allocations

This resolution permits customers using less than their allocated amount to obtain an allocation credit for future usage. This resolution also permits refunds.

Los Angeles County General Plan

The Water and Waste Management Element of the General Plan includes the following policy regarding water conservation:

Policy No. 25: Encourage development and application of water conservation, including recovery and reuse of storm and wastewater.

Malibu Local Coastal Plan

Malibu LCP policies that would be applicable to the Project include the following:

P233: Continue to require all new developments to demonstrate that an adequate potable water supply is available to each parcel.

P234: Continue to require all new developments to demonstrate that an adequate water supply for fire protection is available based on the location of development, type of construction, spacing of structures, fire hazards, and so on.

P235: An on-site water source shall be of potable quality and be able to provide a quantity of water sufficient to meet domestic supply requirements as determined by the governmental agency having jurisdiction.

P236: All new developments shall be encouraged, where feasible, to best utilize the existing water facilities.

Los Angeles County Code - Part 20 Green Building (Section 22.52.2100)

The purpose of Part 20 is to establish green building development standards for new projects, addressing several issues including water conservation. The County's Green Building Standards as stated in this ordinance include requirements for indoor and outdoor water conservation, by setting standards for plumbing fixtures and irrigation controls to be used on projects as applicable.

Los Angeles County Code - Part 21 Drought-Tolerant Landscaping (22.52.2200)

The purpose of Part 21 is to establish minimum standards for the design and installation of landscaping using drought-tolerant plants and native plants that require minimal use of water. These requirements will help conserve water resources by requiring landscaping that is appropriate to the region's climate and to the nature of a project's use.

5.14.1.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the County of Los Angeles Environmental Checklist (Initial Study), the Project would result in a significant impact if it would:

- Create water system capacity problems, or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Not have sufficient reliable water supplies available to serve the project from existing entitlements and resources, considering existing and projected water demands from other land uses.

5.14.1.4 Project Impacts

The Project would develop facilities that would require potable water for operations, including overnight guest accommodations, however, the Project does not propose a level of development that would trigger the need for a SB 610 WSA to be prepared for a determination of adequate water supply availability. To quantify the Project's impact regarding water supply, the water demand for the proposed facilities were added to the irrigation demands of the remodeled golf course to estimate the total Project water demand. The projected future water demand was then compared to the current water use of the Malibu Golf Club to determine the net change in water demand with implementation of the Project. Additionally, the

Project's impacts to the water distribution system were evaluated based on the projected maximum peak demands, and the capability of the existing potable water delivery system to supply a sufficient flow rate while maintaining adequate pressure elsewhere within the system. Peak water flow demands for domestic use, fire flow, and irrigation are described separately in the following subsections.

Threshold: Would the Project create water system capacity problems, or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Threshold: Would the Project have sufficient reliable water supplies available to serve the project from existing entitlements and resources, considering existing and projected water demands from other land uses?

Project Water Demand Rates and Supply Impacts

Domestic Use Water Demand

Estimates for the potable water demand are based on the average daily demand criteria provided by LVMWD.[9] Projected demands for irrigation provided by the developer are considered in the irrigation subsection below. The average potable water demand for Mountain Land uses within the County of Los Angeles serviced by LVMWD includes an average of 550 gallons per day per person (gpd/person) and 2.95 persons per residence. As discussed in the Preliminary Water System Design Report Malibu Institute Development provided by LVMWD,[10] the average daily demand for land designated "Mountain Land M-2" is considered to be highly conservative for the Project's proposed land uses. The LVMWD Water System Design Report determined that a water demand rate of 250 gpd per person, based on residential water use, would be more appropriate for the proposed facilities. This demand rate was used to calculate the projected average daily water use for the Project's proposed lodging and community buildings. As the Project is proposing to develop 40 bungalows with a total of 160 bedrooms to serve as overnight accommodations, the water demand rate was applied to 320 persons, assuming a maximum occupancy of two persons per bedroom, to calculate overall demand, not accounting for the golf course. As such, the Project's estimated potable water demand for domestic use would be 80,000 gpd, or 89.6 AFY.

Irrigation Use Water Demand

As described in Section 3.0, Project Description, the remodeled golf course would incorporate features to reduce irrigation demands for maintenance of playing surfaces and landscaping. The LVMWD Water System Design Report indicates that due to water saving features proposed for the remodeled golf course, the Project would require a total of 192.49 AFY for irrigation.[11] As stated above, onsite water wells supply approximately 15 percent of the current water demands for the existing Malibu Golf Club,[12] or approximately 43.08 AFY. The onsite wells would be expected to continue to contribute a similar amount of water for irrigation purposes for the Project. Additionally, under the preferred option for wastewater treatment, a proposed onsite water recycling system (OWTS), described in Section 5.14.2,

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[9] Las Virgenes Municipal Water District, Potable Water System Master Plan Update 2007 (LVMWD Report No. 2389.00), prepared by Boyle Engineering Corporation, October 2007.

[10] Las Virgenes Municipal Water District, Preliminary Water System Design Report for Malibu Institute Development (Vesting Tentative Tract Map No. 71735), September 13, 2012.

[11] Las Virgenes Municipal Water District, Preliminary Water System Design Report for Malibu Institute Development (Vesting Tentative Tract Map No. 71735), September 13, 2012. Appendix C

[12] Ron Davis, personal communication with Envicom, Dec. 10, 2012.

would generate recycled water for irrigation use. The recycled water system would produce approximately 40,000 gpd on average (44.81 AFY), with 100 percent of those supplies allocated to irrigation of the golf course, further reducing the Project's demand for LVMWD potable water supplies. Supplementing LVMWD potable water used for irrigation with onsite well water and recycled water supplies would potentially reduce the Project's irrigation demand for LVMWD potable water to 104.6 AFY. In the event that the OWTS generated recycled water is not available for golf course irrigation, the Project's irrigation demand for LVMWD potable water would be 149.41 AFY.

Total Potable Water Demand (LVMWD Supplies)

The combined annual water demand for the Project, including domestic use for the educational retreat and irrigation use for the remodeled golf course, would be 282.1 AFY as shown in **Table 5.14.1-4** before introducing demand reductions due to onsite well water and recycled water supplies. This would be a net reduction of 48.2 AFY (17 percent) in potable water demand compared to the existing development on the site. Irrigation water supplied by onsite wells and recycled water supplies generated by the proposed onsite wastewater treatment system under the preferred option for wastewater treatment would result in an overall Project demand for LVMWD potable water supplies of 194.21 AFY, which would be a reduction of approximately 32 percent compared to existing conditions. In the event that the OWTS generated recycled water is not available for golf course irrigation, the Project's irrigation demand for LVMWD potable water would be reduced to 239.0 AFY, which would be a reduction of approximately 17 percent compared to existing conditions.

Table 5.14.1-4
Project Potable Water Demands

Water Use	Demand Criteria	Annual Water Demand	
Demands		**Gallons**	**AFY**
Domestic Water Use	2,000 gpd per unit [a]	80,000	89.61
Golf Course Irrigation		62,723,141	192.49[b]
Total Demand		**62,803,141**	**282.1**

Based on the LVMWD Preliminary Water System Design Report (WSDR) for Malibu Institute Development (Vesting Tentative Tract Map No. 71735)
[a] 40 bungalow units with 8 persons per unit @ 250 gpd per person.
[b] Appendix C of the WSDR (page WP-1)

In addition to determining overall demand would be reduced by the Project compared to existing conditions, the Project's potential impact to water supply was evaluated in terms of the projected water supply available to LVMWD. To provide an analysis regarding projected supplies, the water demand of the existing development and landscaping was eliminated from the projected LVMWD supplies. As seen in Tables 5.14.1-1 through 5.14.1-3, LVMWD projects that the system will have surplus water supplies throughout the UWMP planning period for normal years as well as in single dry years and multiple dry years with the existing development in place. By proposing the Project with a reduced demand for potable water supplies from LVMWD compared to existing conditions, the projected water supplies would be sufficient to provide for Project operations.

The Project would reduce the demand for potable water provided by LVMWD at the Project site relative to current water usage regardless of the Project's plans to supplement its irrigation demands with onsite supplies of well water or recycled water. As the Project would result in an net reduction in demand for potable water to be supplied by LVMWD, primarily due to the incorporation of water saving features into

the remodeled golf course, and the reduced area of turf coverage, the Project would not result in the need for additional LVMWD facilities or expansion or additional entitlements to provide adequate potable water supplies for the Project. The provision of recycled water supplies from the onsite wastewater treatment system under the preferred option for wastewater treatment would further reduce the demand for potable water. Therefore, under both potential wastewater treatment options, the Project's potential impacts related to water supply availability would be less than significant (**Class III**).

Water Distribution System Peak Demand Impacts

Domestic Water Supply Peak Flow Demands

To determine the water system's capability to provide adequate supplies at a period of intense water demand for domestic use, a Maximum Day Demand (MDD) and a Peak Hour Demand (PHD) were determined for the Project based on peaking factors provided LVMWD.[13] The peaking factors relate the Average Day Demand (ADD) to the MDD, and also relate the calculated MDD to the PHD anticipated to be required by the proposed facilities. The system's peaking factors for MDD and PHD are 2.1 and 2.5 respectively, as shown in **Table 5.14.1-5**.

Table 5.14.1-5
Project Water Peak Flow Demands

Water Use	Number of Units	Demand Criteria	Estimated Water Demand (gpm)		
			ADD	MDD[a]	PHD[b]
Potable Water Use	40	2,000 GPD per unit[c]	55.6	116.8	292.0
Fire Flow Demand		LACFD Consultation	2,000		
Golf Course Irrigation			1,071 [d]		

Based on peaking factors for the overall LVMWD system
a Domestic MDD Peaking Factor of 2.1
b Domestic PHD Peaking Factor of 2.5
c Based on assuming 8 people per unit @ 250 gpd per person.
d Based on billing records from 2009 to 2012 showing a maximum day of 386,000 gpd, replenished during a six (6) hour window during low demands at night.

Future Fire Flow Requirements

Future fire flow requirements will ultimately be decided by the Los Angeles County Fire Marshal. Items to be considered in determining the fire flow requirement include land use, density, exposure (i.e. proximity to lot boundaries), ground floor area, the number of stories, construction material type and other factors at the discretion of the Fire Marshal. The applicant has conducted preliminary investigations with the Los Angeles County Fire Department (LACFD) and coordinated with the Project architect to estimate the fire flow demands. Based on that coordination effort, the LACFD has indicated that the Project's required fire flow would be 2,000 gpm at 20 psi for two hours.[14]

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[13] Las Virgenes Municipal Water District, Potable Water System Master Plan Update 2007 (LVMWD Report No. 2389.00), prepared by Boyle Engineering Corporation, October 2007, Table 5-10.

[14] Juan Padilla, County of Los Angeles Fire Department, Fire Prevention Division Land Development Unit, email correspondence with RCE Consultants, February 11, 2013 (included with the Water System Design Report provided as Appendix I).

Irrigation Demand

Recycled water is not provided to the Project site by LVMWD, and a planned extension of recycled water infrastructure to the site has been deemed infeasible for LVMWD at this time. The Project proposes to provide an onsite wastewater treatment system under the preferred option for wastewater treatment that would provide irrigation water for the remodeled golf course; however, the quantity would depend on generation of supplies within the Project itself. This Project also proposes water saving features for the remodeled golf course, such as the use of more efficient irrigation controls and water efficient turf and landscaping, which would reduce the quantity of irrigation water demand by approximately 32 percent. For a conservative analysis of peak flow demands, however, this study presumes that potable water will continue to be used for irrigation of the golf course at a similar rate as under existing conditions. Based on billing records provided by LVMWD, the maximum day demand for the Malibu Country Club from 2009 through 2012 was 386,000 gpd. This previous maximum day demand was used to evaluate irrigation demand and potential impacts of the Project on the existing potable water distribution system.

Future Recycled Water Demand

The Project would include an onsite wastewater treatment system that would generate recycled water to be used as irrigation for the golf course under the preferred option for wastewater treatment. As this Project would not use public supplies of recycled water, and the Project's use of recycled water would be limited by the generation of supplies onsite, the Project would have no impact on public supplies of recycled water provided by LVMWD or any other utility.

Maximum Water Demand Flow Rate

The Project would be supplied with potable water by LVMWD from the existing Seminole System, a portion of which runs through the Project site on the northwest side of the property. The Seminole System is supplied from the Seminole Pump Station, which is located on Mulholland Highway, west of Malibu Lake, and has a capacity of 2,400 gpm with four 300 HP pumps (3 duty, 1 standby). There are two reservoirs in the Seminole System that have a combined capacity of 2 million gallons, located northeast of the Project site on the north side of Mulholland Highway.

The existing water supply system that provides potable water to the Project site utilizes an 8-inch meter with an 8-inch pressure reducing valve (PRV) located in the northwest corner of the Malibu Golf Club. The existing 8-inch meter serving the property is capable of providing a maximum flow of 1,000 gpm, based on information provided by LVMWD. In order to provide a required fire flow of 2,000 gpm, a detector check valve and PRV would need to be installed parallel to the existing meter and PRV in accordance with LVMWD standards.[15] As such, under mitigation measure MM5.14.1-1, a detector check valve with its own PRV would be installed consistent with LVMWD standards parallel to the existing meter and PRV.

For an impact analysis of the Project, the system was modeled during a Maximum Day Demand (MDD) with a simultaneous fire flow demand of 2,000 gpm at the Project site. This scenario represents a worst-case scenario assuming the LACFD preliminary estimate of fire flows the Project would be required to provide would not exceed 2,000 gpm. This system modeling was conducted using the hydraulic model from the LVMWD 2007 Master Plan Update. The water system modeling found that the existing system is capable of delivering a fire flow demand of 2,000 gpm while maintaining an adequate pressure of 20 psi in the rest of the system as required by the California Department of Public Health. Mitigation

[15] For details of an appropriate detector check installation specifications, see LVMWD STP. PLAN PW-109

measure MM5.14.1-1, which would upgrade the system's pressure reducing valve, would reduce impacts to the water distribution system under peak demand scenarios to less than significant (**Class II**).

A portion of the existing water supply system that serves the Malibu Golf Club includes a 10-inch diameter pipeline within the Project site that is buried at more than 10-feet below grade. During grading activities for the remodeled golf course, the Project would replace the deep portion of pipeline with a new pipeline segment installed at 36 to 60 inches below ground surface, which is a normal depth for a pipeline of this size. This action would be undertaken under the direction of LVMWD to improve the accessibility of the pipeline for maintenance purposes. This action would not affect potable water supplies or the system's ability to provide for the current demand or future demand. The replacement would only require minor trenching to place a new pipe at the shallower depth beneath the fairway area. Therefore, construction impacts associated with replacement of this segment of existing water delivery infrastructure would be less than significant (**Class III**).

5.14.1.5 Cumulative Impacts

Land to the south of the Project has been classified as open space/park land and is not anticipated to be developed. Land immediately to the west and east of the Project has been classified as Mountain Lands or Public Use and is served by the existing Seminole System. There are two related projects listed in Section 4.0, Environmental Setting, which are located within the LVMWD service area that could be served by the Seminole system. These two projects are the Camp Vernon Kilpatrick Replacement Project, which would reduce the number of detainees at a juvenile detention facility and incorporate water conservation features,[16] and the subdivision of a parcel for two single-family home lots. Similar to the Project, the Camp Vernon Kilpatrick Replacement Project would result in a decrease in water demand compared to existing conditions. The subdivision of a parcel into two lots could result in two single-family homes being constructed in the vicinity that may be served by the LVMWD Seminole system. The projected water use for two residences would be approximately 1,623 gpd (1.68 af/yr).[17] Based on the cumulative projects list presented in Section 4.0, there are five additional related projects located in the City of Agoura that would be served by LVMWD (cumulative projects in the City of Malibu would not be served by the LVMWD system). These five cumulative projects would consist of a total of 237 multi-family residential units, and 382,824 sq. ft. of commercial space (office and retail). As determined in the evaluation in subsection 5.14.1.5, Project Impacts, the Project would result in a net reduction in demand for potable water provided by LVMWD, and would not introduce demands for LVMWD recycled water supplies. As such, the Project's water use would not result in a cumulatively considerable contribution to water supply demand within the service area. Therefore, the cumulative impacts to water supply would be less than significant (**Class III**).

With implementation of mitigation measure MM5.14.1-1, the Project would result in an improvement in the water distribution system to provide sufficient peak flows under maximum demand conditions. As such, the Project's contribution to cumulative impacts regarding the water supply distribution system would be reduced to less than significant. (**Class II**).

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[16] County of Los Angeles, Draft Initial Study/Mitigated Negative Declaration Camp Vernon Kilpatrick Replacement Project, September 2012.

[17] Derived from LVMWD, Potable Water System Master Plan Update 2007. (2.95 residents per unit (two units) x 550 gpd per resident = 1,622.5 gpd)

5.14.1.6 Mitigation Measures

As estimated, the Project would not adversely impact the potable water pressure for surrounding land uses in the event that a maximum fire flow of 2,000 gpm is needed on the same day that the Project requires a maximum daily demand. With the identified mitigation measure to upgrade the system's pressure reducing valve, impacts related to water supply would be reduced to less than significant.

MM5.14.1-1 The applicant shall install a detector check valve with its own pressure reducing valve parallel to the existing water meter and Pressure Reducing Valve (PRV) on the Project site approved by the Department of Public Works in accordance with LVMWD standards in order to provide a fire flow on the Project site as required by the County of Los Angeles Fire Department.

This development may require fire flows up to 3,000 gallons per minute at 20 pounds per square inch residual pressure for up to a three hour duration. A reduction in the required fire flow for this development can be determined based on the total square footage of the largest building, the type of constructions used, and if the building is equipped with an approved fire sprinkler system. The required fire flow cannot be reduced below 2,000 gallons per minutes at 20 pounds per square inch residual pressure for up to a two hour duration. All required public and private fire hydrants shall comply with the required fire flow. All required fire protection systems (fire hydrants, fire department connection, standpipes, fire sprinklers, etc) shall be reviewed and approved prior to building permit issuance.

5.14.1.7 Residual Impacts

The Project would result in a potable water requirement for an onsite fire flow of 2,000 gpm, which would exceed the capacity of the current pressure reducing valve that serves the site. However, with the identified valve upgrade discussed in MM5.14.1-1, the Project's impact regarding potable water supplies would be reduced to less than significant. Therefore, the Project would not result in any significant unavoidable adverse impacts.

5.14.2 Wastewater Treatment

The purpose of this section is to examine and describe the Project's potential wastewater conveyance and disposal impacts on wastewater facilities. This section is based on information provided by EPD Consultants, Inc. of San Pedro, CA (Appendix J), including calculations of wastewater generation estimates for each of the proposed facilities.

5.14.2.1 Existing Conditions

Regional Setting and Wastewater Treatment Districts

The LVMWD provides wastewater treatment within much of the western portion of unincorporated Los Angeles County near the Project site, however, it does not serve the Project site, with the site's current development as the Malibu Golf Club providing onsite wastewater treatment by septic tanks. As the Project would continue to provide for wastewater treatment onsite, this analysis does not evaluate the LVMWD wastewater treatment system. The methodology used in this analysis will rely on anticipated wastewater flows as determined by EPD Consultants, Inc. and the proposed onsite treatment system's capacity to accommodate the Project's wastewater flows.

Existing Physical Wastewater System

The existing Malibu Golf Club uses an onsite wastewater system (OWS) that consists of buried septic tanks located near the facilities that each septic tank serves, as well as associated distribution and absorption field areas. As the existing OWS serves a commercial facility, it is required to be maintained in compliance with the approvals of the California Regional Water Quality Control Board (RWQCB). With the exception of the septic tank and leach field serving the existing caretaker's residence near Mulholland Highway on the Project site, the Project would abandon the existing OWS in its entirety, and replace it with an Onsite Wastewater Treatment System (OWTS) that would include a water recycling system capable of treating wastewater to a level approved for irrigation use on the remodeled golf course.

5.14.2.2 Regulatory Setting

State

2010 California Plumbing Code and 2010 California Building Code

These Codes apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures in the State of California.

