Biological Assessment Report

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project in Malibu, Los Angeles County, California

Prepared for

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1.0 INTRODUCTION

This Biological Assessment Report has been prepared for the Santa Monica-Malibu Unified School District (District) as required by City of Malibu's Local Coastal Program Local Implementation Plan section 4.4.2 (Local Implementation Plan), as one phase of the Malibu Middle and High School Campus Specific Plan Project (hereinafter referred to as the "Project"). Additionally, the Project is within 200 feet of an identified Environmentally Sensitive Habitat Area (ESHA), which also requires a Biological Assessment per the Local Implementation Plan, and initial surveys on the Project Site have identified special status resources within the Project boundary. This report is also intended to satisfy supporting documentation requirements for California Environmental Quality Act (CEQA) threshold determinations for biological resources.

1.1 PROJECT LOCATION AND PHYSICAL ENVIRONMENTAL SETTING

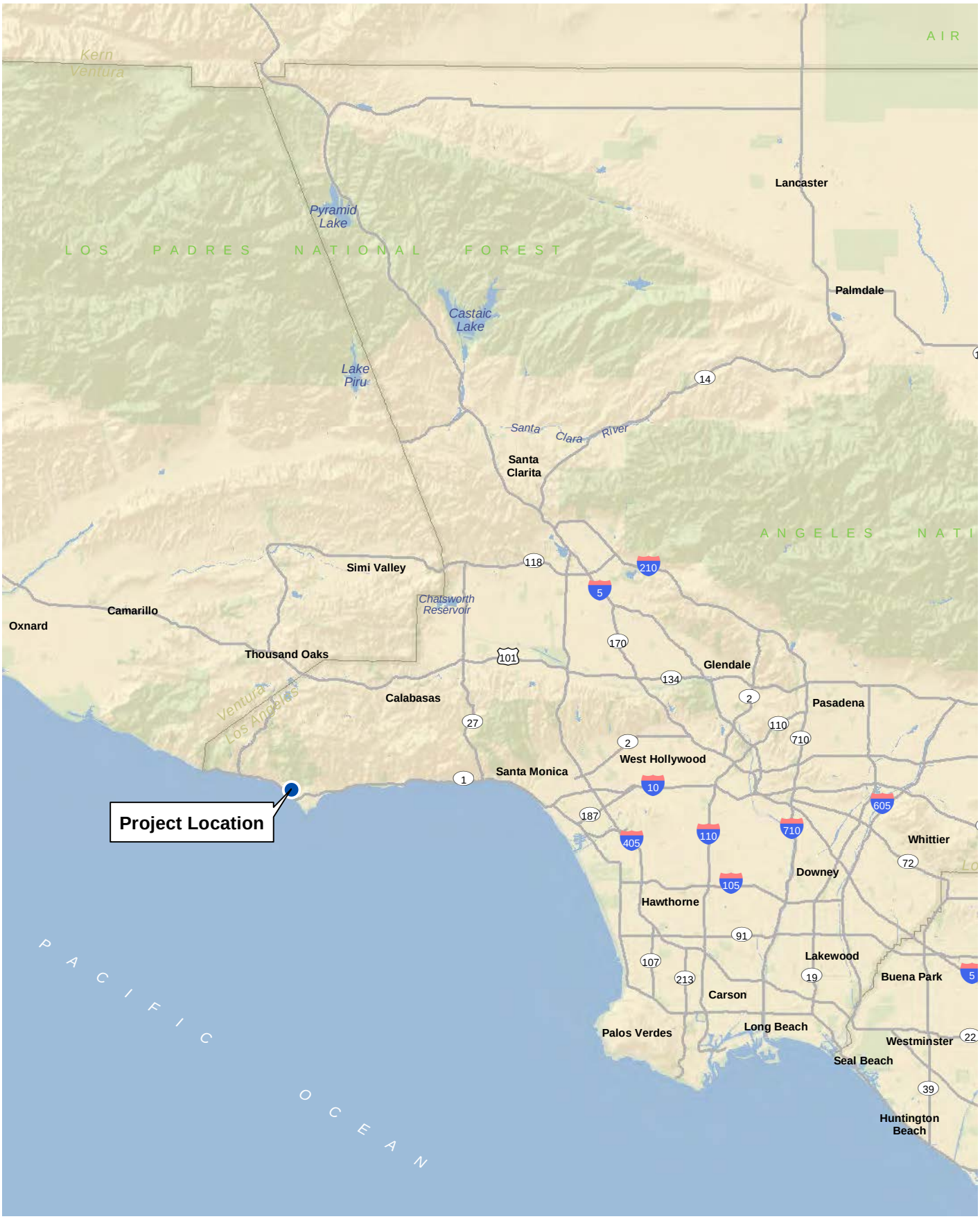
The Project Study Area is located within the City of Malibu (Exhibit 1). It is located within the Santa Monica Bay Watershed on the U.S. Geological Survey's (USGS') Point Dume 7.5-minute topographic quadrangle map in Township 02S, Range 19W, Section 01 (Exhibit 2). Elevations in the Study Area range from approximately 90 to 210 feet above mean sea level (msl). The Study Area encompasses approximately 80 acres over nine parcels. These parcels include the existing Malibu Equestrian Park in the eastern part of the Study Area, the existing Malibu Middle and High School (MMHS) campus in the center, and the former Juan Cabrillo Elementary School (JCES) campus in the west. The east side of the MMHS campus is adjacent to Malibu Equestrian Park, which is on District owned land. The northwest edge borders along a drainage feature which is also an ESHA. The MMHS campus slopes toward the Pacific Ocean and is surrounded by single-family residences.