Title 22

The California Water Code requires the Department of Health Services (DHS) to establish water reclamation criteria. In 1975, the DHS prepared Title 22 to fulfill this requirement. Title 22 defines four categories of recycled water:

- Undisinfected Secondary Recycled Water: Primary effluent that has been biologically oxidized;
- Disinfected Secondary-23 Recycled Water: Primary effluent that has been biologically oxidized and disinfected so that the 7-day median coliform bacteria level does not exceed 23 per 100 mL, with no more than one sample exceeding 240 per 100 mL in any 30-day period;

- Disinfected Secondary 2.2 Recycled Water: Primary effluent that has been biologically oxidized and disinfected so that the 7-day median coliform bacteria level does not exceed 2.2 per 100 mL, with no more than one sample exceeding 23 per 100 m: in any 30-day period; and
- Disinfected Tertiary Recycled Water: Adequately, oxidized, coagulated, clarified, filtered disinfected effluent so that the 7-day coliform bacteria level does not exceed 2.2 per 100 mL, with no more than one sample exceeding 23 per 100 mL in any 30-day period, and no sample exceeding 240 per 100 mL.

In addition to defining reclaimed water uses, Title 22 also defines requirements for sampling and analysis of effluent and requires specific design requirements for facilities.

Local

Los Angeles County Code – Title 12, Chapter 12.80 Stormwater and Runoff Pollution Control

The purpose of Chapter 12 is to protect the health and safety of the residents of the County by protecting the beneficial uses, marine habitats, and ecosystems of receiving waters within the County from pollutants carried by stormwater and non-stormwater discharges. The intent of this Chapter is to enhance and protect water quality of the receiving waters of the County and the United States, consistent with the Clean Water Act.

Los Angeles County Code – Title 20, Chapter 20 Sanitary Sewers, Section 20.32.070

Section 20.32.070 requires any water pollution control plant to have plans checked and approved by the County engineer before granting a permit for construction.

Los Angeles County Code – Title 28, Chapter 1 Administration

Chapter 1 of Title 28 incorporates the 2010 California Plumbing Code by reference and lists provisions regarding the minimum standards required to preserve the public health, safety and welfare by regulating the design, construction, quality of material, and installation of plumbing. The provisions of this Code apply to the construction, alteration, moving, removal, repair and use of any plumbing or drainage work, and the qualification and registration of certain persons performing such work on any premises within the unincorporated territory of the County of Los Angeles. These include requirements for accommodating new service needs.

Los Angeles County General Plan

The Water and Waste Management Element of the General Plan includes the following policies regarding wastewater treatment which may be applicable to the Project:

Policy No. 4: Encourage compatible, multiple use of water and waste management facilities, including public recreational utilization where consistent with their original purpose and the maintenance of water quality.

Policy No. 21: Design and construct new water and waste management facilities to maintain or protect existing riparian habitats.

Malibu Local Coastal Program

Malibu LCP policies that would be applicable to the Project include the following:

P217: Wastewater management operations within Malibu Coastal Zone shall not degrade streams or adjacent coastal waters or cause or aggravate public health problems.

P218: The construction of individual septic tank systems shall be permitted only in full compliance with building and plumbing codes. Building and plumbing codes shall be revised to permit innovative and alternative methods of wastewater treatment and disposal, provided that installation, operation, and maintenance are acceptable to the Departments of Health Services and County Engineer-Facilities and to the Regional Water Quality Control Board. Such code revisions shall constitute an LCP amendment.

P223: The construction of new small package wastewater treatment plants shall be prohibited, except in those areas where this is the desired long-term wastewater management solution selected by the County Engineer-Facilities.

P225: The Departments of Health Services and County Engineer-Facilities shall continue to strictly enforce all Health, Building, and Plumbing Code requirements concerning private wastewater disposal systems. This shall apply to beachfront lots, as well as to other areas. Such requirements shall be considered to be part of the LCP.

P226: The County shall not issue a coastal permit for a development unless it can be determined that sewage disposal adequate to function without creating hazards to public health or coastal resources will be available for the life of the project beginning when occupancy commences.

P238: Encourage the development of standards and policies that will maximize the beneficial uses of reclaimed water and reduce the need for exploiting domestic water supplies.

P239: Upon appropriate revisions of state and county standards, development shall be required to plan for and, if available, utilize reclaimed water.

5.14.2.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the County of Los Angeles Environmental Checklist Form (Initial Study), the Project would result in a significant impact if it would:

- Exceed wastewater treatment requirements of the Los Angeles or Lahontan Regional Water Quality Control Boards; or
- Create wastewater system capacity problems, or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

5.14.2.4 Project Impacts

The Project proposes to construct an Onsite Wastewater Treatment System (OWTS) that would include a water recycling system. With the exception of the septic tank and leach field serving the existing caretaker's residence near Mulholland Highway on the Project site, the Project would abandon the existing Onsite Wastewater System (OWS) in its entirety. The proposed wastewater system would consist of a sewer network gravity draining to a proposed onsite OWTS and water recycling system to be installed underground near the proposed information/security building. The OWTS would use a combination of aeration, ultrafiltration, and disinfection that treats the effluent to a standard suitable for

unrestricted, non-potable reuse onsite as landscape and golf course irrigation. Under the preferred option, the Ventura Regional Sanitation District (VRSD) would operate, monitor and maintain the OWTS, and the Project would use the treated effluent to irrigate the 122-acre golf course, which currently is irrigated using potable water, through either spray irrigation or subsurface piping 9-12 inches below ground surface. Under the second option, the VRSD would operate, monitor and maintain the OWTS with the treated effluent dispersed through a conventional subsurface dispersal system that would allow the water to percolate to groundwater.

One hundred percent of the effluent is budgeted for irrigation. The Project's wastewater flow, as estimated by EPD Consultants, Inc. based primarily on the California Plumbing Code and the California Building Code, is shown in **Table 5.14.2-1**. As shown in Table 5.14.2-1, the Project's Peak Flows are estimated to be 58,338 gpd, which was rounded to 60,000 gpd for design purposes. The average flow rate was estimated to be 40,000 gpd.

Table 5.14.2-1
Peak Estimated Wastewater Flow for the Malibu Institute Project

Building	Peak Flow (gpd)
Malibu Institute Building	21,376
Security / Information Building	60
Golf Pro Shop / Grill	5,002
Cart Barn	360
Club House	11,740
Guest Bungalows (40)	19,200
Maintenance Building	500
Warehouse	100
Total	**58,338**
Source: EPD Consultants, Inc. 2012	

Threshold: Would the Project exceed wastewater treatment requirements of the Los Angeles or Lahontan Regional Water Quality Control Boards?

The design and installation of the OWTS would be subject to approval by the Los Angeles Regional Water Quality Control Board to ensure requirements related to protection of water resources are not exceeded. Under the preferred option, the Ventura Regional Sanitation District (VRSD) would operate, monitor and maintain the OWTS, and the Project would use the treated effluent to irrigate the 122-acre golf course, which currently is irrigated using potable water, through either spray irrigation or subsurface piping 9-12 inches below ground surface. Under the second option, the VRSD would operate, monitor and maintain the OWTS with the treated effluent dispersed through a conventional subsurface dispersal system that would allow the water to percolate to groundwater. Therefore, impacts regarding wastewater treatment requirements would be less than significant (**Class III**).

Threshold: Would the Project create wastewater system capacity problems, or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

With the exception of the septic tank and leach field serving the existing caretaker's residence near Mulholland Highway on the Project site, the Project would abandon the existing OWS of on-site septic tanks that serve the site. As there are no wastewater utility infrastructure components in the vicinity that would serve the Project, wastewater generated by the Project would be collected and treated by a proposed onsite OWTS, which has been designed to treat 100 percent of the Project's wastewater to standards for reuse as irrigation on the remodeled golf course. As such, the Project would result in the construction (installation) of a new wastewater treatment facility. The OWTS would be pre-fabricated and self-contained and would be buried underground near the information/security building. As a proposed component of the Project, discussion and analysis of the significance of the construction and operation of the Project's OWTS is provided as part of the overall Project evaluation, which has concluded impacts would be less than significant or less than significant with mitigation. Impacts requiring mitigation are summarized in Section 1.0, Executive Summary, and include impacts related to Air Quality, Geology, Hazards, Hydrology and Water Quality, and Noise. Mitigation has been identified to reduce any potential impacts from this Project to less than significant; therefore, impacts related to construction or operation of the OWTS would be less than significant with mitigation (**Class II**).

<u>On-site Wastewater Impacts</u>

Wastewater generated by the Project would be treated by a proposed OWTS, which has been designed with a capacity to convey, collect, and treat 100 percent of the Project's wastewater based on peak flows as shown in Table 5.14.2-1. The OWTS would treat wastewater to standards for reuse as irrigation. Under the preferred option, the Ventura Regional Sanitation District (VRSD) would operate, monitor and maintain the OWTS, and the Project would use 100 percent of the treated effluent to irrigate the 122-acre golf course, which currently is irrigated using potable water, through either spray irrigation or subsurface piping 9-12 inches below ground surface. An on-site in-ground covered storage basin would be provided to hold treated recycled water supplies until needed for irrigation use. Under the second option, the VRSD would operate, monitor and maintain the OWTS with the treated effluent dispersed through a conventional subsurface dispersal system that would allow the water to percolate to groundwater. If the OWTS plant and disposal/irrigation system provided under either option fails to meet the standards of the Regional Water Quality Control Board (RWQCB) discharge permit at any time, the Applicant would immediately close and cease operation of the facility. This would include cancellation of all current and scheduled events and lodging. The closure would remain in place until it is confirmed that the system can again meet RWQCB water quality/discharge requirements. Therefore, by complying with the requirements of the RWQCB discharge permit issued for this facility, on-site wastewater conveyance or disposal capacity impacts would be less than significant (**Class III**).

<u>Impacts to the Off-site Wastewater System</u>

Wastewater generated by the Project would continue to be collected and treated onsite as under existing conditions and would have no connection to off-site wastewater infrastructure provided by a utility. The Project would result in no impacts to off-site wastewater facilities regarding capacity in sewer lines and/or sewage disposal conveyance systems as there are none that serve the Project site (**Class III**).

As stated above, Malibu Local Coastal Program Land Use Plan Policy P223 provides: The construction of new small package wastewater treatment plants shall be prohibited, except in those areas where this is the desired long-term wastewater management solution selected by the County Engineer-Facilities.

The Malibu Institute proposes to use an Onsite Wastewater Treatment System (OWTS) that would include a water recycling feature. The proposed OWTS would consist of a sewer network within the proposed 21-acre development area gravity draining the resulting wastewater to a proposed treatment that includes a recycling feature installed underground near the information building at the entrance of the project site on Clubhouse Drive from Encinal Canyon Road. The OWTS would use a combination of

aeration, ultrafiltration, and disinfection to treat effluent to a standard suitable for unrestricted, non-potable uses onsite. Under the first option, the Ventura Regional Sanitation District (VRSD) would operate, monitor and maintain the OWTS and the Project would use the treated effluent to irrigate the 122-acre golf course, which currently is irrigated using potable water, through either spray irrigation or subsurface piping 9-12 inches below ground surface. Under the second option, the treated effluent would be dispersed through a conventional subsurface dispersal system that would allow the water to percolate to groundwater. Under either option, the proposed OWTS should not be characterized as a "small package wastewater treatment plant" as it would either be operated by a public entity or dispersed through a conventional subsurface dispersal system.

In any event, the proposed OWTS is the appropriate long-term wastewater management solution for the Project site. There is no private or public wastewater utility infrastructure in the vicinity that could serve the Project site. The 650-acre Project site lies at the headwaters of Trancas Creek in a relatively undeveloped area in the Santa Monica Mountains. Over 450-acres of the 650-acre Project site would be dedicated as permanent open space. The property surrounding the Project site is undeveloped private and public lands with some large lot rural residential uses along the site's northern and western boundaries. These uses are separated from the proposed development area and golf course on the Project site by the rugged surrounding terrain and often steep sloping hillsides. The hillsides around the proposed development area are mapped special management areas such as Sensitive Ecological Area (SEA), and Significant Watershed Area (SWA), Environmentally Sensitive Habitat Area (ESHA) and Hillside Management Area (HM). Few of the parcels within the 855-acre Trancas Creek tributary area surrounding the Project site could gravity drain to the proposed OWTS due to surrounding topography, and those few would require sewer lines and potential pumping stations to be constructed within ESHA. Furthermore, land use limitations of current regulations along with the proposed amendments to the Malibu Local Coastal Program would restrict any development in the area to very low density and would prohibit new golf courses. Given the foreseeable low growth potential and physical limitations of the surrounding areas, the proposed OWTS is the appropriate long-term wastewater management solution for the Project site. Under the first option, the treated effluent would be used to irrigate the golf course. The Project would provide a unique opportunity to use wastewater treated to Title 22 standards to irrigate a golf course rather than using potable water. Under the second option, the treated effluent would recharge the groundwater under the Project site.

5.14.2.5 Cumulative Impacts

Related projects located within the vicinity of the Project site would produce additional flows, some of which may be serviced by regional wastewater treatment facilities. Any additional wastewater flows from related projects would have no bearing on the Project's OWTS, as there would be no connection provided to other projects, and the Project's OWTS would have no connection to a regional wastewater system. Therefore, the Project would not contribute to cumulative impacts to off-site wastewater treatment infrastructure (**Class III**).

5.14.2.6 Mitigation Measures

The Project would not result in a potentially significant impact to the local wastewater system utility; therefore, no mitigation measure is required.

5.14.2.7 Residual Impacts

No adverse wastewater impacts requiring new or upgraded facilities for the regional wastewater treatment system would be generated by the Project, which would provide an OWTS to manage wastewater onsite (**Class III**).

5.14.3 SOLID WASTE

5.14.3.1 Existing Conditions

Background

In-County Solid Waste Management

The County of Los Angeles comprises 88 incorporated cities and numerous unincorporated areas within its 4,100 square miles, and has a population in excess of 9.8 million persons.[18] Each jurisdiction of the County is responsible for its own solid waste management. Solid waste generated in Los Angeles County comprises residential waste, construction wastes, commercial and industrial wastes, and sludge residues (wastes remaining at the end of the sewage treatment process).

In most cases, solid waste is hauled directly to major Class III landfills (permitted to accept nonhazardous municipal waste), with the remainder being taken to transfer stations, resource recovery centers, or waste-to-energy facilities. In 2011, the residents and businesses of Los Angeles County disposed of approximately 8.75 million tons of solid waste at existing permitted land disposal and transformation facilities (waste-to-energy) located within and outside of the County. Of this amount, approximately 6.25 million tons were disposed of at in-County Class III landfills, 524,021 tons at transformation facilities, 1.9 million tons exported to out-of-County Class III landfills, and 71,854 tons at permitted inert waste landfills.[19]

As shown in **Table 5.14.3-1,** solid waste is disposed of at 11 Class III landfills within the County of Los Angeles. In 2011, a total of about 20,226 tons per day were disposed of at these landfills, or about 48 percent of the total permitted maximum daily capacity. As of the end of 2011, an estimated 127.14 million tons of solid waste disposal capacity remained among Class III landfills in the County.[20]

In 2011, California's statewide disposal was 29.9 million tons and population was 37.4 million residents. This resulted in a per resident disposal rate of 4.4 pounds/resident/day, which is slightly less than the 2009 and 2010 rates of 4.5 pounds/resident/day, however, the per resident "diversion rate equivalent" remains unchanged at 65%.[21] Locally, the County of Los Angeles Department of Public Works administers the Countywide Integrated Waste Management Plan, which is comprised of County and City waste reduction planning documents.

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[18] U.S. Census Bureau: State and County QuickFacts, http://quickfacts.census.gov/qfd/states/06/06037.html, accessed on October 26, 2012.

[19] County of Los Angeles Department of Public Works. County of Los Angeles Countywide Integrated Waste Management Plan 2011 Annual Report, August 2012.

[20] IBID.

[21] California Department of Resources Recycling and Recovery (CalRecycle). Local Government Central, California's 2011 Per Capita Disposal Rate. Accessed on October 27, 2012 from: http://www.calrecycle.ca.gov/LGCentral/GoalMeasure/DisposalRate/MostRecent/default.htm.

Table 5.14.3-1
Los Angeles County Class III Landfill Capacity and Usage [a]

Landfill	Permitted Daily Capacity (tons)	2011 Average Daily Disposal (tons) [b]	Estimated Remaining Permitted Capacity as of December 31, 2011 (million tons)
Antelope Valley	1,800	365	16.09
Burbank	240	95	2.82
Calabasas	3,500	779	5.71
Chiquita Canyon	6,000	4,264	4.9
Lancaster	1,700	809	0.31
Pebbly Beach	49	8	0.06
Puente Hills	13,200	5,116	7.55
San Clemente	10	1	0.02
Scholl Canyon	3,400	747	3.62
Sunshine Canyon City/County	12,100	7,801	82.39
Whittier (Savage Canyon)	350	241	3.67
Totals	**42,349**	**20,226**	**127.14**

[a] County of Los Angeles Department of Public Works. County of Los Angeles Countywide Integrated Waste Management Plan 2011 Annual Report, August 2012.
[b] Includes waste generated within and outside of the County.

In-County landfills that serve western Los Angeles County, including the Project site, include the Calabasas landfill, which is the nearest landfill permitted to accept solid waste disposal from the Project site. The Calabasas landfill is located approximately 13 miles to the northeast in Agoura Hills and is operated by the County Sanitation Districts of Los Angeles County. Based on data presented in Table 5.14.3-1, in 2011, the Calabasas landfill operated at about 22 percent of its permitted daily capacity. As of the end of 2011, the landfill had a remaining capacity of 5.71 million tons and an estimated remaining life of approximately 24 years.[22] While solid waste disposal from the Project site would most likely be deposited at this facility as the closest facility to the Project site, in the event of temporary closure or other occurrence which may prevent disposal at this site, Project-generated solid waste could be disposed of at other landfills in the County. These include the Sunshine Canyon City/County Landfill located in Sylmar, which in 2011, operated at about 65 percent of its permitted daily capacity. As of December 31, 2011, this landfill had a remaining capacity of 82.39 million tons, or approximately 98 million cubic yards. The landfill has an estimated remaining lifespan of 25 years.[23] As shown in Table 5.14.3-1, several other landfill facilities in the County also report unused daily capacity for accepting solid waste disposal.

Out-of-County and Expansions of Landfill Capacity

As shown below in **Table 5.14.3-2**, the County delivered approximately 6,092 tons per day (tpd) of waste to landfills located outside the County in 2011. These landfills include El Sobrante Landfill in Riverside

[22] County of Los Angeles Department of Public Works. County of Los Angeles Countywide Integrated Waste Management Plan 2011 Annual Report, August 2012.
[23] County of Los Angeles Department of Public Works. County of Los Angeles Countywide Integrated Waste Management Plan 2011 Annual Report, August 2012.

County; Frank Bowerman Sanitary Landfill, Olinda Alpha Sanitary Landfill, and Prima Deshecha Sanitary Landfill, all referred to as "Orange County–Collectively"; and Simi Valley Landfill & Recycling Center in Ventura County. El Sobrante Landfill is permitted to receive 16,054 tpd and has a remaining capacity of 151 million tons, and a remaining design lifespan of 33 years. This landfill can accept up to 11,054 tpd from other counties, and potentially could provide capacity for 4,000 tpd from Los Angeles County. Through waste importation agreements with various entities within Los Angeles County, Orange County-Collectively will provide up to 4,500 tpd of capacity to accept Los Angeles County waste. Simi Valley Landfill & Recycling Center, with a daily permitted capacity of 6,000 tpd, could potentially continue to provide 850 tpd of capacity for solid waste generated in Los Angeles County. Therefore, compared to 2011 quantities, the County could potentially export an additional 3,599 tpd of solid waste to neighboring counties. A waste disposal haul route from the Project site to the Simi Valley Landfill would be approximately one-half the distance compared to the second closest in-County landfill (Sunshine Canyon City/County Landfill).

Table 5.14.3-2
Out-of-County Class III Landfills

Landfill	2011 Average Daily Disposal from LA County (tpd)	Potential Daily Acceptance from LA County (tpd)
El Sobrante Landfill (Riverside County)	2,160	4,000
Orange County –Collectively	1,509	4,500
Simi Valley Landfill (Ventura County)	375	850
Totals	**5,709**	**9,308**
Source: County of Los Angeles Department of Public Works. County of Los Angeles Countywide Integrated Waste Management Plan 2011 Annual Report, August 2012.		

Planning efforts to accommodate future demand will continue to include development of landfill expansions and creation of new landfill sites; however, future demands will be increasingly addressed by waste-to-energy transformation facilities. Currently, there are two such facilities in the County, located in the Cities of Commerce and Long Beach, which processed a total of 1,841 tpd in 2011.[24]

Malibu Golf Club Solid Waste Generation

The existing Malibu Golf Club generates solid waste that is removed from the site by a private waste hauling service, which is currently provided by Waste Management Inc. All "green" waste from landscaping activities is composted onsite for reuse on the existing golf course and landscaping features. Solid waste that is not derived from landscaping cuttings is separated onsite to divert recyclable materials from landfills. Solid waste generated at the site bound for landfill disposal is stored in three containers with capacity for approximately 175 pounds each, which are emptied twice weekly, for a maximum total disposal of 192 tons annually. Recyclable materials that are removed from the waste stream onsite, consisting of mixed-load recyclables (e.g. paper, plastic, cardboard, aluminum), are stored in four containers with capacity for approximately 500 pounds each, which are emptied once weekly, for a maximum total of 52 tons recycled annually. The actual amount of disposal/recyclable material generated

[24] County of Los Angeles Department of Public Works. County of Los Angeles Countywide Integrated Waste Management Plan 2011 Annual Report, August 2012.

by the site is unknown, as the quantities leaving the site are not recorded, however, assuming that the facility would not pay for unneeded capacity and collection services, the current amount of solid waste disposal and recycling can be estimated by the capacity of the existing storage containers. As such, the estimated combined total of solid waste generated onsite is 244 tons annually, which indicates a current diversion rate for recyclables of approximately 21 percent. However, considering that all "green" waste from the 118-acre golf course and associated landscaping areas is composted and reused onsite but is not quantified or included in the amounts discussed above, the actual generation and diversion rate would be considerably higher.

5.14.3.2 Regulatory Setting

Federal

Resource Conservation and Recovery Act (RCRA)

The Resource Conservation and Recovery Act (RCRA), enacted in 1976, is the nation's primary law governing the disposal of solid and hazardous waste. The Act, codified in title 42 of the United States Code, section 6901, *et seq.*, set national goals for reducing the amount of waste generated and ensuring wastes are managed in an environmentally sound manner. The *Solid Waste Program* encourages states to develop comprehensive plans to manage nonhazardous industrial solid waste and municipal solid waste, sets criteria for municipal solid waste landfills, and prohibits the open dumping of solid waste. RCRA regulations encourage source reduction and recycling and promote the safe disposal of municipal waste.

State

California Integrated Waste Management Act of 1989 (AB 939)

Assembly Bill 939 was enacted to reduce, recycle, and reuse solid waste generated in the State to the maximum extent feasible. Specifically, the Act required cities and counties to adopt a Source Reduction and Recycling Element of their Waste Management Plans to describe actions to be implemented to achieve waste reduction goals. It also required jurisdictions to identify implementation schedules to divert 25 percent of their total solid waste stream from landfill disposal by the year 1995, and 50 percent of the total waste stream from landfill disposal by the year 2000. Incentives to achieve these goals include a $10,000 daily fine on local jurisdictions as long as they are not in compliance. To assist in achieving AB 939's goals of reducing solid waste, the Act requires each city and county to promote a hierarchical method for managing waste: source reduction, recycling, composting, transformation and finally, if necessary, disposal.

CalRecycle is the California department concerned with the State's recycling and waste reduction efforts, including the implementation of AB 939. Officially known as the Department of Resources Recycling and Recovery, CalRecycle is a part of the California Natural Resources Agency and administers programs formerly managed by the California Integrated Waste Management Board (CIWMB) and Division of Recycling.

California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327)

Assembly Bill 1327, as amended, requires each local jurisdiction to adopt an ordinance requiring commercial, industrial, or institutional building, marina, or residential buildings having five or more living units to provide an adequate storage area for the collection and removal of recyclable materials.

The sizes of these storage areas are to be determined by the appropriate jurisdictions' ordinance. If no such ordinance exists with the jurisdiction, the CalRecycle model ordinance shall take effect.

Construction and Demolition Waste Materials Diversion Requirements (SB 1374)

Senate Bill 1374, passed in 2002, added Section 42912 to the California Public Resources Code. SB 1374 requires each jurisdiction to provide a summary of the progress made in diverting construction and demolition waste as part of the annual AB 939 report. The legislation also requires CalRecycle to adopt a model ordinance for diverting 50 to 75 percent of all construction and demolition waste from landfills.

Assembly Bill 341 (AB 341)

AB 341 establishes a policy goal for California that not less than 75% of the solid waste generated be source-reduced, recycled or composted by 2020. It also requires CalRecycle to provide a report to the Legislature by January 1, 2014 detailing strategies to achieve that policy goal.[25]

Assembly Bill 223 (AB 223)

AB 223 required additional revisions of the Los Angeles County's Solid Waste Management Plan to ensure to the extent feasible and appropriate that solid waste facility sites identified in the plan are equitably distributed within the county.

Local

Solid Waste Action Management Plan

The County Solid Waste Action Management Plan was adopted in 1988 as required by AB 223 to provide for long-range management of solid waste. The Plan was designed to provide permitted capacity of 50 years and established policies on waste reduction in the forms of source reduction, recycling, composting and hazardous waste management.

Los Angeles County Integrated Waste Management Plan

The Los Angeles County Integrated Waste Management Plan (IWMP), which was formally approved on June 23, 1999, identifies a regional approach for the management of solid waste through source reduction, recycling and composting, and environmentally safe transformation and disposal. The IWMP recognizes that landfills will remain an integral part of the County's solid waste management system in the foreseeable future and ensures that the waste management practices of cities and other jurisdictions in the County are consistent with the solid waste diversion goals of AB 939.

The IWMP includes the Countywide Integrated Waste Management Summary Plan (Summary Plan), which was approved by the CIWMB on June 23, 1999. Pursuant to AB 939, the Summary Plan describes the actions to be taken to achieve the mandated waste diversion goals of AB 939. The Summary Plan establishes countywide goals and objectives for integrated waste management, establishes an administrative structure for preparing and managing the Summary Plan, describes the countywide system of governmental solid waste management infrastructure, describes the current system of solid waste management in the County and its incorporated cities, summarizes the types of solid waste programs, describes programs that could be consolidated or coordinated countywide, and analyzes the financing for these countywide programs.

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[25] California Department of Resources Recycling and Recovery (CalRecycle). Local Government Central, California's 2011 Per Capita Disposal Rate. Accessed on October 27, 2012 from: http://www.calrecycle.ca.gov/LGCentral/GoalMeasure/DisposalRate/MostRecent/default.htm.

Also a part of the IWMP and pursuant to AB 939, the County prepared the Countywide Siting Element (Siting Element), which identifies the County Department of Public Works as the agency responsible for developing goals, policies, and strategies to provide for the proper planning and siting of solid waste disposal and transformation facilities for a 15–year planning period. The Siting Element was approved by the CIWMB on June 24, 1998 and provides strategies and establishes siting criteria for evaluating the development of needed disposal and transformation facilities. The County is currently updating the Siting Element to reflect the most recent information regarding remaining landfill disposal capacity and the County's current strategy for maintaining adequate disposal capacity.

To provide an annual update on the IWMP, the County Department of Public Works prepares IWMP Annual Reports. The IWMP Annual Reports provide an assessment of the Summary Plan and the Siting Element. As previously discussed, the IWMP Annual Reports analyze solid waste disposal and estimated future remaining capacity at County landfills. As described above, the 2011 lWMP Annual Report dated August 2012 is the most recent report available.

Source Reduction and Recycling Element

In accordance with AB 939, the County adopted its Source Reduction and Recycling Element (SRRE) to establish local policies and programs to achieve the mandated waste disposal reductions. The current Plan's 15-year disposal capacity projection commenced in 2006.

Green Building Ordinance

On November 18, 2008, the County adopted its Green Building Ordinance to promote green building standards establishing low impact development standards that not only divert waste from landfills and help to incorporate other "green" design features. The County's Green Building Ordinance (Section 22.52.2130.C.4.b), effective January 1, 2009, requires a minimum of 65% of non-hazardous construction and demolition debris be recycled or salvaged for buildings of 10,000 sq. ft. or more.

In 2010, in response to the passage of CALGreen (2010 California Green Building Standards Code), the Board of Supervisors adopted the Los Angeles County Green Building Standards Code (Title 31). Staff also recommended a comprehensive revision to Title 22 and amendments to Title 31, which included an update to the Green Building Program Technical Manual. These revisions are currently under development, and are intended to provide clarity for the development community, ensure consistency with the State and other local agencies, and advance sustainable construction standards in the County.

Planning staff has proposed revising Title 22 to the Regional Planning Commission. Specifically, staff has recommended that the Drought Tolerant Landscaping requirements of Title 22 be repealed and replaced with amendments to Title 31 (Green Building Standards Code); and that, with the exception of the tree planting requirements, all provisions of the Green Building Ordinance be repealed from Title 22 and replaced with amendments to Title 31.

Los Angeles County General Plan

Policy No. 7: Protect the capacity of Class I landfills by restricting their acceptance of nonhazardous wastes.

Policy No. 8: Promote solid waste technology, including source reduction, to reduce dependence on sanitary landfills.

Policy No. 23: Facilitate the recycling of wastes such as metal, glass, paper, and textiles.

Malibu Local Coastal Program

The Malibu LCP does not include policies regarding solid waste disposal that are applicable to the Project.

5.14.3.3 Threshold of Significance

According to Appendix G of the CEQA Guidelines and the County of Los Angeles Environmental Checklist Form (Initial Study), the Project would result in a significant solid waste impact if the Project would:

- Not be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs; or
- Not comply with federal, state, and local statutes and regulations related to solid waste.

5.14.3.4 Project Impacts

Threshold: Would the Project be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?

Construction Period Impacts

Development of the Project would result in the demolition of the existing buildings associated with the Malibu Golf Club, as well as construction of the proposed facilities. In addition to the existing Malibu Golf club buildings that would be demolished, an abandoned hunting lodge located in the northern portion of the Project site that is not associated with operations of the existing golf club would also be demolished for safety and security concerns. Much of the solid waste generated from demolition and construction activities would be recyclable, such as wood and metal scrap, and formed construction board (cement and dry wall board). The existing buildings to be removed would be deconstructed rather than demolished, to allow each of the existing components to be separated onsite to salvage as many reusable materials as possible, such as lighting and plumbing fixtures, windows, framing lumber, roofing materials, and flooring. Deconstruction also allows recyclable materials (i.e. glass, metal, wood, and concrete) to be sorted onsite and hauled to the appropriate processing facilities. The Project would be required to comply with the County's mandatory Construction and Demolition Debris Recycling and Reuse Program. To comply with the County's Green Building Ordinance (Section 22.52.2130.C.4.b), the Project would divert a minimum of 65 percent of non-hazardous construction and demolition debris to be recycled or salvaged. As shown in **Table 5.14.3-3**, following a diversion of 65 percent for recycling activities, demolition is expected to produce up to 661.4 tons of debris to be deposited in a landfill. Construction of the Project's proposed facilities would generate 162 tons of debris for disposal, for a total of 823.4 tons of material to be disposed of in landfills. Construction workers at the site would generate minimum quantities of waste, which would be mostly food-related (food scraps and various food packaging materials). Given the excess in permitted daily capacity at the Sunshine Canyon, Calabasas, and Chiquita landfills, as shown in Table 5.14.3-1, construction waste from the Project that cannot be recycled is not expected to exceed the capacity of those landfills. Construction debris would primarily be classified as inert waste, which may be deposited in a Class I landfill (inert materials) facility. As reported in the *County of Los Angeles Countywide Integrated Waste Management Plan 2011 Annual Report*, the Azusa Land Reclamation inert waste landfill (located in Los Angeles County), a facility with a full solid waste facility permit, has a remaining capacity estimated at 64.2 million tons or 53.5 million cubic yards. Given the remaining permitted capacity and at the 2011 average disposal rate of 357 tpd, this facility would not be exhausted for 576 years. Therefore, the Project would not result in significant construction or demolition related solid waste impacts (**Class III**).

Table 5.14.3-3
Construction Waste

Type	Size (sf)	Generation Factor[a] (lbs/sf)	Waste Generated (lbs)	Recycling Percentage[b]	Waste Sent To Landfill (lbs)	Waste Sent To Landfill (tons)
Construction						
Residential[c] (bungalows)	109,140	4.38	478,033	65%	167,312	83.7
Commercial	115,147	3.89	447,922	65%	156,773	78.4
Total Construction Waste			**925,955**		**324,084**	**162.0**
Demolition						
Residential[d]	6,615	115	760,725	65%	266,254	133.1
Commercial	19,475	155	3,018,625	65%	1,056,519	528.3
Total Demolition Waste			**3,779,350**		**1,322,773**	**661.4**
Total Construction and Demolition Wastes			**4,705,305**		**1,646,857**	**823.4**

[a] US Environmental Protection Agency, *Characterization of Building-Related Construction and Demolition Debris in the United States*, June 1998.
[b] Required by Los Angeles County's Green Building Ordinance (Section 22.52.2130.C.4.b)
[c] Includes gross square footage for 40 bungalow units.
[d] Abandoned residence to be removed.

Operational Impacts

Solid Waste Generation

As stated in Section 3.0, Project Description, the Project will be seeking a LEED™ Platinum or equivalent sustainability designation, which would include a sustainable recycling program as an essential component to meeting the designation criteria. Four basic solid waste management strategies will be incorporated including:

- Capture of recycle materials from the waste stream, which involves determining materials that can be effectively separated, and identifying local markets which will accept the recyclable materials for ultimate remanufacture into new products;
- Delivery of recyclable materials to the remanufactures as clean, sorted material;
- Source reduction in each department of the Project's operations, to be coordinated by a designated Recycling Supervisor to design recycling activities and operational guidelines, as well as a training program to ensure that all Project employees are familiar with the established recycling program; and
- Purchase of materials with recycled content, to be overseen by the Recycling Supervisor in coordination with the Purchasing Department.

The Project would provide new facilities on the site, including overnight accommodations. To estimate a project's solid waste generation, the California Department of Resources Recycling and Recovery (CalRecycle) provides solid waste generation rates to estimate the amount of waste created by certain land uses. The waste generation rates include all materials discarded, whether or not they are recycled or disposed of in a landfill. As such, they can provide a general level of information for planning purposes.

As shown in **Table 5.14.3-4**, during operations, the daily solid waste generated by the Project would be 2,381 pounds per day (1.194 tpd), which would be a total of 434.7 tons of solid waste annually. As stated above regarding existing conditions, the Project site currently generates approximately 244 tons per year of solid waste. As discussed below under Solid Waste Diversion, recyclable materials would be collected separately and diverted from landfills, thus reducing the Project's quantity of solid waste that would require landfill disposal.

The remodeled golf course facility would be operated similarly to the existing golf course that currently occupies the site, and as such, solid waste generation from that portion of the facility would not be expected to change substantially and is not estimated here.

The Project would not produce or dispose of hazardous wastes other than typical products related to maintenance activities, such as cleaning products, solvents, and motor oil. Typical hazardous wastes would be stored in maintenance areas consistent with the practices of the existing Malibu Golf Club, and in compliance with requirements of the Los Angeles County Fire Department, and properly disposed of as required by applicable laws and ordinances.

Solid Waste Diversion (Recyclables)

The Project would divert recyclable materials from being sent to a landfill by implementing recycling programs such as providing separate refuse containers onsite for recyclable materials as well as other features including those listed as mitigation measure MM5.14.3-1. For this analysis, it is conservatively estimated that the Project's recycling program would result in a 55 percent diversion rate, which was the reported Countywide diversion rate in the *County of Los Angeles Countywide Integrated Waste Management Plan (IWMP) 2011 Annual Report*. Based on the existing diversion rate of approximately 52 tons per year by the Malibu Golf Club, the Project would send an estimated net increase of 0.132 tpd or 48.2 tons per year of solid waste to landfills over existing conditions.

Table 5.14.3-4
Project Generated Solid Waste

Land Use	Size	Factor	Daily Generation (lbs/day)	Daily Generation (tons/day)	Annual Generation (tons/yr)
Bungalows	160 bedrooms	2 lbs/room/day[a]	320	0.160	58.4
Malibu Institute	48,220 sq. ft.				
• Educational Institution[4]	41,097 sq. ft.	0.007 lbs/sq. ft./day[b]	288	0.144	52.6
• Cafeteria	475 seats	1 lb./seat/day[c]	475	0.238	86.7
Clubhouse	30,147 sq. ft.				
• Dining Room	185 guests	1 lb./seat/day[c]	185	0.093	33.8
• Offices	2,844 sq. ft.	6 lbs/1,000 sq. ft./day[d]	17	0.009	3.1
• Fitness/spa	5,954 sq. ft.	3.12 lbs/100 sq. ft./day[e]	186	0.093	33.9
• Other	18,569 sq. ft.	3.12 lbs/100 sq. ft./day[e]	579	0.290	105.7
Golf Pro Shop					
• Retail	10,184 sq. ft.	2.5 lb./1,000 sq. ft./day[f]	26	0.013	4.7
• Grill	128 guests	1 lb./seat/day[c]	128	0.064	23.4
Security/ Information	447 sq. ft.	6 lbs./1,000 sq. ft./day[d]	3	0.002	0.5
Maintenance Building	10,500 sq. ft.	5 lbs./ 1,000 sq. ft./day[g]	53	0.027	9.7

Land Use	Size	Factor	Daily Generation (lbs/day)	Daily Generation (tons/day)	Annual Generation (tons/yr)
Warehouse	4,623sq. ft.	1.42 lbs/100 sq. ft./day[h]	66	0.033	12.0
Cart Barn	9,162 sq. ft.	5 lbs./ 1,000 sq. ft./day[g]	46	0.023	8.4
Caretaker's Residence	875 sq. ft	8.6 lb./dwelling unit/day[i]	9	0.005	1.8
Solid Waste Generation[j]			**2,381**	**1.194**	**434.7**
Total Solid Waste Disposed of at Landfills[k]			**1,310**	**0.657**	**239.1**

[a] Ultrasystems, Stevenson Ranch DEIR Phase IV Specific Plan, April 1992. Accessed from CalRecycle on November 26, 2012 from: http://www.calrecycle.ca.gov/wastechar/wastegenrates/Service.htm
[b] Draft EIR for the Central Commercial Redevelopment Project (Monterey Park Redevelopment Agency), which cites Athens Disposal Co. and GRC Redevel. Consultants, 1992 as source. Accessed from CalRecycle on November 26, 2012 from: http://www.calrecycle.ca.gov/wastechar/wastegenrates/Institution.htm
[c] Ultrasystems, Stevenson Ranch DEIR Phase IV Specific Plan, April 1992. Accessed from CalRecycle on November 26, 2012 from: http://www.calrecycle.ca.gov/wastechar/wastegenrates/Service.htm
[d] Ultrasystems, Stevenson Ranch DEIR Phase IV Specific Plan, April 1992. Accessed from CalRecycle on November 14, 2012 from: http://www.calrecycle.ca.gov/wastechar/wastegenrates/Commercial.htm
[e] Guide to Solid Waste and Recycling Plans for Development Projects (Santa Barbara County Public Works Department), May 1997. Accessed from CalRecycle on November 26, 2012 from: http://www.calrecycle.ca.gov/wastechar/wastegenrates/Service.htm
[f] Ultrasystems, Stevenson Ranch DEIR Phase IV Specific Plan, April 1992. Accessed from CalRecycle on November 14, 2012 from: http://www.calrecycle.ca.gov/wastechar/wastegenrates/Commercial.htm
[g] Ultrasystems, Stevenson Ranch DEIR Phase IV Specific Plan, April 1992. Accessed from CalRecycle on November 14, 2012 from: http://www.calrecycle.ca.gov/wastechar/wastegenrates/Industrial.htm
[h] Guide to Solid Waste and Recycling Plans for Development Projects (Santa Barbara County Public Works Department), May 1997. Accessed from CalRecycle on November 26, 2012 from: http://www.calrecycle.ca.gov/wastechar/wastegenrates/Industrial.htm
[i] Draft EIR for the Central Commercial Redevelopment Project (Monterey Park Redevelopment Agency), which cites Athens Disposal Co. and GRC Redevel. Consultants, 1992 as source. Accessed from CalRecycle on March 6, 2013 from: http://www.calrecycle.ca.gov/wastechar/wastegenrates/Residential.htm
[j] This does not include "green" waste from landscaping/golf course maintenance activities which would be composted onsite for reuse on landscaped areas onsite.
[k] After diverting 55 percent for recycling, which is the Countywide recycling rate reported by the County of Los Angeles Countywide Integrated Waste Management Plan 2011 Annual Report.

Landfill Disposal Impacts

The Project would implement a solid waste diversion program that would include onsite separation of recyclable materials, food waste, and green waste, from the waste stream to minimize the quantity to be disposed of at County landfills. For this analysis, it is conservatively assumed the Project's recycling program would result in a 55 percent diversion rate, which was the reported Countywide diversion rate in the *County of Los Angeles Countywide Integrated Waste Management Plan 2011 Annual Report*.

The Calabasas Landfill's disposal rate for 2011 averaged 779 tpd, which is 2,721 tons less than the permitted daily capacity of 3,500 tpd. The Project's incremental increase in daily solid waste disposal over existing conditions following diversion of recyclable materials (0.132 tpd) would represent approximately 0.005 percent of unused daily capacity at the Calabasas Landfill based on 2011 disposal rates. Other landfills in western Los Angeles County, including Sunshine Canyon City/County Landfill and Chiquita Canyon landfill, also report excess daily disposal capacity. Based on 2011 disposal rates, the Project's net increase in solid waste disposal would represent 0.001 percent of the remaining average

daily capacity at the Sunshine Canyon City/County Landfill, and 0.003 percent of the remaining average daily capacity at the Chiquita Canyon Landfill.

The Project's estimated quantity of solid waste disposal would not exceed the permitted daily capacity of the three nearest landfills under their most recently reported disposal rates. As such, the Project would not result in a significant impact to those facilities. However, as other landfills in the County reach their lifetime capacity, future inputs could potentially increase significantly. Due to the potential for increased demands on the nearest landfills, and for the County to maintain compliance with AB 939, it will be important for all solid waste generators, including the Project, to implement and maintain diversion programs to reduce the amount of waste sent to landfills. As such, the Project's solid waste impact is considered adverse, but reduced to less than significant with incorporation of mitigation measure MM5.14.3-1 (**Class II**).

Threshold: Would the Project comply with federal, state, and local statutes and regulations related to solid waste?

The Project would be required to comply with the County's mandatory Construction and Demolition Debris Recycling and Reuse Program as required by the County's Green Building Standards (Section 22.52.2130.C.4.b), by diverting a minimum of 65 percent of non-hazardous construction and demolition debris to be recycled or salvaged. In addition, the Project would comply with County requirements under Title 20, Chapter 20.89 that establishes a service charge levied upon each parcel of real property in the unincorporated area of the County of Los Angeles in order to fund the preparation, adoption and administration of the Los Angeles County Household Hazardous Waste Element, and the Los Angeles County Source Reduction and Recycling Element of the Countywide IWMP. Therefore, impacts regarding compliance with statutes and regulations related to solid waste disposal would be less than significant (**Class III**).

5.14.3.5 Cumulative Impacts

The ability to accommodate future solid waste generation in the southern California region has become an issue of concern due to the limited supply of existing landfill space, the difficulty in establishing new landfills in California, and anticipated increases in solid waste generation due to population increases and economic growth. Although source reduction and recycling efforts, such as those mandated by AB 939, have been successful in reducing the amount of solid waste requiring landfill disposal, the diminishing supply of landfill capacity remains an important issue for the region.

<u>Construction Cumulative Impacts</u>

Construction of the Project and the Related Projects identified in Section 4.0, Environmental Setting, would generate construction and demolition waste and, thus, would cumulatively increase the need for waste disposal at the County's unclassified landfills. As analyzed above, the Project would generate a total of approximately 823.4 tons of construction and demolition waste to be sent to unclassified landfills after diversion of recyclable materials. Although the amounts of construction and demolition solid wastes to be sent to unclassified landfills by each of the related projects is not available, it is anticipated that future related development would implement similar recycling programs to divert construction and demolition wastes from landfill disposal. Furthermore, the County's unclassified landfills generally do not face capacity issues and unclassified landfills would be expected to have sufficient capacity to accommodate cumulative demand. Thus, unclassified landfills would not be significantly impacted from cumulative disposal of construction and demolition wastes, and the Project's contribution of construction and demolition materials to those facilities would be less than significant. (**Class III**).

Operational Cumulative Impacts

During operations, the Project would contribute a net increase to landfill disposal of approximately 48.2 tons of waste per year over existing conditions into the foreseeable future, which in combination with related projects and regional growth, would consume permitted capacity of landfills over the life of the Project. As provided in **Table 5.14.3-5**, the annual cumulative waste generation of the related projects including the incremental increase from the Project would be 589.2 tons, of which the Project represents approximately 8.2 percent. Cumulatively, the estimated solid waste disposal from the identified related projects including the Project would represent approximately 0.03 percent of the combined unused daily disposal capacity of existing landfills in Los Angeles County based on 2011 disposal rates. Given the limited magnitude of the Project's incremental solid waste generation as compared to the existing landfill capacity, the Project is not expected to result in a significant impact on solid waste disposal capacity. Additionally, the 2011 IWMP anticipates that future disposal needs can be adequately met through the remainder of the planning period (2026) through implementation of strategies that include various combinations of scenarios that include:

- Permitting and developing proposed in-County landfill expansions;
- Utilizing available or planned out-of-County disposal capacity;
- Developing necessary infrastructure to facilitate exportation of waste to out-of-County landfills;
- Developing conversion and other alternative technologies; and
- Continuing to enhance diversion programs and increasing the Countywide diversion rate.

As stated above, AB 341 establishes a policy goal for California that not less than 75% of the solid waste generated be source-reduced, recycled or composted by 2020, by following strategies to be developed by CalRecycle by January 1, 2014 for implementation of this policy, which would further reduce cumulative disposal impacts.

Therefore, as the IWMP has identified strategies to provide adequate disposal capacity for the current planning period, and as the Project would have a relatively insignificant increase in disposal amounts, the Project would not have a cumulatively considerable contribution to solid waste disposal impacts, and the Project's cumulative impacts from operations would be less than significant. To further ensure that the Project minimizes solid waste disposal to landfills as much as feasible, mitigation measure MM5.14.3-1 would establish a solid waste diversion program on the Project site, consistent with the goal of AB 341. With incorporation of MM5.14.3-1 the Project's contribution would not be cumulatively considerable and therefore would be less than significant. Therefore, the Project would not contribute to a significant cumulative impact on landfill capacity; however, mitigation measure MM5.14.3-1, requiring the implementation of a waste reduction and recycling program is incorporated to further insure the Project's contribution would not be cumulatively considerable. As such, with implementation of mitigation measures in support of the State's disposal reduction goals, the Project would not have a cumulatively considerable contribution to solid waste impacts, which would be less than significant. (**Class II**).

5.14.3-5
Solid Waste Generation/Disposal –Related Projects

Land Use	Size[1]	Generation Factor[2]	Daily Generation (lbs/day)	Annual Generation (tons/year)
Single-Family Residential	7 units	10 lbs/du/day	70	12.8
Multi-Family Residential	237 units	4 lbs/du/day	948	173.0
Office	163,694 sf	6 lbs/1,000 sf/day	982	179.2
Commercial/Retail	364,503 sf	2.5 lbs/1,000 sf/day	911	166.3
Commercial/Retail (food market)	77,972 sf	3.12 lbs/100 sf/day	2,433	444.0
Hotel	146 rooms	4 lbs/room/day	584	106.6
Total Solid Waste Generation[3]			5,928	1,081.9
Total Disposed of at Landfills[4]			**2,964**	**541.0**
Malibu Institute Disposal Rate[5]			264	48.2
Cumulative Totals With Project:	**-**	**-**	**3,228**	**589.2**

[1] Tabulated from Table 4-1 approved and pending cumulative projects list, section 4.0 Environmental Setting, of this EIR.
[2] California Department of Resources Recycling and Recovery (CalRecycle), solid waste characterization database, updated December 30, 2009, http://www.calrecycle.ca.gov/wastechar/resdisp.htm, accessed November 29, 2012.
[3] Totals do not include waste generated by the Camp Vernon Kilpatrick Replacement Project as that project would reduce the amount of detainees onsite and therefore would not contribute to an increase in solid waste generation.
[4] Assumes a 50 percent diversion rate for related projects, based on AB 939 requirements.
[5] Net increase over existing conditions.

5.14.3.6 Mitigation Measures

Implementation of the following mitigation measure would ensure that the Project's contribution to cumulative impacts would be less than significant.

MM5.14.3-1 The applicant shall implement a recycling program for the operational phase of the Project. The recycling program shall be monitored to ensure that the program advances along with technological advancements in waste management industry-wide. At a minimum the recycling program shall maintain existing levels of waste diversion with improvements in waste diversion over time that exceed existing levels and are in keeping with overall Countywide criteria. Some of the recycling criteria that shall be met or exceeded include:

- All green waste generated onsite (e.g. tree trimmings, brush clearance, grass, etc.) shall be either chipped and reused for pathways or landscaping (e.g. wood chips), or shall be composted onsite for use within the Project;
- Where trash receptacles are placed in common areas of the Project site for use by guests, clearly marked recyclable bins shall also be provided for beverage containers such as bottles and cans;
- Food waste shall be separated from other refuse and recyclable materials and composted onsite utilizing a worm bin to convert non-fatty food wastes into potting soil (called ermicompost) for onsite landscape maintenance use;
- Batteries, toner cartridges and other office tech equipment such as computer monitors, printers, and cell phones shall be recycled;

- Offices shall promote recycled paper usage that contains at least 30 percent recycled content and is Green Seal Certified;
- A Central Recycling Center (CRC) shall be located on-site in an area where all of recycled materials are to be stored until transported to the processor, and will include roll-off containers for separation of various recycling commodities;
- The Project shall provide an on-site baler for all cardboard and newspaper, equipment to crush glass items and cans, and compactors for all other waste to minimize volumes;
- The Project shall provide bulk dispensing systems throughout the property for toiletry items such as soaps and shampoos to minimize packaging; and
- The Project shall provide cloth towel rolls or hand dryers in common area restrooms instead of paper towels.

5.14.3.7 Residual impacts

The Project's relatively minor increase in solid waste disposal would not result in unavoidable adverse impacts regarding landfill capacity, as in-County landfills have ample daily permitted capacity for Project solid waste disposal. For long-term planning, the IWMP has identified scenarios that would provide adequate disposal capacity throughout the planning period (2026) for cumulative growth within the County. Additionally, with implementation of the State's disposal reduction goals expressed by AB 341, the operational periods of existing facilities would be extended further. Therefore, adequate capacity would be available for solid waste disposal from the Project and related projects in the nearby cities of Malibu and Agoura Hills as listed in Section 4.0. With implementation of mitigation measure MM5.14.3-1, requiring a recycling program be followed during operations, the Project's contribution to those impacts would not be cumulatively considerable and thus residual impacts would be less than significant.

5.14.4 ENERGY

This section addresses the Project's impacts related to energy supply and distribution provided by local or regional utilities. These impacts are evaluated based on the existing supply and current consumption rates, and the estimated demand that would be created with implementation of the Project.

5.14.4.1 Existing Conditions

Electricity

California's in-state electricity generation system generates more than 200,000 gigawatt-hours each year, which is transported over the state's 32,000 miles of transmission lines. In 2011, California produced 70% of the electricity it used; the rest was imported from the Pacific Northwest (10%) and the U.S. Southwest (20%). Natural gas is the main source for electricity generation at 45% of the total in-state electric generation system power.[26]

Southern California Edison (SCE) currently supplies electricity to the existing Malibu Golf Club. As shown in **Table 5.14.4-1**, electricity usage in the SCE planning area has decreased since 2008, with a total usage in 2011 of 95,819 million kilowatt hours.[27] Electricity consumption in Los Angeles County (from all electrical utilities) has also decreased over the same period with a total countywide consumption in 2011 of 345,968 million kilowatt hours.[28]

Table 5.14.4-1
SCE Planning Area Electricity Consumption [a]

Year	Ag & Water Pump	Commercial Building	Commercial Other	Industry	Mining & Construction	Residential	Streetlight	Total Usage
2007	4,791	37,204	5,082	19,225	2,921	31,742	701	101,666
2008	5,235	38,367	5,162	18,574	2,980	32,580	721	103,620
2009	5,582	37,192	4,938	16,456	3,600	31,924	554	100,247
2010	5,211	36,098	4,865	16,627	3,374	30,664	527	97,366
2011	4,251	35,503	4,939	16,377	3,101	31,138	509	95,819

[a] Units expressed in Millions of kWh
Source: California Energy Commission

Table 5.14.4-2 shows the estimated current electrical consumption of the existing Malibu Golf Club and associated facilities. The South Coast Air Quality Management District (SCAQMD) provides the generation rates used in these calculations.[29] The estimations presented in Table 5.14.4-2 do not include electrical use on the golf course or the existing caretaker's residence, as these components would not be expected to substantially differ in electricity consumption under the Project.

[26] California Energy Commission, Energy Almanac, http://energyalmanac.ca.gov/electricity/, accessed November 14, 2012.
[27] California Energy Commission, Energy Consumption Data Management System, http://ecdms.energy.ca.gov/elecbyplan.aspx, accessed October 29, 2012.
[28] California Energy Commission, Energy Consumption Data Management System, http://ecdms.energy.ca.gov/elecbycounty.aspx, accessed November 14, 2012.
[29] South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993. Table A9 - 11 – A.

Table 5.14.4-2
Existing Conditions Electricity Usage

Land Use	Size Sq. Ft.	Factor kWh/Sq. Ft./Year	Annual Generation (kWh/Year)
Malibu Golf Club	12,475 sq. ft.	10.50	130,988
Maintenance sheds	1,490 sq. ft.	10.50	15,645
Total Electricity Consumption			**146,633**
Source: South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993.			

Natural Gas

The Project site is not currently served by natural gas infrastructure. The existing Malibu Golf Club consumes propane for heating and cooking uses, which is commonly the fuel provided for such uses by developments in rural areas. Propane supplies are delivered to the site by truck and stored in onsite tanks. The current purveyor of propane to the site is Amerigas. Although propane is a component of natural gas in its raw form, it differs from natural gas in energy content per volume.

Unlike natural gas, propane is an unregulated commodity in California (except for storage and safety issues which are regulated), with prices set by supply and demand. The State does not collect data on the supply or consumption of propane.[30]

The Project would continue to use propane for heating uses, and would store it onsite in tanks that would be relocated as part of the Project. As the site would not connect to infrastructure for a natural gas utility, the Project would have no impact in this regard. Therefore, this analysis of the Project's impacts to energy utilities will focus on electricity use.

5.14.4.2 Regulatory Setting

State

Senate Bill 1389

SB 1389 (Public Resources Code Sections 25300–25323), passed by the State Legislature in 2002, requires the development of an integrated plan for electricity, natural gas, and transportation fuels. The California Energy Commission must adopt and transmit to the Governor and Legislature an Integrated Energy Policy Report every two years. The last report completed is the 2011 Integrated Energy Policy Report, which provides policy recommendations to conserve resources, protect the environment, ensure reliable, secure, and diverse energy supplies, enhance the state's economy, and protect public health and safety. The California Energy Commission recently released a Notice of Request for Public Comments on the Draft 2013 Integrated Energy Policy Report Scoping Order to be used in the preparation of the 2013 Integrated Energy Policy Report

[30] California Energy Commission, Energy Almanac http://www.energyalmanac.ca.gov/propane/index.html#intro, accessed November 28, 2012.

Assembly Bill 32

AB 32 (Health and Safety Code Sections 38500–38599), also known as the California Global Warming Solutions Act of 2006, commits the State to achieving the following:

- Year 2000 greenhouse gas (GHG) emission levels by 2010; and
- Year 1990 levels by 2020.

To achieve these goals, AB 32 tasked the CPUC and California Energy Commission with providing information, analysis, and recommendations to the California Air Resources Board (CARB) on ways to reduce GHG emissions in the electricity and natural gas utility sectors.

Title 24, 2008 Building Energy Efficiency Standards

California Code of Regulations, Title 24, Part 6 provides Statewide energy efficiency requirements for new construction, additions, or alterations of buildings. These requirements pertain to appliance and equipment efficiency ratings, as well as to building envelope requirements.

Title 24, 2010 California Green Building Standards Code (CALGreen)

California Code of Regulations, Title 24, Part 11, the *California Green Building Standards Code*, also known as the CALGreen Code, provides regulations to improve public health, safety and general welfare by enhancing the design and construction of buildings to reduce negative impacts.

Divisions 4.2 and 5.2 of the CALGreen Code state that for the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards for residential and non-residential buildings. However, both sections note that the Code's intent is to encourage buildings to achieve exemplary performance in the area of energy efficiency. For the purposes of energy efficiency standards, specifically, a green building should achieve at least a 15 percent reduction in energy usage when compared to the State's mandatory energy efficiency standards.

Local

Los Angeles County Green Building Program

In 2008, Los Angeles County adopted the Green Building Program, which included the Drought-Tolerant Landscaping, Green Building, and Low Impact Development Ordinances. County Code Section 22.52.2130 C.1 states all projects shall be designed to consume at least fifteen (15) percent less energy than allowed under the 2005 Update to the California Energy Efficiency Standards. In addition, Section 22.52.2130 D.2 requires any hotel/motel, lodging house, non-residential or mixed-use building, or first-time tenant improvement, with a gross floor area of at least 10,000 square feet but less than 25,000 square feet, shall retain a LEED™ accredited professional or other green building professional, approved by the Director and the Director of Public Works to be part of the project design team. Such a project shall achieve the equivalency of LEED™ certification.

In 2010, in response to the passage of CALGreen (2010 California Green Building Standards Code), the Board of Supervisors adopted the Los Angeles County Green Building Standards Code (Title 31). Staff also recommended a comprehensive revision to Title 22 and amendments to Title 31, which included an update to the Green Building Program Technical Manual. These revisions are currently under development, and are intended to provide clarity for the development community, ensure consistency with the State and other local agencies, and advance sustainable construction standards in the County.

Planning staff has recommended the Drought Tolerant Landscaping requirements of Title 22 be repealed and replaced with amendments to Title 31 (Green Building Standards Code); and that, with the exception

of the tree planting requirements, all provisions of the Green Building Ordinance be repealed from Title 22 and replaced with amendments to Title 31.

Los Angeles County General Plan

Policy No. 2: Support the conservation of energy and encourage the development and utilization of new energy sources including geothermal, thermal waste, solar, wind and ocean-related sources.

Policy No. 3: Promote the use of solar energy to the maximum extent possible.

Malibu Local Coastal Program

There are no Malibu LCP policies regarding energy supplies or use that are applicable to the Project.

5.14.4.3 Threshold of Significance

Based on the County of Los Angeles Environmental Checklist Form (Initial Study), the Project would have a significant impact if the Project would:

- Conflict with Los Angeles County Green Building Ordinance (L.A. County Code Title 22, Ch. 22.52, Part 20 and Title 21, § 21.24.440) or Drought Tolerant Landscaping Ordinance (L.A. County Code, Title 21, § 21.24.430 and Title 22, Ch. 22.52, Part 21);
- Involve the inefficient use of energy resources; or
- Create energy utility (electricity, natural gas, propane) system capacity problems, or result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

5.14.4.4 Project Impacts

The Project would consume an estimated 2,786,279 kWh of electricity annually, as shown in **Table 5.14.4-3**, based on usage factors provided by South Coast Air Quality Management District (SCAQMD).[31] This would be an annual increase of 2,639,646 kWh over the estimated electricity use of the existing Malibu Golf Club shown in Table 5.14.4-2. The energy consumption rates provided by SCAQMD were compiled in 1993, prior to certain regulations that set higher efficiency standards for new development. For example, the County's Green Building Program Section 22.52.2130 C.1 (adopted in 2008) requires that the Project be designed to consume at least fifteen (15) percent less energy than allowed under the 2005 Update to the California Energy Efficiency Standards. Notwithstanding any further reductions in building energy consumption that have occurred in the 15 years from the publication of the SCAQMD CEQA Handbook and the 2005 Update to the California Energy Efficiency Standards, the 15 percent reduction required by the County's Green Building Program would reduce the Project's estimated electricity usage to approximately 2,243,699 kWh annually.

SCAQMD reports that new consumption rates are being prepared for an updated CEQA Air Quality Handbook, however, the new document has not been completed at this time. Therefore, the estimated usage presented in Table 5.14.4-3 would be considered conservative by today's building standards. As seen in Table 5.14.4-1, SCE supplied 95,819 million kWh of electricity in 2011, of which this Project's estimated increase in annual demand of 2,639,646 kWh would represent less than 0.003 percent.

[31] South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993. Table A9 - 11 – A.

Table 5.14.4-3
Project Electricity Consumption

Land Use	Size Sq. Ft.	Factor kWh/Sq. Ft./Year	Annual Demand (kWh/Year)
Bungalows	109,140	9.95	1,085,943
Malibu Institute			
Educational Institution	41,097	11.55	474,670
Cafeteria	7,123	47.45	337,986
Clubhouse			
Dining Room	2,780	47.45	131,911
Offices	2,844	12.95	36,830
Fitness/spa facilities	5,954	10.50	62,517
Other	18,569	10.50	194,975
Golf Pro Shop			
Retail	10,184	13.55	137,993
Grill	1,920	47.45	91,104
Security/Information	447	12.95	5,789
Maintenance Building	10,500	10.50	110,250
Warehouse	4,623	4.35	20,110
Cart Barn	9,162	10.50	96,201
Total Electricity Consumption			**2,786,279**
Source: South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993.			

As stated in Section 3.0, Project Description, the Project would incorporate energy efficiency features with the goal of achieving LEED™ Platinum certification or equivalent, which would reduce the Project's electricity demand compared to buildings constructed with conventional materials and techniques. These features include structures and appliances that minimize energy use, as well as water conservation features such as providing an efficient irrigation system, removal of non-native trees and providing drought tolerant landscaping, replacing the existing golf course turf with drought tolerant grasses, and use of recycled water generated onsite for irrigation purposes. While no studies were available for this analysis that compare the energy use of a LEED™ Platinum building to the demand rates reported by the 1993 SCAQMD CEQA Air Quality Handbook, a LEED™ Platinum building would typically consume approximately 50 percent less energy than a conventional building, depending on location (due to weather variables). Based on the temperate climate of coastal California, by providing efficiency measures to receive LEED™ Platinum certification or equivalent, which is the highest level of certification for sustainability, the Project would be expected to achieve a fifty-percent reduction in electricity demand compared to a similar building using conventional construction techniques. For this analysis, the Project's electricity use can be conservatively estimated to be 50 percent less than the total reported in Table 5.14.4-3, which is based on the 1993 demand rates reported by SCAQMD. As such, by incorporating energy efficiency features to achieve a LEED™ Platinum certification or equivalent, the Project's electricity usage would be conservatively estimated to be approximately 1,393,140 kWh/year. This estimate would likely be even less due to additional efficiency improvements in conventional building construction that have become standard practice over the twenty-year period since the publication of the SCAQMD energy usage estimates.

In addition to constructing energy efficient buildings, the Project would generate electricity onsite using photovoltaic panels to be installed on top of the proposed parking lot shade structures to further reduce electricity demands from a utility provider. This electricity would be consumed onsite for Project operations. The Project would also continue to be connected to the local electrical grid by way of a service connection with SCE. This connection with SCE would allow the Project to draw from SCE generated electricity to supplement electric demands that exceed the supplies generated onsite. A preliminary evaluation of the site's potential solar energy production indicated that solar panels could be installed atop the parking lot shade coverings as well as rooftops of some of the proposed buildings such as the warehouse, cart storage, and maintenance buildings. The 1.3-acre parking lot could accommodate solar panel coverage of approximately fifty percent of the area, or 0.65 acre of coverage, and rooftop area would provide 0.75 acre of solar panel coverage. This coverage area would allow solar electricity generation of approximately 615,000 kWh/year. This would represent approximately 44 percent of the 1,393,140 kWh/year estimated Project usage based on a 50-percent reduction in demand shown in Table 5.14.4-3 by implementation of efficiency features to qualify for the highest level of certification for sustainability. As the electricity usage estimates provided in Table 5.14.4-3 are based on 1993 building standards, this total estimate would be overstated based on efficiency improvements mandated in current regulations such as the County's Green Building Program Section 22.52.2130 C.1 (adopted in 2008) that requires projects be designed to consume at least 15 percent less energy than allowed under the 2005 Update to the California Energy Efficiency Standards. By applying a 15 percent reduction to energy use estimates in Table 5.14.4-3, and then reducing that amount by fifty percent estimated to be reduced by efficiency features incorporated to achieve LEED™ Platinum certification or equivalent, the solar generation potential of 615,000 kWh/year would equate to approximately 52 percent of the Project's total demands. As the Project would replace the existing Malibu Golf Club structures, which consume approximately 146,633 kWh/year as shown in Table 5.14.4-2, the Project's net increase in electricity demand from a utility provider would be approximately 422,536 kWh/year.

Threshold: Would the Project conflict with Los Angeles County Green Building Ordinance (L.A. County Code Title 22, Ch. 22.52, Part 20 and Title 21, § 21.24.440) or Drought Tolerant Landscaping Ordinance (L.A. County Code, Title 21, § 21.24.430 and Title 22, Ch. 22.52, Part 21)?

As discussed above, the Project would incorporate energy efficiency features with the goal of achieving LEED™ Platinum certification or equivalent for proposed structures, which would result in greater efficiencies and more sustainable development than required by the Los Angeles County Green Building Ordinance. As such, the Project would not conflict with this ordinance and impacts related to the Project's compliance with the Los Angeles County Green Building Ordinance would be less than significant (**Class III**).

The Project description provided in Section 3 of this document discusses the incorporation of drought tolerant native trees and landscaping including the replacement of turf grass on the existing golf course with drought tolerant grass varieties, which would comply with the Drought Tolerant Landscaping Ordinance. The Project would also remove approximately 1,590 non-native trees to reduce irrigation demands on the site. As such, the Project would not conflict with the Los Angeles County Drought Tolerant Landscaping Ordinance and impacts related to compliance with that ordinance would be less than significant (**Class III**).

Threshold: Would the Project involve the inefficient use of energy resources?

The Project would incorporate energy conservation features with the goal of achieving LEED™ Platinum certification or equivalent including a more efficient irrigation system, provide a shuttle service to area

airports for overnight guests, and install pathways for internal circulation between each proposed structure by foot or electric cart to minimize energy use onsite. Therefore, impacts related to inefficient use of energy resources would be less than significant (**Class III**).

Threshold: Would the Project create energy utility (electricity, natural gas, propane) system capacity problems, or result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Based on the minor increase in electricity demands by the Project relative to SCE's current production of electricity, the Project's electricity demands would not exceed the capacity of SCE facilities to supply them. Additionally, the Project would produce electricity onsite to meet approximately half of its own demand by installing solar panels above parking lot shade structures and some rooftops, the impacts of which are discussed in Section 3, Project Description, and throughout this document as applicable. As such, the Project would not create energy utility system capacity problems, or result in the construction or expansion of new energy facilities by a public utility and impacts related to the energy utility facilities would be less than significant (**Class III**).

5.14.4.5 Cumulative impacts

The Project's electricity consumption would be supplied by a combination of SCE generated supplies and solar generated electricity produced onsite. The Project's overall electricity demand, as conservatively estimated in Table 5.14.4-3 based on the 1993 SCAQMD CEQA Air Quality Handbook, without considering additional reductions from increased efficiencies in conventional construction materials and techniques, regulatory reductions in building energy use, efficiency features incorporated to achieve LEED™ Platinum certification or equivalent, or the current electricity demands of the existing Malibu Golf Club buildings, would be less than 0.003 percent of SCE consumption in 2011. By providing approximately 50 percent of the electrical demand onsite, constructing buildings with enhanced efficiency features to achieve the highest level of certification for sustainability, and accounting for the reduction of the estimated current usage onsite, the Project would have a net increase in demand of approximately 0.0004 percent, which would not represent a significant contribution to cumulative electricity supply impacts (**Class III**).

5.14.4.6 Mitigation Measures

There are no mitigation measures required regarding energy utility supplies.

5.14.4.7 Residual impacts

No adverse energy supply impacts that would require new or upgraded facilities for regional utilities would result from implementation of the Project, which proposes to provide approximately 50 percent of its electricity needs onsite with photovoltaic panels. Additionally, the Project's buildings and accommodations would incorporate features that enhance sustainability and energy efficiency with the goal of achieving LEED™ Platinum certification (or equivalent). Therefore, the Project would not result in unavoidable adverse impacts regarding energy supply.

6.0 ALTERNATIVES

6.1 INTRODUCTION

CEQA indicates the purpose of an EIR is to identify the significant effects of a project on the environment, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided.[1] CEQA requires an EIR to describe a reasonable range of alternatives to a project, including in many cases an alternative location of the project,[2] which would feasibly attain most of the project's basic objectives but would avoid or substantially lessen any of the project's significant environmental impacts.[3] CEQA also requires an EIR to evaluate the comparative merits of the proposed alternatives. This section of this DEIR analyzes alternatives to the Project and compares the potential impacts of each alternative with the Project's potential environmental impacts.

The CEQA Guidelines emphasize the selection of project alternatives should be based primarily on the ability of the alternative to reduce significant impacts of a project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."[4] An EIR need not consider every conceivable alternative to a project, but rather the range of alternatives should be guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are analyzed.[5]

An EIR generally must contain "a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences."[6] The analysis of environmental effects of project alternatives, however, need not be as thorough or detailed as the analysis of the project itself. Rather, the EIR shall include "sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project."[7]

In selecting project alternatives for analysis, potential alternatives should be feasible. "Feasible" is defined as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors."[8] CEQA Guidelines Section 15126.6(f)(1) states:

> *Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site.*

Public Resources Code Section 21002 states: "It is the policy of the State that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects.... [I]n the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof."

1Public Resources Code Section 21002.1 (a).
2 CEQA Guidelines Section 15126.6(f)(2)(A) states; "only locations that would avoid or substantially lessen the significant effects of the project need be considered for inclusion on the EIR. If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR."
3 CEQA Guidelines Section 15126.6(a).
4 CEQA Guidelines Section 15126.6(b).
5 CEQA Guidelines Section 15126.6(f).
6 CEQA Guidelines Section 15151.
7 CEQA Guidelines Section 14126.6(d).
8 Public Resources Code Section 21061.1; CEQA Guidelines Section 15364.

Alternatives considered but rejected as infeasible during the scoping process should be identified along with a reasonably detailed discussion of the reasons and facts supporting the conclusion such alternatives were infeasible.

Section 15126.6(f)(1) provides additional factors that may be taken into account when addressing the feasibility of alternatives. These factors include site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the potential alternative sites considered.

The CEQA Guidelines require the analysis of a "No Project" Alternative, which evaluates the continuation of the existing conditions at the time the Notice of Preparation is published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved,[9] and an evaluation of alternative location(s) for the project, if feasible. Of the alternatives analyzed in an EIR, an environmentally superior alternative must be designated. If the environmentally superior alternative is the No Project Alternative, then the EIR must identify an environmentally superior alternative among the other alternatives.[10]

Under CEQA, an EIR must include an analysis of a "No Project" Alternative, which discusses the existing conditions at the time the notice of preparation is published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved.[11]

As indicated above, the intent of this alternatives analysis is to try to reduce the Project's significant impacts. As evaluated in Section 5 of this DEIR, the Project as proposed would not result in a significant and unavoidable impact. Nevertheless, the following alternatives have been selected for analysis in this DEIR, as they may reduce an impact that is either less than significant or may be mitigated to less than significant as identified in this DEIR.

Based on these potentially significant environmental impacts and the objectives established for the Project (listed in Section 3.0, Project Description, Goals and Objectives, in this DEIR), as well as consideration of the local plans and zoning designations that guide development of the Project site, the following alternatives to the Project were selected for analysis:

1. Alternative 1 – No Project/No Build – The proposed Malibu Institute and remodeled golf course would not be implemented and existing Malibu Golf Club would remain unchanged;
2. Alternative 2 – Residential Development – The proposed Project would not be implemented and the existing Malibu Golf Club would remain unchanged and the remaining lots in the 650-acre property would be developed with single-family residential estates. Based on General Plan Zoning designations and topographic or accessibility constraints, a total of 29 residential estates would be developed with implementation of Alternative 2. For this analysis, it has been assumed that the residential estates would average approximately 3,000 square feet in size. Under this alternative, the golf course would not be remodeled and therefore improvements related to water conservation, water quality, and non-native aquatic species eradication would not occur. Additionally, due to limited suitable development area, it is assumed that two existing structures in the northern portion of the Project site, consisting of an abandoned residence and a caretaker's house, would be removed to accommodate the planned estates and associated landscaping;

9 CEQA Guidelines Section 15126.6(e)(2).
10 CEQA Guidelines Section 15126.6(e)(2).
11 CEQA Guidelines Section 15126.6(e)(2).

3. Alternative 3 – Original Malibu Institute Proposal (2011) – The Malibu Institute educational retreat would be implemented under this alternative, however, a total of 626,904 square feet of structures would be developed and the redesigned golf course would consist of only six fairways, reducing the total golf course acreage, allowing for restoration of approximately 40 acres of the Trancas Canyon Creek headwaters. As this alternative would significantly alter the golf course and provide habitat restoration, it is assumed that implementation of Alternative 3 would likely incorporate improvements related to water conservation, water quality, and non-native aquatic species eradication within the existing onsite ponds. This alternative would include a 118,395 square foot conference and event center, 46,485 square feet of meeting rooms, 58 guest bungalow units (four bedrooms each), an underground parking facility, a 5,720 square foot administration/security building, as well as a wellness center and a golf pro shop. Under this alternative, two existing structures in the northern portion of the Project site, consisting of an abandoned residence and a caretaker's house, would remain as they currently exist; and
4. Alternative 4 – Reduced Footprint – The Malibu Institute would be implemented as proposed, however, no bungalows would be located on the former helipad, and six of the single bungalow units would be replaced with the double-unit bungalow structures (Bungalow Floor Plan B2) for an overall reduction of 1,500 square feet of construction. Implementation of this alternative would therefore result in a greater average building height as the Bungalow Floor Plan B2 is approximately five to twelve feet higher than the single bungalow units that would be replaced.

These alternatives are discussed below, followed by analyses of each of the alternatives impacts relative to the Project that is proposed, and the identification of the environmentally superior alternative.

6.2 PROJECT OBJECTIVES AND GOALS

Pursuant to CEQA, a potential alternative must have the potential to attain most of the basic objectives of the Project. As stated in Section 3.0, Project Description, the objectives and goals of the Project are as follows:

- Establish a financially viable sports-oriented educational retreat, which provides educational, research and employment opportunities, and invigorates the local economy of unincorporated western Los Angeles County.
- Provide a comfortable, relaxing and inspiring environment in which educational institutions, governmental organizations, non-governmental organizations, business leaders and the public can conduct meetings and conferences.
- Provide visitor-serving overnight accommodations within individual bungalow units that would include common areas within each unit to provide a casual meeting space for discussion or study groups of Project guests that would be attending conferences or on-site functions together.
- Introduce a pattern of land uses compatible with existing environmental resources and community character, while improving the social, environmental and economic well-being of overnight guests, visitors, and the community.
- Incorporate sustainable and green design features with the goal of achieving LEED™ Platinum certification (or equivalent) for all new buildings on the Project site.
- Protect environmentally sensitive native plant and animal species by dedicating open space areas on the Project site that contain sensitive and native habitat.
- Preserve and enhance the scenic beauty of the Santa Monica Mountains.
- Protect and expand access to open space recreational opportunities and resources, including incorporation of sustainable visitor-serving accommodations, which would be available for visitors of the Santa Monica Mountains National Recreation Area.

- Protect a unique public recreational resource of unincorporated western Los Angeles County consisting of an 18-hole golf course located within the Santa Monica Mountains and in the vicinity of the Santa Monica Mountains National Recreation Area.
- Construct proposed site improvements within a clustered area to minimize off-site view impacts while locating visitor-serving facilities including overnight accommodations in a manner that maximizes guests' views of the remodeled golf course and natural areas of the Santa Monica Mountains and provides separation between bungalow structures as feasible within the development area.
- Provide an all-inclusive retreat destination in the Santa Monica Mountains with all visitor-serving components connected by a network of paths for pedestrian or electric cart use, so guests could access those Project features without the need for personal vehicle use.
- Design and construct a state-of-the-art 18-hole golf course using features and standards that will minimize impacts to the existing environment for sustainable coexistence between golf and nature.
- Recognize and avoid natural hazards, and protect paleontological, archaeological and historic resources.
- Protect the unique cultural and social characteristics of the region's rural residential communities.
- Eradicate non-native aquatic species in the man-made ponds onsite.
- Improve water quality in the portion of Trancas Canyon Creek leaving the Project site.

The Project would provide meeting rooms and classroom facilities within a 48,164-square foot conference building, with an emphasis on supporting research and educational programming. Programming for these activities would consist of educational conferences, seminars, and lectures, and would be available for use by educational institutions and other organizations, including charitable foundations. This facility also could also host seminars, banquets, or receptions. The University of Southern California would participate in collaboration with the Malibu Institute on research projects, academic conferences and symposia, and would offer advice on development of a professional and/or continuing education curriculum.

6.3 SELECTION AND DESCRIPTION OF THE ALTERNATIVES

6.3.1 Criteria For Selecting Alternatives

As stated above, pursuant to CEQA, an alternative must have the potential to attain most of the basic objectives of the Project.

In addition, a primary consideration in defining an alternative is whether the alternative has the potential to reduce or eliminate significant impacts as compared to the Project. The impact analysis, as detailed in Section 5.0 of this DEIR, concluded that the Project would not result in significant and unavoidable impacts, as all environmental impacts would be less than significant with implementation of mitigation.

6.3.2 Alternatives Considered But Rejected

CEQA Guidelines Section 15126.6(c) states:

> *An EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination…. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.*

A brief description of alternatives considered but rejected follows.

Alternate Sites

Development of the Project is dependent upon the utilization of the Applicant's property. There are no offsite locations in the Santa Monica Mountains that could feasibly be acquired by the Applicant that could be feasibly developed as a retreat and 18-hole golf course while at the same time resulting in fewer or less significant environmental effects as compared to the Project site. The Project site is already developed with a golf course facility, surface parking, sediment and detention basins, and buildings consistent with its zoning and existing Conditional Use Permit. Any other location would intrude into undeveloped areas of the Santa Monica Mountains and would require significantly more construction, including significantly more grading, and would therefore have greater environmental impacts than the proposed remodeling of an existing facility in a manner consistent with its existing use. Therefore, the option to relocate the Project elsewhere within the Santa Monica Mountains was rejected.

Residential Subdivision Development and Removal of Golf Facility

Replacing the existing golf course with a residential development based on allowable densities as provided by the Malibu Land Use Plan would introduce approximately 48 to 113 residences to the Project site. The total number of allowable residences is difficult to determine as the land use designation lines do not correspond with the parcel lines, nor do they consider ESHA limitations. The estimated number of single-family residences assumes half the Project site is M2-mountain lands (1 du per 20 acres), and the other half is either RL1 (1 du per 10 acres) or a combination of RL1 and RL3 (1 du per 2 acres). This alternative would not be consistent with many of the Project objectives and would not be an appropriate land use for this site. Therefore, the option to eliminate the golf course and build out the site with residences was rejected.

6.3.3 Alternatives Selected for Analysis

The CEQA Guidelines require an EIR to consider a range of alternatives that could feasibly achieve the objectives of the Project. The discussion should focus on alternatives that would avoid or substantially lessen adverse impacts associated with the Project.

In accordance with the CEQA Guidelines, four alternatives to the Project have been selected and analyzed in this DEIR. **Table 6-1** provides a comparison of the level of development related to each alternative.

- Alternative 1: No Project – The proposed Malibu Institute and remodeled golf course would not be implemented and existing land uses would remain unchanged;
- Alternative 2: Residential Development – The proposed Project would not be implemented, the existing Malibu Golf Club would remain unchanged, and the remaining lots in the 650-acre property would be developed with single-family homes based on underlying General Plan land use and zoning designations and topographic or accessibility constraints.
- Alternative 3: Original Malibu Institute Proposal (2011) – The Malibu Institute educational retreat would be implemented under this alternative, however, a total of 626,904 square feet of structures would be developed and the redesigned golf course would consist of six fairways, reducing the total golf course acreage, allowing for restoration of approximately 40 acres of the Trancas Canyon Creek headwaters. This alternative would include a 118,395 square foot conference and event center, 46,485 square feet of meeting rooms, 58 guest bungalow units (four bedrooms each), an underground parking facility, a 5,720 square foot administration/security

building, as well as a wellness center and a golf pro shop.

- Alternative 4: Reduced Footprint – The Malibu Institute would be implemented as proposed, however, no bungalows would be located on the former helipad, and six of the single bungalow units would be replaced with the double-unit bungalow structures (Bungalow Floor Plan B2) for an overall reduction of 1,500 square feet of construction. This alternative would accommodate the same number of guests as would the Project, and would also remodel the golf course in the same manner as the Project, which would include water conservation features, remove palms and non-native trees, and improve water quality in the onsite ponds to eliminate non-native aquatic species. This alternative would also remove the abandoned residence structure in the northern portion of the property.

Table 6-1
Comparison of Land Uses Under the Alternatives

	Malibu Institute Project	Alternative 1 No Project	Alternative 2 Residential Development	Alternative 3 Original Malibu Institute Project (2011)	Alternative 4 Reduced Footprint
Land Uses					
Malibu Institute	48,164 sf	-	-	118,395 sf	48,164 sf
Guest Bungalows (40 Units)	109,140 sf (40 Units)	-	-	282,378 sf (58 Units)	107,640 sf (40 Units)
Security/Information Building	120 sf	-	-	5,720 sf[a]	120 sf
Golf Pro Shop/Grill	12,104 sf	-	-	5,720 sf	12,104 sf
Cart Barn	9,162 sf	-	-		9,162 sf
Clubhouse	30,147 sf	12,475 sf	12,475 sf	16,500 sf[b]	30,147 sf
Maintenance Building	10,500 sf	7,000 sf	7,000 sf	5,000 sf	10,500 sf
Warehouse	4,623 sf	-	-	-	4,623 sf
Pool Showers	800 sf	-	-	-	800 sf
Meeting Rooms	-	-	-	46,485 sf	-
Sub-grade Parking Structure	-	-	-	145,906 sf	-
Sewer Treatment Building	-	-	-	800 sf	-
Caretaker's Residence [e]	-	875 sf-	-	-	-
Abandoned Residence [c]	-	4,160 sf	-		-
Residential Estates	-	-	87,000 sf[d] 29 d.u.	-	-
Totals	224,760 sf	24,510 sf	106,475 sf	626,904 sf	223,260 sf
Golf Course	107 acres	118 acres	118 acres	40 acres	107 acres

[a] Administration/Security building
[b] Wellness Center
[c] Alternative 2 would likely place new residences at the site of an existing abandoned residence and a caretaker's residence, thus removing them from the overall development square footage.
[d] Assumes 3,000 sf per residence
[e] Except for the no project alternative, the existing 875 sf caretaker's residence is not included in the totals as the Project would not modify or remove this structure.

The comparison of feasible alternatives discussed below has been included to provide sufficient

information about each alternative to allow for meaningful evaluation, analysis, and comparison with the Project and its objectives. In the analysis and **Table 6-2**, the potential impacts of the alternatives are compared with those expected to be generated by the Project.

Table 6-2
Comparison of Alternatives - Summary of Environmental Impacts

Environmental Issue	Proposed Malibu Institute Project	Alternative 1: No Project – Continues as an 18-hole Golf Course	Alternative 2: Residential Development	Alternative 3: Original Malibu Institute Project	Alternative 4: Reduced Footprint
Aesthetics					
Visual Resources	LTS	NI	LSAM (greater)	LTS (reduced)	LTS (greater)
Visual Character	LTS	NI	LSAM (greater)	LTS (greater)	LTS (greater)
Lighting	LTS	NI	LSAM (greater)	LTS (reduced)	LTS (same)
Air Quality					
Air Quality - Construction	LSAM	NI	LTS (reduced)	LTS (greater)	LSAM (same)
Air Quality - Operation	LTS	NI	LTS (reduced)	LTS (greater)	LTS (same)
Biological Resources					
Biological Resources	LSAM	NI	LSAM (greater)	BI	LSAM (reduced)
Cultural Resources					
Paleontological Resources	LSAM	NI	LSAM (greater)	LSAM (same)	LSAM (same)
Archaeological Resources	LSAM	NI	LSAM (greater)	LSAM (same)	LSAM (same)
Geology and Soils					
Geotechnical Hazards	LTS	NI	LSAM (greater)	LTS (same)	LTS (same)
GHG/Climate Change					
Greenhouse Gas Emissions	LTS	NI	LTS (greater)	LTS (greater)	LTS (same)
Hazards and Hazardous Materials					
Exposure - Construction	LSAM	NI	LSAM (same)	LSAM (same)	LSAM (same)
Exposure - Operations	LSAM	NI	LSAM (same)	LSAM (same)	LSAM (same)
Hydrology and Water Quality					
Drainage -Operation	LTS	NI	LSAM (greater)	LTS (reduced)	LTS (same)
Water Quality -Construction	LSAM	NI	LSAM (greater)	LSAM (same)	LSAM (same)
Water Quality -Operation	LSAM	NI	LSAM (greater)	LSAM (reduced)	LSAM (same)
Land Use					
Land Use Consistency	LTS	NI	LTS (same)	LTS (same)	LTS (same)
Land Use Compatibility	LTS	NI	LTS (same)	LTS (same)	LTS (same)
Noise					
Noise - Construction	LTS	NI	LTS (same)	LTS (same)	LTS (same)
Noise - Operation	LSAM	NI	LTS (same)	LSAM (same)	LSAM (same)
Public Services					
Fire	LSAM	NI	LSAM (greater)	LSAM (greater)	LSAM (same)
Police	LTS	NI	LTS (same)	LTS (same)	LTS (same)
Schools	NI	NI	LSAM (greater)	NI (same)	NI (same)
Recreation					

Environmental Issue	Proposed Malibu Institute Project	Alternative 1: No Project – Continues as an 18-hole Golf Course	Alternative 2: Residential Development	Alternative 3: Original Malibu Institute Project	Alternative 4: Reduced Footprint
On-site Recreation Facilities	LTS	NI	LTS (same)	LTS (greater)	LTS (same)
Off-site Recreation Facilities	LTS	NI	LTS (same)	LTS (same)	LTS (same)
Transportation/Traffic					
Traffic and Access	LSAM	NI	LSAM (reduced)	LSAM (greater)	LSAM (same)
Utilities					
Water Supply	LSAM	NI	LSAM (greater)	LSAM (greater)	LSAM (same)
Wastewater	LTS	NI	LTS (same)	LTS (same)	LTS (same)
Solid Waste	LSAM	NI	LSAM (reduced)	LSAM (greater)	LSAM (same)
Energy	LTS	NI	LTS (greater)	LTS (greater)	LTS (same)
NI – No Impact BI – Beneficial Impact LTS – Less Than Significant LSAM – Less Than Significant After Mitigation SI – Significant Impact					

6.4 ANALYSIS OF ALTERNATIVES

6.4.1 Alternative 1: No Project

As required by CEQA, this section analyzes a "No Project" alternative. Under the No Project Alternative, the Project would not be constructed. Specifically, the educational and meeting facilities, overnight accommodations in 40 bungalow units, clubhouse with fitness and spa facilities, restaurant and lounge, swimming pool, golf pro-shop and grill, and associated support facilities including a maintenance building, a golf cart storage barn, a warehouse, and a security/information building would not be developed at the existing Malibu Golf Club under this alternative.

This analysis of the No Project Alternative assumes the continuation of existing conditions notwithstanding economic viability issues of the existing facility. Under this alternative, the existing structures would remain unchanged, and no additional structures would be added to the Project site. The Malibu Golf Club would continue to be operated as a public 18-hole golf course with an associated clubhouse and restaurant facility. Approximately 1,590 trees of non-native species, including palm trees, planted during the original construction of the golf course would not be removed. The onsite ponds would not be cleaned out to remove non-native aquatic species and would not have pumps added for water circulation to reduce stagnation and improve water quality. Irrigation efficiency improvements would not be provided and the turf and landscaping would not be replaced with drought resistant varieties. An abandoned and dilapidated residence in the northern portion of the Project site would not be removed. All utility services would remain unchanged including the use of potable water for irrigation and the use of existing septic tank systems for onsite wastewater treatment. The existing uses would remain consistent with the current land use designation and zoning and the current Conditional Use Permit (CUP) would remain unchanged.

Relation to Project Objectives

As discussed below, Alternative 1 would result in the fewest number of environmental impacts compared to the Project and remaining alternatives. However, it would not meet the majority of the objectives of the Project. Specifically, Alternative 1 would not establish a financially viable sports-oriented educational retreat or provide visitor-serving accommodations, and would not redesign the golf course to include sustainability features such as more efficient irrigation and hybrid turf that reduces irrigation demands.

An economic feasibility study by Kibel Green, Inc., (KGI) indicates that the Property has incurred significant operating losses since 2007, resulting in a substantial loss on both the purchase price and cumulative net equity investment. Malibu Golf Associates, LLC (MGA) incurred additional economic losses based on the alternative yield it could have earned by investing its $10.5 million of equity in risk-free U.S. Treasury securities of comparable duration. KGI anticipates continued operating and economic losses if the Property continues to be operated as a golf course with limited amenities because of increased competition, the prolonged economic downturn, and negative golf industry trends. Substantial investment would be required to improve the competitiveness of the existing golf course operations and management. Such additional investment would be not justifiable in light of current golf industry and economic conditions and its investment in the Property to date. In fact, the Property under its existing use would be valued considerably less than the 2006 purchase price of $33,000,000 which was paid at the peak of the "real estate bubble" before property values collapsed in 2007 to 2009. For these reasons, KGI has concluded continued operation of Malibu Golf Club is not economically feasible under its existing use as a golf course-only operation.

Environmental Analysis

All of the environmental impacts associated with the Project would be avoided or reduced under Alternative 1. However, all of the environmental benefits of the Project would not be achieved. As discussed above, the Project would not result in any environmental impacts that would be significant following the implementation of feasible mitigation measures. As such, this alternative could not reduce any significant and unavoidable impacts, as none would occur under the Project as proposed. Each of the alternative's impacts are evaluated as compared to the baseline conditions, which are the current conditions.

Aesthetics

Alternative 1 would have no impact regarding visual impacts, as there would be no change to existing conditions. Public views of the Malibu Golf Club buildings and golf course would not change, and the Malibu Golf Club would not obstruct views of visual resources. Under this alternative, the existing parking lot lighting, which can be seen from offsite, would remain unchanged. The Project potentially would have a reduced impact compared to this alternative as all outdoor lighting for the Project would be limited in terms of shielding, wattage, and hours of operation except where necessary for safety.

Air Quality

Alternative 1 would have no impact regarding air quality, as mobile and stationary sources of emissions would remain unchanged.

Biology

Alternative 1 would have no impact regarding biology, as no undisturbed areas would be impacted. However, this alternative would not achieve the environmental benefit from cleaning out the ponds on the

golf course to remove non-native aquatic species and improve water quality. Also, the non-native vegetation, including 1,590 non-native trees, would not be removed from the golf course.

Cultural

Alternative 1 would have no impact regarding cultural resources as no grading would take place and no demolition would occur.

Geology

Alternative 1 would have no impact regarding geology, as no additional structures would be built and no additional population would be introduced to the area. As such, this alternative would not result in additional risk of loss of life or property due to geologic hazards.

GHG/Climate Change

Alternative 1 would have no impact regarding Global Climate Change, as no new sources of emissions would be incorporated.

Hazards and Hazardous Materials

Alternative 1 would have no impact regarding hazards and hazardous materials as no ground disturbance would occur and onsite materials and the methods of storage and handling would remain unchanged.

Hydrology and Water Quality

Alternative 1 would have no impact regarding hydrology and water quality as no new impervious surfaces would be introduced and no changes in the amount of irrigation, fertilization, or other potential sources of water quality impairment would be changed.

Land Use

Alternative 1 would have no land use impacts, as no new land uses would be introduced. This evaluation makes the assumption the CUP under which the existing facility operates would be extended after its expiration in 2019 for the foreseeable future.

Noise

Alternative 1 would have no impact regarding noise issues, as no new sources of noise would be introduced.

Public Services – Fire

Alternative 1 would have no impact regarding fire protection services.

Public Services – Police

Alternative 1 would have no impact regarding police protection services.

Recreation

Alternative 1 would have no impact regarding recreation facilities. However, this alternative would not provide visitor-serving accommodations that could increase the availability of such facilities for visitors to the Santa Monica Mountains Recreation Area.

Transportation/Traffic

Alternative 1 would have no impact regarding traffic.

Utilities – Water Supply

Alternative 1 would have a greater impact regarding water use as irrigation efficiencies of the Project would not be implemented, and use of recycled water from the Project's onsite wastewater treatment plan would not be introduced to the site. As such, Project-related reduction in imported water demands would not be realized with Alternative 1.

Utilities – Wastewater

Alternative 1 would have no impact regarding wastewater services, which would continue to be treated by onsite septic tanks.

Utilities – Solid Waste

Alternative 1 would have no impact regarding solid waste as the amount generated by the Malibu Golf Club would not change.

Utilities – Energy

Alternative 1 would have no impact regarding energy use or supply.

6.4.2 Alternative 2 – Residential Development

Under Alternative 2, the County's existing land use designations for the Project site would be built-out within the limitations of the site's topographic and accessibility constraints. All other components of the existing Malibu Golf Club would remain unchanged and would continue to operate as a public golf course. Under this alternative, residential development consisting of 29 single-family estates would occur on individual parcels of the Project site surrounding the existing golf course.

Relation to Project Objectives

Alternative 2 does not provide for the construction of a sports-oriented educational retreat, which is a core objective of the Project. This alternative would also place residences, access roads, and fuel modification areas within undisturbed portions of the site, with several estates occupying ridgeline areas that are highly visible from offsite. As such, Alternative 2 would contradict Project objectives related to compatibility with existing environmental resources, preservation of the scenic beauty of the Santa Monica Mountains, and protection and preservation of environmentally sensitive native habitats. This alternative potentially could meet the following project objectives:

- Protect the unique cultural and social characteristics of the region's rural residential communities;
- Recognize and avoid natural hazards, and protect paleontological, archaeological and historic resources;
- Protect a unique public recreational resource of unincorporated western Los Angeles County consisting of an 18-hole golf course located within the Santa Monica Mountains and in the vicinity of the Santa Monica Mountains National Recreation Area.

Alternative 2 would not meet the full range of objectives on other key issues. Specifically, this alternative would not meet the following project objectives:

- Establish a financially viable sports-oriented educational retreat, which invigorates the local economy and provides educational, research and employment opportunities, and invigorates the local economy of unincorporated western Los Angeles County;
- Provide a comfortable, relaxing and inspiring environment in which educational institutions, governmental organizations, non-governmental organizations, business leaders and the public can conduct meetings and conferences;
- Provide visitor-serving overnight accommodations within individual bungalow units that would include common areas within each unit to provide a casual meeting space for discussion or study groups of Project guests that would be attending conferences or on-site functions together;
- Introduce a pattern of compatible land use that improves the social, environmental and economic well-being of guests and the public.
- Incorporate sustainable and green design features with the goal of achieving LEED™ Platinum certification (or equivalent) for all new buildings on the Project site;
- Protect environmentally sensitive native plant and animal species by dedicating open space areas on the Project site that contain sensitive and native habitat;
- Preserve and enhance the scenic beauty of the Santa Monica Mountains;
- Protect and expand access to open space recreational opportunities and resources, including incorporation of sustainable visitor-serving accommodations, which would be available for visitors of the Santa Monica Mountains National Recreation Area;
- Construct proposed site improvements within a clustered area to minimize off-site view impacts while locating visitor-serving facilities including overnight accommodations in a manner that maximizes guests' views of the remodeled golf course and natural areas of the Santa Monica Mountains and provides separation between bungalow structures as feasible within the development area;
- Provide an all-inclusive retreat destination in the Santa Monica Mountains with all visitor-serving components connected by a network of paths for pedestrian or electric cart use, so guests could access those Project features without the need for personal vehicle use;
- Design and construct a state-of-the-art 18-hole golf course using features and standards that will minimize impacts to the existing environment for sustainable coexistence between golf and nature;
- Eradicate non-native aquatic species in the man-made ponds onsite; and
- Improve water quality in the portion of Trancas Canyon Creek leaving the Project site.

Environmental Analysis

Aesthetics

Alternative 2 would result in a greater aesthetic impact as it would protect less open space area and would spread development across a broader area of the Project site. The developed residential estates would in most cases occupy parcels located at higher elevations where they would be more visible from public viewpoints than the Project, and potentially intrude on views of ridgelines. The aesthetic impacts of this alternative would be exacerbated by substantial vegetation clearance buffers required for fuel modification around each estate, as well as lengthy driveways for accessing remote parcels. These impacts would likely be significant and unavoidable. On an individual basis, scattered single-family residences would be consistent with the existing character of many adjacent properties, and would therefore be a less than significant impact regarding visual character with mitigation to ensure compatibility with the scale, color, and landscaping of other development in the vicinity of the Project

site. However, by placing 29 estates in areas that are currently not developed, displacing views of natural vegetation or rock formations, this alternative could potentially have a significant and unavoidable impact to the visual character of the vicinity. The residences in this alternative likely would incorporate some outdoor lighting for safety and security, for driveway visibility, and for outdoor entertaining or personal enjoyment. Therefore, this alternative would introduce outdoor lighting sources across a wider area of the Project site, impacting nighttime views to a greater extent than the Project. Mitigation measures could be required to provide shielding, or minimize wattage, however, as personal residences, imposition of specific hours of operation to regulate and minimize lighting impacts would be difficult. As the baseline lighting environment for the areas where estates would be developed does not include any artificial lighting, this alternative would likely have a significant and unavoidable lighting impact.

Air Quality

Alternative 2 would construct 29 single-family dwellings of undetermined sizes as well as driveways to provide access to each dwelling unit. Air quality impacts due to construction activities likely would be less than they would be with the Project, although mitigation for dust control would still be required. Operational air quality impacts potentially would be reduced compared to the Project, as the 29 residences would add fewer vehicle trips compared to the Project (see Transportation/Traffic below).

Biology

Alternative 2 would result in a greater impact to biological resources as it would protect less open space area and would spread development across a broader area of the Project site including areas that previously have not been disturbed. Additionally, this alternative would have greater impacts on habitat connectivity due to access driveways, increased fuel modification vegetation clearance, and edge effects such as night lighting. This Alternative would not provide water quality improvements or eradicate non-native aquatic species in the golf course ponds. Based on the undisturbed condition of much of the areas to be developed under this alternative, the development of 29 estates with associated access driveways and fuel modification zones would permanently disturb ESHA, and potentially disrupt wildlife movement. As such, impacts to sensitive species would potentially be significant and unavoidable.

Cultural

By retaining the golf course in its current configuration, this alternative would not require mitigation measures to reduce potential impacts regarding cultural resource site CA-LAN-927 as discussed in Section 5.4. This alternative, however, would result in grading disturbances of previously undisturbed areas, which could potentially uncover, damage, or destroy unknown cultural resources. By implementation of mitigation measures similar to those provided for the Project, Alternative 2 would result in less than significant impacts regarding unknown cultural resources.

Geology

Alternative 2 would result in greater impacts regarding geology, as residences would be developed on or near steep slope areas with associated risks due to geologic hazards such as slope failure. As such, under this alternative, more permanent residents could be affected by geologic hazards and mitigation may be required to stabilize building pads. This analysis assumes homes would not be developed where soil or slope conditions cannot be mitigated by reasonably feasible geotechnical measures.

GHG/Climate Change

Alternative 2 would result in a greater impact regarding global climate change, as the Project's proposed energy efficient features that would reduce golf course irrigation and generate electricity onsite from solar energy would not be implemented.

Hazards and Hazardous Materials

Alternative 2 would result in similar impacts regarding hazards and hazardous materials during construction and operations. Under this alternative, there would be the potential for a greater impact as there likely would be less oversight of private homeowners as to what materials would be stored or used on individual lots, and how those materials would be disposed.

Hydrology and Water Quality

Alternative 2 would result in greater impacts related to hydrology and water quality as more runoff would be generated by more impervious surfaces, including rooftops and driveways, which would occur over a greater area. Under this alternative, the circulation/aeration systems proposed for two of the golf course ponds would not be implemented resulting in continued eutrophication of those water bodies, and efforts to eradicate non-native aquatic species would not occur. This alternative also would generate potential impacts to water quality as it would develop as many as 29 separate septic systems, which would be required to be constructed, maintained, and regulated. The greater hydrology and water quality impacts under Alternative 2 would likely require mitigation to be reduced to less than significant levels.

Land Use

Alternative 2 would result in similar impacts regarding Land Use, as the development of 29 residential lots would be consistent with the land use policies regarding development density. The development of single-family homes would not represent an incompatible use based on the County's land use policy and the surrounding developments.

Noise

Alternative 2 would result in similar noise impacts as the Project during operations as it would also increase traffic. Construction noise impacts potentially would be greater under this alternative as it would develop areas that are closer to sensitive receptors (existing residences) and that are on ridgelines.

Public Services – Fire

Alternative 2 would result in additional fire protection services particularly related to adequate access for emergency vehicles, as this alternative would place development in more remote portions of the Project site. The residences would not be clustered, which could lead to greater difficulties in providing wildfire protection. Access also could be hampered, as some residences would require driveways of substantial length in areas of steep terrain. With required mitigation, which would include Fire Department approval of emergency vehicle access and turnaround facilities and adequate water pressure and hydrant locations, this impact would be reduced to less than significant.

Public Services – Police

Alternative 2 would have similar impacts regarding police protection services and would not be expected to require additional police facilities.

Schools

This alternative would develop 29 homes, which would potentially increase enrollment at public school facilities. Although development fees likely would reduce impacts to schools to less than significant, the Project and the other alternatives evaluated here would not generate additional students and would thus have no impact.

Recreation

This alternative would retain the golf course as a public recreation resource in the Santa Monica Mountains, and nearby trails and open space offer passive recreation opportunities. The development of 29 homes could result in an increase in demands for active recreation facilities such as neighborhood parks.

Transportation/Traffic

Alternative 2 would develop 29 single-family homes at the Project site, which would increase traffic on area roadways by generating an additional 276 ADT based on the 9th Edition ITE Trip Generation Manual rates (9.52 daily trips per dwelling) trips. These trips would not include those currently generated by the Malibu Golf Club, which would continue to operate in its current configuration with this alternative. Traffic impacts with this alternative would be less than under the Project, which would generate 998 ADT for a net difference of 722 ADT impacting area roadways. Traffic impacts related to this alternative would be less than significant, which is a reduced impact than that of the Project in that volume would increase but would not likely trigger a significant reduction in a level of service (LOS) associated with roadways and intersections. This alternative would not provide the opportunity to develop a shuttle system to transport guests to the golf facility, such as would be provided by the Project, however, in the absence of crediting the Project with ADT reductions due to shuttle operation, this alternative would have a reduced impact on traffic as compared to the Project.

Utilities – Water Supply

Alternative 2 would have a greater impact regarding water use as the Project's golf course irrigation efficiencies would not be implemented, and recycled water would not be introduced to the site as proposed by the Project. As such, Project-related reduction in imported water demands for golf course irrigation would not be realized with Alternative 2, which would also result in additional demands for domestic use and landscape irrigation associated with the addition of 29 single-family estates. As the LVMWD has not extended a recycled water pipeline to this area, and has deemed such an extension economically infeasible at this time, it would be necessary for this alternative's residential irrigation water to consist of imported potable water. Based on information provided in the LVMWD Water System Design Report for the Project (Appendix I), this alternative would increase water demand on the site by at least 24 AFY (250 gpd/person x 2.95 persons/residence). As the existing water use is already included in the UWMP's water use projections, the additional 24 AFY would not exceed the amount of surplus potable water rights available to LVMWD.

Utilities – Wastewater

Alternative 2 would develop 29 residences, which would require septic tank systems to treat wastewater on-site, as sewer utilities do not serve the Project site. Therefore, as with the Project, this alternative would not impact wastewater facilities provided by a utility.

Utilities – Solid Waste

Alternative 2 would generate approximately 290 pounds of solid waste per day (0.145 tons/day)[12] in addition to solid waste currently generated by the Malibu Golf Club. Assuming recyclables would be separated to divert 55 percent of the solid waste generated, this alternative would increase landfill disposal by 0.065 tons daily. This alternative's solid waste disposal would be approximately 0.48 tons less than disposal associated with the Project. As discussed in Section 5.14, landfills that would serve the

12 California Department of Resources Recycling and Recovery (CalRecycle). http://www.calrecycle.ca.gov/wastechar/wastegenrates/Residential.htm accessed March 14, 2013. (Single-family home solid waste generation = 10 lbs./d.u./day)

Project or this alternative currently operate with a substantial amount of unused permitted daily intake capacity. As such, this alternative would result in a reduced impact regarding solid waste as compared to the Project, however, similar to the Project, this alternative would need to provide mitigation to provide for separation and diversion of recyclable materials in order to minimize landfill disposal, thereby reducing future impacts of replacement landfill facilities that would be required when the existing landfills reach their capacity.

Utilities – Energy

Alternative 2 would impact energy supplies by developing residences with associated energy needs. While the residences would be required to incorporate efficiency features in compliance with the County's Green Building Ordinance, there would be no requirement to attain a LEED™ Platinum or equivalent rating to minimize energy usage as the Project would. Additionally, this alternative would not require individual estate owners to incorporate solar panels for generation of electricity with the goal of providing all necessary electrical supplies on-site. By not providing on-site electricity generation, and not incorporating efficiency features required to attain a LEED™ Platinum or equivalent rating, this alternative's impact regarding energy would be greater than impacts associated with the Project, but would be less than significant based on the minimal increase in consumption compared to SCE's generated electricity supply.

6.4.3 Alternative 3 – Original Malibu Institute Project (2011)

Alternative 3 would develop the Malibu Institute as proposed in 2011 with a total of 626,904 square feet of structures that would replace the existing Malibu Golf Club facilities, including a 118,395-square foot Conference and Event Center, 58 guest bungalows (four bedrooms each) providing overnight accommodations, associated structures provided as guest amenities and for project maintenance, and a sub-grade parking structure. This alternative would reduce the area of the redesigned golf course by providing a configuration with 6 fairways on 40.5 acres. This course layout would require golfers to play through each fairway three times for an 18-hole equivalent round. By reducing the number of fairways, the golf course total acreage would be reduced, allowing for restoration of approximately 40 acres of the Trancas Canyon Creek headwaters including daylighting some culverted portions of the channel. It is assumed for this analysis that with remodeling of the golf course and restoration of a portion of Trancas Canyon Creek, Alternative 3 would also provide water quality improvements within the development and the golf course. Water quality improvements would likely include cleaning out the on-site ponds to eradicate non-native aquatic species, and introduction of water circulation pumps to increase aeration and eliminate stagnation of water in the ponds. For this analysis, it is also assumed that Alternative 3 would retain two existing structures in the northern portion of the Project site, consisting of an abandoned residence and a caretaker's house, as they currently exist, resulting in a total of 631,939 square feet of development on the site. Table 6-3 provides a list of facilities that would be developed under this alternative.

Table 6-3
Summary of Alternative 3 Project Components

Components	Square Feet
Alternative Facilities	
Conference and Event Center	118,395
Meeting Rooms	46,485
Administration/Security	5,720
Wellness Center	16,500
Golf Pro Shop	5,720
Guest Bungalows (58 Units)	282,378
Maintenance Building	5,000
Sub-Grade Parking Structure	145,906
Sewer Treatment Maintenance Building	800
TOTAL NEW DEVELOPMENT	**626,904**
Caretaker's Residence (existing)	875
Abandoned Residence (existing)	4,160
TOTAL ONSITE DEVELOPMENT	**631,939**
Remodeled Golf Course (6-holes)	40.5 acres

Relation to Project Objectives

Alternative 3 meets certain project objectives as they pertain to the Malibu Institute educational facilities and overnight accommodations, but does not meet the full range of objectives on several key issues, particularly regarding the protection of recreational opportunities related to the public golf course. Although a golf course would be provided, the configuration of six fairways would slow play while each playing group waits for other groups to access the same fairway three separate times. The provision of only six fairways also would allow a maximum of six groups of golfers (up to four players) to tee off on the course at a given time rather than eighteen. Without consideration of the marketing challenges of attracting golfers to a 6-fairway course, by restricting the number of players the course could accommodate daily, this alternative would reduce the potential number of golfers that could access the course on a given day.

This alternative would potentially meet the following Project objectives:

- Establish a sports-oriented educational retreat, which invigorates the local economy and provides educational, research and employment opportunities, and invigorates the local economy of unincorporated western Los Angeles County;
- Provide a comfortable, relaxing and inspiring environment in which educational institutions, governmental organizations, non-governmental organizations, business leaders and the public can conduct meetings and conferences;
- Provide visitor-serving overnight accommodations within individual bungalow units that would include common areas within each unit to provide a casual meeting space for discussion or study groups of Project guests that would be attending conferences or on-site functions together;
- Introduce a pattern of land uses compatible with existing environmental resources and community character, while improving the social, environmental and economic well-being of overnight guests, visitors, and the community;
- Incorporate sustainable and green design features with the goal of achieving LEED™ Platinum

certification (or equivalent) for all new buildings on the Project site;

- Protect environmentally sensitive native plant and animal species by dedicating open space areas on the Project site that contain sensitive and native habitat;
- Preserve and enhance the scenic beauty of the Santa Monica Mountains;
- Protect and expand access to open space recreational opportunities and resources, including incorporation of sustainable visitor-serving accommodations, which would be available for visitors of the Santa Monica Mountains National Recreation Area;
- Construct proposed site improvements within a clustered area to minimize off-site view impacts while locating visitor-serving facilities including overnight accommodations in a manner that maximizes guests' views of the remodeled golf course and natural areas of the Santa Monica Mountains and provides separation between bungalow structures as feasible within the development area;
- Provide an all-inclusive retreat destination in the Santa Monica Mountains with all visitor-serving components connected by a network of paths for pedestrian or electric cart use, so guests could access those Project features without the need for personal vehicle use;
- Recognize and avoid natural hazards, and protect paleontological, archaeological and historic resources;
- Protect the unique cultural and social characteristics of the region's rural residential communities;
- Eradicate non-native aquatic species in the man-made ponds onsite; and
- Improve water quality in the portion of Trancas Canyon Creek leaving the Project site.

Alternative 3 would not meet the full range of objectives on several key issues. Specifically, this alternative would not meet or comparatively would be deficient at meeting the following Project objectives:

- Protect a unique public recreational resource of unincorporated western Los Angeles County consisting of an 18-hole golf course located within the Santa Monica Mountains and in the vicinity of the Santa Monica Mountains National Recreation Area; and
- Design and construct a state-of-the-art 18-hole golf course using features and standards that will minimize impacts to the existing environment for sustainable coexistence between golf and nature.

Environmental Analysis

Aesthetics

Alternative 3 would introduce structures on the Project site that would be similar in design, layout, and function, as would the Project, but would introduce an approximately 118,000-square foot building on the site, more than double the size of any single structure proposed by the Project. Therefore, the scale of impacts related to the visual character of the Project site would be greater. This alternative's reduction in acreage of the existing golf course area could potentially have a reduced impact regarding the visual character of the site, by restoring more natural appearing vegetation coverage in the more remote areas of the Trancas Canyon Creek headwaters, however, those benefits would be offset by the larger scale Conference and Event Center, and overall larger amount of development.

Air Quality

Alternative 3 would introduce structures on the site of larger scale than would the Project. This alternative would not introduce features designed to reduce the number of guests accessing the site, and would accommodate up to 464 overnight guests, which would increase air quality impacts slightly. Under this alternative, there would not be golf course construction in the area to be restored, however, the

restoration would require some amount of earth movement, and therefore construction emissions would not be expected to be significantly less under this alternative. As such, this alternative would have similar, although marginally greater, air quality impacts.

Biology

Alternative 3 would be expected to have beneficial impacts regarding biological resources from restoration efforts in the Trancas Canyon Creek headwaters area that would be designed to create a higher functioning habitat area. Alternative 3 would have a less than significant impact based on existing conditions.

Cultural

Alternative 3 would result in similar cultural resource impacts as the Project. Although the Project's cultural resources study did not identify the area to be restored under this alternative as having known cultural resources, the restoration of the Trancas Canyon Creek headwaters area would involve earth movement, requiring similar mitigation measures as the Project regarding unknown cultural resources. The remainder of the Project site would be developed in the same way as the Project under this alternative, which would result in similar cultural resource impacts, which would be less than significant after mitigation.

Geology

Alternative 3 would introduce structures on the Project site of similar design, location, and function, as would the Project. Therefore, less than significant impacts related to geology would be the same under this alternative, as would the Project.

GHG/Climate Change

Alternative 3 would introduce structures on the site of similar design, location, and function, as would the Project. This alternative would accommodate a larger number of guests for the overnight facilities, and would increase the size of the structures proposed, increasing the alternative's energy demands. This alternative potentially could result in fewer GHG emissions due to reduced demands for irrigation water by reducing the golf course area to approximately 40 acres, as water use is a factor calculated in the determination of a project's GHG emissions. While water use is a factor considered in GHG emissions estimation, a project's GHG generation is more heavily influenced by mobile sources and the energy demands of structures, which would be increased under this alternative. Therefore, GHG emissions would not be substantially reduced by irrigation reductions under this alternative, and would be increased as a result of higher traffic levels and the increase in square footage compared to the Project. As such, climate change impacts would be greater than those associated with the Project, although they would likely remain less than significant.

Hazards and Hazardous Materials

Alternative 3 would introduce structures on the site of similar design, location, and function, as would the Project. Although the golf course acreage would be reduced, resulting in similar reductions in the amount of hazardous materials for landscape maintenance such as pesticides and fuels, the storage and use of those materials would not be significantly different from the Project. An existing dilapidated abandoned residence located in the northern portion of the Project site would remain which poses potential hazards related to rodent infestation and associated infectious hazards (i.e. hantavirus). Therefore, impacts related to hazards and hazardous materials for employees and guests would be the same under this alternative and require similar mitigation, as would the Project; however, a potential hazard to trespassers who may enter the abandoned residence would remain and could potentially be significant.

Hydrology and Water Quality

The reduced golf course acreage could potentially benefit water quality compared to the Project, as it would require a smaller area to be fertilized, irrigated, and possibly treated with pesticides. This alternative also could remove portions of a culvert that currently encloses some of the upper reach of Trancas Canyon Creek, which would restore some function regarding infiltration and aeration of creek flows. As discussed above, it is assumed that restoration activities that would occur under this alternative would include cleaning out onsite ponds to eradicate non-native aquatic species. As such, hydrology and water quality impacts under Alternative 3 would be less than those resulting from the Project.

Land Use

Alternative 3 would introduce structures on the site of similar design, location, and function, as would the Project. Therefore, impacts related to land use would be the same under this alternative as with implementation of the Project.

Noise

Alternative 3 would introduce structures on the site of similar design, location, and function, as would the Project. Therefore, noise impacts related to construction and operation would be the same under this alternative as with implementation of the Project.

Public Services – Fire

Alternative 3 would require similar fire protection services as the Project. Therefore, impacts related to fire protection generally would be the same under this alternative as with implementation of the Project, however, this alternative would develop a conference/event center of over 100,000 square feet, which could increase impacts regarding fire protection, by increasing fire-flow requirements, which could necessitate utility improvements if sufficient capacity is not available. Such impacts could be mitigated to less than significant.

Public Services – Police

Alternative 3 would require similar police protection services as the Project. Therefore, impacts related to police protection would be the same under this alternative as with implementation of the Project.

Recreation

Alternative 3 would result in a reduction of active recreation opportunities in the Santa Monica Mountains by restricting the number of players per day that could access the golf course compared to existing conditions. This alternative also would slow play as golfers wait for multiple groups to share fairways, and also would reduce the variation of the course by providing only six fairways, which would reduce the quality of the recreational experience offered to guests and visitors. Therefore, this alternative would have an increased impact regarding recreation compared to the Project by reducing the quantity and quality of the existing recreational resource.

Transportation/Traffic

Alternative 3 would introduce structures on the site of similar design, location, and function, as would the Project. This alternative would accommodate a greater number of guests, and thus would increase the number of trips generated. Therefore, impacts related to traffic would be greater under this alternative than with implementation of the Project.

Utilities – Water Supply

Alternative 3 would result in reduced demands for irrigation water compared to the Project by reducing the golf course area to approximately 40 acres, however, this alternative would increase the demand for domestic use water as more guests would be accommodated. As the Project also would reduce irrigation demands based on existing conditions, water supply impacts under both the Project and this alternative would be less than significant. As discussed above regarding fire protection, this alternative could require mitigation regarding upgrades to the existing onsite water delivery system if so directed by Los Angeles County Fire Department to ensure adequate flows could be provided for fire suppression use in an emergency. Such impacts related to Alternative 3 would be mitigated to less than significant, as with implementation of the Project.

Utilities – Wastewater

Alternative 3 would not be connected to a wastewater utility and would require development of an onsite wastewater treatment system similar to the Project. This alternative's wastewater treatment system would be designed with adequate capacity based on the facilities that it would develop, as would the Project's wastewater treatment system. Therefore, impacts related to wastewater would be the same under this alternative as with implementation of the Project.

Utilities – Solid Waste

Alternative 3 would incorporate similar structures and facilities as would the Project, and therefore would serve a similar number of guests. Therefore, impacts related to solid waste would be less than significant at the project level, although slightly greater than with development of the Project. Cumulative impacts from this alternative related to limited disposal sites would be reduced to less than significant with similar mitigation as required of the Project.

Utilities – Energy

Alternative 3 would develop the site with similar structures and facilities as the Project. These facilities would include solar panels to provide for the energy demands of the Project or this alternative. Due to the electricity demand of the Project and this alternative being relatively small in relation to the generating capacity of SCE, and as much of that demand would be supplied by onsite generation, impacts related to energy would be less than significant for this alternative as well as the Project. Therefore, impacts related to energy supply, distribution, or consumption would be the same under this alternative as with implementation of the Project.

6.4.4 Alternative 4 – Reduced Footprint

Alternative 4 proposes to develop the Malibu Institute with structures and facilities including overnight accommodations similar to the Project, but would modify the development footprint by eliminating six bungalow units proposed to be located on the former helipad at the western edge of the development area. Under this alternative, six of the proposed single bungalow units adjacent to the parking lot would be replaced with double-unit bungalows (Floor Plan B2). By eliminating the six westernmost proposed bungalows, this alternative would reduce the required area of fuel modification, and also would provide a greater distance between visitor accommodations and sloped areas at the western development boundary. This alternative also would reduce the overall development by 1,500 square feet.

Relation to Project Objectives

Alternative 4 would meet the Project objectives as they pertain to the Malibu Institute educational facilities and overnight accommodations, as well as the protection of recreational opportunities related to the public golf course. However, this alternative would increase the average height of structures on the site, and would limit opportunities to provide guests with views of the Santa Monica Mountains and the remodeled golf course. As such, Alternative 4 would not meet the following Project objective:

- Construct proposed site improvements within a clustered area to minimize off-site view impacts while locating visitor-serving facilities including overnight accommodations in a manner that maximizes guests' views of the remodeled golf course and natural areas of the Santa Monica Mountains and provides separation between bungalow structures as feasible within the development area.

Environmental Analysis

Aesthetics

Alternative 4 would introduce structures on the site that would be similar in design, scale, layout, and function, as would the Project, and therefore would have similar impacts regarding visual resources and visual character of the site. This alternative's reduction in the development footprint would have a limited potential to reduce visual impacts, however, the area that would not be developed is within the previously disturbed development footprint and, as such, does not represent natural habitat or vegetation features. This alternative would result in converting six proposed bungalow buildings (Type A) of less than 23 feet in height, to double bungalow units (Type B2) of up to 30 feet in maximum height. Therefore, any reduction in scale or massing would not be substantial in terms of impact significance and would be offset by an increase in the average building height of the developed area. This alternative would have a less than significant, although slightly greater, impact on aesthetics than would the Project.

Air Quality

Alternative 4 would introduce structures on the site of similar design, scale, location, and function, as would the Project. This alternative would reduce the overall development by 1,500 square feet, which would not result in a substantial decrease in emissions from construction or operations. Construction of this alternative would require similar mitigation measures as the Project to reduce particulate matter emissions during grading activities. As such, air quality impacts would be less than significant after mitigation, as would the Project.

Biology

Alternative 4 would be expected to reduce impacts to biological resources relative to the Project, as it would require less vegetation clearance for fuel modification. As the area of required vegetation clearance that would be avoided by this alternative would not include special status species, impacts related to fuel modification activities in that area would be less than significant under the Project as well as with this alternative. As this alternative would include remodeling the existing golf course, it is assumed that the onsite ponds would be cleaned out to eradicate non-native aquatic species, as would the Project. Therefore, impacts related to biological resources would be less than significant with mitigation under either the Project or this alternative, although with Alternative 4, the less than significant impacts resulting from fuel modification requirements would be reduced in comparison to the Project.

Cultural

Alternative 4 would result in similar cultural resource impacts as the Project. Although the Project's cultural resources study did not identify the area of the bungalows to be eliminated under this alternative as having known cultural resources, there would be a reduction in the total acreage to be disturbed. The remainder of the Project site would be developed in the same way as the Project under this alternative, which would result in similar cultural resource impacts, which would likewise be less than significant after mitigation.

Geology

Alternative 4 would introduce structures on the site of similar design, scale, and function, as would the Project. However, this alternative would eliminate the construction of the Project's westernmost bungalow structures. As with the Project, impacts related to geology would be less than significant.

GHG/Climate Change

Alternative 4 would introduce structures on the site of similar design, scale, and function, as would the Project. This alternative would develop overnight accommodations that would provide the same number of bedrooms, and thus would serve the same number of guests, within the same number of bungalow units, consisting of additional stacked units in place of proposed single units. In replacing single units for stacked units that serve the same number of guests and would reduce square footage by a maximum of 1,500 square feet, this alternative would not substantially reduce the size or energy demands of the structures proposed, and would not have any effect on mobile GHG emissions sources for transportation. Therefore, GHG emissions would not be substantially reduced under this alternative, and climate change impacts would not be different from those associated with the Project, which would be less than significant.

Hazards and Hazardous Materials

Alternative 4 would introduce structures on the site of similar design, scale, and function, as would the Project. Although the total development footprint would be reduced, resulting in similar reductions in the amount of hazardous materials for landscape maintenance such as pesticides and fuels, the quantities of those materials stored and used on the site would not be substantially different from the Project. Therefore, impacts related to hazards and hazardous materials would be the same under this alternative and require similar mitigation, as would the Project.

Hydrology and Water Quality

The reduced development footprint could potentially benefit water quality compared to the Project, as it would result in a reduced impervious surface coverage, resulting in greater infiltration of stormwater. The reduction in impervious surfaces would not be substantially reduced compared to the Project, and similar design features for detaining stormwater flows for reuse as irrigation or to allow infiltration would be incorporated in either case. Water quality improvements associated with providing circulation pumps for the onsite ponds, as well as eradication of non-native aquatic species in the ponds, would occur with Alternative 4 as well as with the Project. As such, hydrology and water quality impacts would be similar under this alternative and would require similar mitigation measures as the Project to reduce impacts to less than significant.

Land Use

Alternative 4 would introduce structures on the site of similar design, scale, and function, as would the Project, and would accommodate the same number of guests. Therefore, impacts related to land use would be the same under this alternative as with implementation of the Project.

Noise

Alternative 4 would introduce structures on the site of similar design, scale, and function, as would the Project. Therefore, noise impacts related to construction and operation would be the same under this alternative as with implementation of the Project.

Public Services – Fire

Alternative 4 would require similar fire protection services as the Project. Therefore, impacts related to fire protection would be the same under this alternative as with implementation of the Project.

Public Services – Police

Alternative 3 would require similar police protection services as the Project. Therefore, impacts related to police protection would be the same under this alternative as with implementation of the Project.

Recreation

Alternative 4 would alter the provision of active recreation opportunities in the Santa Monica Mountains in relation to the Project. As such, this alternative would result in the same impacts regarding recreation, as would the Project.

Transportation/Traffic

Alternative 4 would introduce structures on the site of similar design, scale, and function, as would the Project. Site access and circulation would not change, and the number of guests accommodated by this alternative would be the same as the Project. Therefore, impacts related to traffic would be the same under this alternative as with implementation of the Project.

Utilities – Water Supply

Alternative 4 would develop the same buildings and features as the Project with a maximum reduction of 1,500 square feet of construction. The number of guests accommodated on the site would be the same and, therefore, water use and impacts related to water supply would be similar as under the Project and would require similar mitigation measures to reduce impacts to less than significant.

Utilities – Wastewater

Alternative 4 would not be connected to a wastewater utility and would require development of an onsite wastewater treatment system similar to the Project. This alternative would accommodate the same number of guests as the Project, and therefore, impacts related to wastewater would be the same under this alternative as with implementation of the Project.

Utilities – Solid Waste

Alternative 4 would develop structures and facilities on a similar scale and with the same functions as would the Project, and would serve the same number of guests. Therefore, as with the Project, impacts related to solid waste would be less than significant at the project level under this alternative. Construction waste generation would be reduced due to a total development reduction of 1,500 square feet; however, similar mitigation regarding separating recyclable materials would be required to reduce impacts related to solid waste to less than significant. Cumulative impacts from this alternative related to limited disposal sites, also would be reduced to less than significant with similar mitigation as required of the Project.

Utilities – Energy

Alternative 4 would develop the site with similar structures and facilities as the Project. These facilities would include solar panels to provide for the energy demands of the Project or of this alternative. Due to the electricity demand of the Project and this alternative being relatively small in relation to the generating capacity of SCE, and as much of that demand would be supplied by onsite generation, impacts related to energy would be less than significant for this alternative as well as the Project. Therefore, impacts related to energy supply, distribution, or consumption would be the same under this alternative as with implementation of the Project.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In addition to the discussion and comparison of impacts of a proposed project and the alternatives, CEQA Guidelines Section 15126.6(e)(2) requires an "environmentally superior" alternative be selected and the reasons for such a selection disclosed. In general, the environmentally superior alternative is the alternative that would be expected to generate the least amount of adverse impacts.

A summary of the environmental impacts anticipated for the Project and each alternative is provided in Table 6-2 above. In this case, Alternative 1 (No Project) would result in the fewest adverse impacts and thus is considered the environmentally superior alternative. However, CEQA Guidelines Section 15126.6(2) requires an environmentally superior alternative be selected above and beyond the No Project Alternative. Based on the alternative analysis provided above, of the remaining alternatives, Alternative 4 (Reduced Footprint) would minimize the extent of less than significant impacts or impacts requiring mitigation, which would make Alternative 4 the environmentally superior alternative. However, when compared to the Project, Alternative 4 would require the same mitigation measures as the Project to reduce potential impacts to less than significant. Thus the Project would not result in impacts of any higher significance than the environmentally superior alternative.

As discussed above, Alternative 4 would not fulfill the Project's objective to:

- Construct proposed site improvements within a clustered area to minimize off-site view impacts while locating visitor-serving facilities including overnight accommodations in a manner that maximizes guests' views of the remodeled golf course and natural areas of the Santa Monica Mountains and provides separation between bungalow structures as feasible within the development area.

7.0 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

California Environmental Quality Act (CEQA) Guidelines Section 15126.2(c) requires an EIR discuss significant irreversible environmental changes associated with a proposed project, including the following:

- uses of nonrenewable resources during the initial and continued phases of the project, which would be irreversible because a large commitment of such resources makes removal or non-use thereafter unlikely;
- primary impacts and, particularly, secondary impacts which commit future generations to similar uses; and
- irreversible damage, which may result from environmental accidents, associated with the project.

Implementation of the Project would include 48,164 sq. ft. of educational and meeting facilities, visitor accommodations in 40 bungalow structures providing 160 bedrooms for visitors and measuring a total of 109,140 sq. ft., a 30,147 sq. ft. clubhouse, a 12,104 sq. ft. golf pro shop and grill/snack shop, and support facilities including a maintenance building (10,500 sq. ft.), warehouse (4,623 sq. ft.), golf cart storage barn (9,162 sq. ft.), and a security/information building (120 sq. ft.), all located within the previously disturbed area of the Malibu Golf Club. In total, the Project proposes to construct 224,760 sq. ft. of new structures, which would include the reuse of the building footprint, and where feasible, the foundation of the existing 12,475 square foot club house and cart barn as part of the Institute building and the removal of 11,160 square feet of existing structures, resulting in a net increase of 201,125 sq. ft. of structures on the Project site. Although the nature of this development is permanent, the Project would be placed within previously disturbed and developed areas and would be compatible with that of development within the Project vicinity.

Development of the Project would result in the incremental use and depletion of renewable and non-renewable resources during construction and operation. To conserve natural resources and renewable and non-renewable materials, buildings and accommodations would incorporate sustainability strategies and green design features with the goal of achieving LEED™ Platinum certification (or equivalent) for all buildings on the Project site. Construction would require the consumption of natural resources as well as renewable and non-renewable materials, including building materials (e.g., wood and metal) and fossil fuels (e.g., gasoline, diesel fuel, and natural gas). As a key construction-phase sustainability strategy, the Project would reuse as much of the existing clubhouse facility as feasible to minimize disposal of demolition and construction debris and reduce associated energy use and air quality impacts. Once operational, the Project would require the consumption of natural resources as well as renewable and non-renewable materials such as electricity, natural gas, potable water, and fossil fuels for building systems, such as heating, air conditioning, and lighting. To a degree, these resources are readily available, and are expected to remain available in the foreseeable future. Nevertheless, all non-renewable resources are finite in supply, given the length of time required by the natural process to create them. Sustainable design features include: green roofs on several Project buildings, color and shade structures to reduce the heat island effect, charging stations for electric vehicles, the use of highly efficient geothermal HVAC equipment, the removal of 1,590 non-native trees and provision of native, drought-tolerant landscaping, the replacement of over 185,000 square feet of existing non-pervious parking lots and cart paths with pervious material, and a shuttle van service for individuals or groups of overnight guests.

To reduce electricity demand, the Project would place photovoltaic panels over shade structures in the parking area and on some proposed rooftops to generate most of the energy needs for the Project. Once operational, the Project would incorporate a recycling program and compost green waste for the ongoing reduction of resource consumption. Potable water conservation features include low flow/ultra low-flow fixtures, energy star appliances, and replacement of multiple septic tanks with an Onsite Wastewater

Recycling System with effluent meeting Title 22 standards for reuse as irrigation to augment water from existing onsite private wells for the remodeled golf course and landscaping as discussed in Section 5.14, Utilities. In addition, the Project would comply with all applicable County ordinances requiring green building, and drought-tolerant landscaping. As such, given the Project's commitment to energy efficiency, the commitment of these resources to construction and operation of the Project is not considered significant. Nevertheless, mitigation measures have been included in this DEIR to reduce and minimize project-specific and cumulative impacts to less than significant levels.

Irreversible long-term environmental changes associated with the Project would include an increase in stationary and event-related noise levels, although not at significant levels. The Project also would result in an increase of greenhouse gas emissions. Design features have been incorporated into the development and mitigation measures are proposed in this DEIR that would minimize the effects of the environmental changes, including increases in greenhouse gas emissions associated with the development of the Project, to less than significant levels. Significant traffic impacts to study-area intersections as a result of the Project's implementation, under both Project and Cumulative + Project conditions, would not be generated as a result of the Project's implementation, based on the County's thresholds analyzed in Section 5.13, Transportation and Traffic. Although the Project would provide overnight accommodations, this proposed housing would be temporary and result in minor but temporary population increases within the area, which would not adversely impact existing police and fire protection facilities serving the Project area. Implementation of the Project would not result in any significant and unavoidable impacts.

The Project proposes no uniquely hazardous uses, and its operation would not be expected to cause environmental accidents that would affect other areas. The Project site is located within a seismically active region and would be exposed to ground-shaking during a seismic event. However, conformance with the regulatory provisions of the Uniform Building Code pertaining to construction standards would minimize, to the extent feasible, damage and injuries in the event of such an occurrence.

8.0 GROWTH INDUCING IMPACTS

8.1 DEFINITION OF GROWTH INDUCING IMPACTS

CEQA Guidelines Section 15126.2(d) requires an EIR to describe the potential growth inducing impacts of a proposed project. Specifically, Section 15126.2 (d) states:

> Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also discuss the characteristics of some project, which may encourage and facilitate other activities that could substantially affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

8.2 POTENTIAL GROWTH INDUCING IMPACTS OF THE PROJECT

CEQA Guidelines Section 15126.2(d) requires that the potential growth inducing impacts of a proposed project be evaluated by analyzing the following four considerations. A detailed discussion regarding how the Project relates to each consideration is provided below.

Ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment:

As discussed in Section 3.0, Project Description, the Project's visitor-serving overnight accommodations consist of 40 bungalow structures that would accommodate a total of 320 guests. These facilities provide temporary housing and thus would not cause a permanent increase in the local population or induce substantial direct population growth, as the Project would not provide additional access to infrastructure that does not already exist. Therefore, implementation of the Project would not induce substantial direct population growth in the area.

Development of the Project would create indirect economic growth in the area during the construction and operational phases. Short-term, construction-related job opportunities would result in secondary economic growth in order to staff construction crews. In the long-term, the introduction of the overnight accommodations for visitors, in addition to the new golf pro-shop and grill, restaurant, and lounge, would create jobs and contribute additional economic revenue for Los Angeles County.

A primary objective of the Project is to establish a financially viable sports-oriented educational retreat, which invigorates the local economy and provides educational, research and employment opportunities. While the Project also would create new jobs, the Project would result in a net increase of only 70 employees providing a new total of 150 full- and part-time employees during the peak season and 114 employees in the winter months. As such, the Project would not directly or indirectly result in a substantial job/housing imbalance or substantially facilitate the construction of more housing in the Project vicinity.

The Project and associated movement of visitors and employees (including construction workers) to the Project site are therefore not expected to substantially indirectly induce population, economic, or housing growth in the area, as the Project would not permanently increase the area's population and the proposed total employees would total 150 at its maximum, and these individuals already reside and commute within the southern California region.

Ways that the proposed project may remove obstacles to population growth (e.g., a major expansion of a wastewater treatment plant):

The Project would be located among already built or previously disturbed areas of the Project site. The Las Virgenes Municipal Water District (LVMWD) and the Los Angeles County Department of Public Works (LACDPW) already provide public utilities to the Project site and the Project would not result in a significant amount of new infrastructure on the existing sites or the expansion of critical public facilities. Implementation of the Project would result in minimal improvements to existing infrastructure, such as the implementation of an Onsite Wastewater Recycling System that would treat wastewater to a standard suitable for unrestricted, non-potable reuse onsite as landscape and golf course irrigation. All improvements would serve only the Project site. As such, the Project would not include the extension of existing public roads or the construction of new public roads. Only onsite improvements and construction of existing and new roadways and parking areas would be implemented. In addition, the Project would not require the installation of new water mains or water mains with increased capacity that could facilitate further growth within the vicinity of the Project site. Proposed sewage treatment/water reclamation plants, potable water facilities, and County landfills, as well as associated infrastructure, would be able to sufficiently accommodate the Project (see Section 5.14, Utilities). No service/utility service connections would be provided to other off-site uses and the service/utility connections would be sized to serve only the proposed land uses on the Project site. Therefore, implementation of the Project would not result in the removal of any impediments to growth in the area.

How increases in the population from the proposed project may tax existing community serving facilities, requiring construction of new facilities that could cause significant environmental effects:

The Project would not require the construction of new community facilities. As discussed in Section 5.14, Utilities, existing public facilities (landfills, wastewater conveyance and treatment, and water supply and conveyance) are adequate to serve the Project. The Los Angeles County Sheriff's Department (LACSD) and Los Angeles County Fire Department (LACFD) indicate they can serve the Project without expanding their current service capacity. As such, the Project would not significantly impact fire or police protection services. The Malibu Golf Club currently provides visitors with a public 18-hole golf course. The Project would offer visitors additional amenities (e.g. redesigned golf course, clubhouse with fitness and spa facilities, swimming pool), which would reduce the necessity for them to seek similar amenities off-site, thus reducing the Project's demands on local parks and public recreational facilities.

Attributes of the proposed project that may encourage and facilitate other activities that would significantly affect the environment, either individually or cumulatively:

Implementation of the Project would require a variety of agency discretionary and ministerial actions including, but not limited to, the County's issuance of conditional use and building permits and the Coastal Commission's issuance of a coastal development permit. However, these actions are not considered to be precedent setting, because they do not represent an innovation or an action that is uncommon to the County of Los Angeles or the California Coastal Commission. Approval of the Project is not anticipated to set a precedent that would cause the County or the Coastal Commission to approve similar proposals in the future. As discussed in Section 5.0, all environmental impacts (i.e. transportation, noise, etc.) that may potentially result in indirect growth would be reduced to less than significant levels with implementation of the mitigation measures identified herein.

8.3 CONCLUSION REGARDING GROWTH INDUCING IMPACTS OF THE PROJECT

The Project is contained within existing disturbed and developed areas and would not increase the population of the area. The Project would increase staffing by approximately 70 total employees during operations. The Malibu Institute would provide temporary lodging for up to 320 guests that may originate from regional and national organizations primarily involved in professional sports and related career fields. The golf course would continue to attract golfers from local and regional areas for day use, as well as providing a local dining/lounge establishment. As such, the Project is not anticipated to have a widespread growth inducing impact. Therefore, project-specific impacts and the Project's contribution to potential cumulative impacts relating to growth inducement would be less than significant.

9.0 PREPARERS OF THE EIR, CONTACTS, AND REFERENCES

9.1 PREPARERS OF THE EIR

9.1.1 Lead Agency

This document was prepared under the direction and approval of Los Angeles County, the lead agency under CEQA. Envicom Corporation prepared the document for the County, and the County by its approval accepts the document as its own.

Los Angeles County Department of Regional Planning
320 West Temple Street
Los Angeles, California 90012
Contact: Carolina Santoro Blengini, Special Projects Section

9.1.2 Project Applicant

The Malibu Institute
901 Encinal Canyon
Malibu, CA 90265
Contact: Tom Hix, President

9.1.3 EIR Preparation

Envicom Corporation
28328 Agoura Road
Agoura Hills, CA 91301
Contact: Primo Tapia III, Vice President

Contributing Staff:

Travis Cullen, President
Ellen Michiel, Senior Project Manager
Jack Blok, Principal Cartographer
Jim Anderson, Principal Biologist
Erin Avina, Biologist/Restoration Ecologist
Charles Cohn, Environmental Analyst
Mitchel Morrison, Environmental Scientist/Planner
Cheryl Barkinskiy, Environmental Analyst/Planner
Chris Boyte, GIS/Graphic Artist
Renee Mauro, Lead Word Processor/Contracts Administrator

Contributing Consultants

Associated Transportation Engineers – Traffic, Circulation, and Parking Study
100 N. Hope Avenue, Suite 4
Santa Barbara, CA 93110
Contact: Scott A. Schell, Principal Transportation Planner

EPD Consultants – Wastewater Systems
20722 Main Street
Carson, CA 90745
Contact: Kevin Poffenbarger, PE, QSD

Geosyntec Consultants – Hydrology and Water Quality
3415 S. Sepulveda Blvd., Ste. 500
Los Angeles, CA 90034
Contact: Erik Strecker, Principal Engineer

Giroux and Associates – Air Quality and Noise Assessments
1820 E. Garry St. #211
Santa Ana, CA 92705
Contact: Hans Giroux

Historical, Environmental, Archaeological, Research, Team (H.E.A.R.T.) – Cultural Resources
8701 Lava Place,
West Hills, CA 91304-2126
Contact: Robert J. Wlodarski

Sladden Engineering – Geotechnical
6782 Stanton Avenue, Suite A
Buena Park, CA 90621
Contact: Brett Anderson, President

Triad/Holmes Associates – Hydrology
PO Box 1570
Mammoth Lakes, CA 93546
Contact: Paul Roten, PE

9.2 AGENCIES CONTACTED FOR PREPARTION OF THE EIR

- Army Corps of Engineers (USACE), Los Angeles District
- California Coastal Commission, South Central Coast District (CCC)
- California Department of Fish and Wildlife (CDFW)
- California Department of Toxic Substances Control (DTSC)
- California Department of Transportation (Caltrans), District 7
- California Highway Patrol (CHP)
- California Native American Heritage Commission (NAHC)
- California Regional Water Quality Control Board (RWQCB) Los Angeles Region
- California State Parks (“State Parks”)
- Governor’s Office of Planning and Research, State Clearinghouse (SCH)
- Las Virgenes/Agoura Hills County Library, Agoura Hills, CA

- Los Angeles County Department of Public Works (LACDPW)
- Los Angeles County Department of Regional Planning (LACDRP)
- Los Angeles County Fire Department (LACFD)
- Los Angeles County Local Agency Formation Commission (LAFCO)
- Los Angeles County Metropolitan Transportation Authority (Metro)
- Los Angeles County Public Library, Malibu, CA
- Los Angeles County Sanitation District (LACSD)
- Los Angeles County Sheriff's Department (LACSD)
- Los Angeles County, Third Supervisorial District
- Los Angeles County Water District No. 29
- City of Agoura Hills
- City of Calabasas
- City of Malibu
- City of Westlake Village
- Las Virgenes Municipal Water District (LVMWD)
- Mountains Recreation & Conservation Authority (MRCA)
- Natural History Museum of Los Angeles County
- U.S. Department of the Interior, National Park Service, Santa Monica Mountains National Recreation Area
- Resource Conservation District of the Santa Monica Mountains
- Santa Monica Mountains Conservancy (SMMC)
- Southern California Air Quality Management District (SCAQMD)
- Ventura Regional Sanitation District (VRSD)
- Westlake Village Public Library, Westlake Village, CA

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