The Project Study Area is set amongst rolling hills, and its associated buildings and athletic fields are terraced into a hillside setting. A total of four drainages and one basin occur in the Survey Area. Topography on the Study Area is hilly with elevations ranging from approximately 90 to 210 feet above msl. Most of the vegetation occurring in the Study Area is ornamental (native and non-native species) and turf grass where the athletic fields are located. Native vegetation types such as scrub and riparian occur at the perimeter of the Study Area, along with disturbed vegetation (Exhibit 3).

Soil types in the Study Area generally consist of the Cropley, coastal – Urban land – Haploxererts complex, 0 to 30 percent slopes and Cropley, coastal – Xerorthents, landscaped – Urban land complex, 0 to 9 percent slopes (Exhibit 4). These soils are not listed as hydric on the National List for the soil Survey Area in which they occur (USDA NRCS 2019).

1.2 PROJECT DESCRIPTION AND BACKGROUND

As the design concepts in the Campus Plan are set to develop in several phases over a long period of time, the City recommended preparation of a specific plan so that a consistent set of development standards could be adopted. Once adopted, the standards in the specific plan would become the regulations against which later phases of the Project would be reviewed by the City. Based on the City's recommendation, the Malibu Middle and High School Campus Specific Plan establishes the development standards and plan for the MMHS Campus over the next 10 to 15 years (PlaceWorks 2021). The existing MMHS campus was constructed as Malibu Park Junior High School beginning in 1963, and in 1992 the school was converted for use as a high school. The Project Site is situated on three of nine parcels: Assessor's Parcel Numbers 4469-017-900 (40.06 acres), 4469-018-900 (9.4 acres), and 4459-018-904 (2.57 acres). The total acreage of the Project Site is 52.03 acres (PlaceWorks 2021).



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Regional Location

Exhibit 1

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N
W E
S

10 5 0 10 Miles

PSOMAS

(Rev: 9-02-2021 MMD) R:\Projects\1SAN\082310\Graphics\BioTech\ex_RL.pdf

Source: USGS 7.5 Minute Quadrangle
Point Dume
Township: 02S
Range: 19W
Section: 01

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Local Vicinity

Exhibit 2

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N W E S

1,000 500 0 1,000 Feet

PSOMAS

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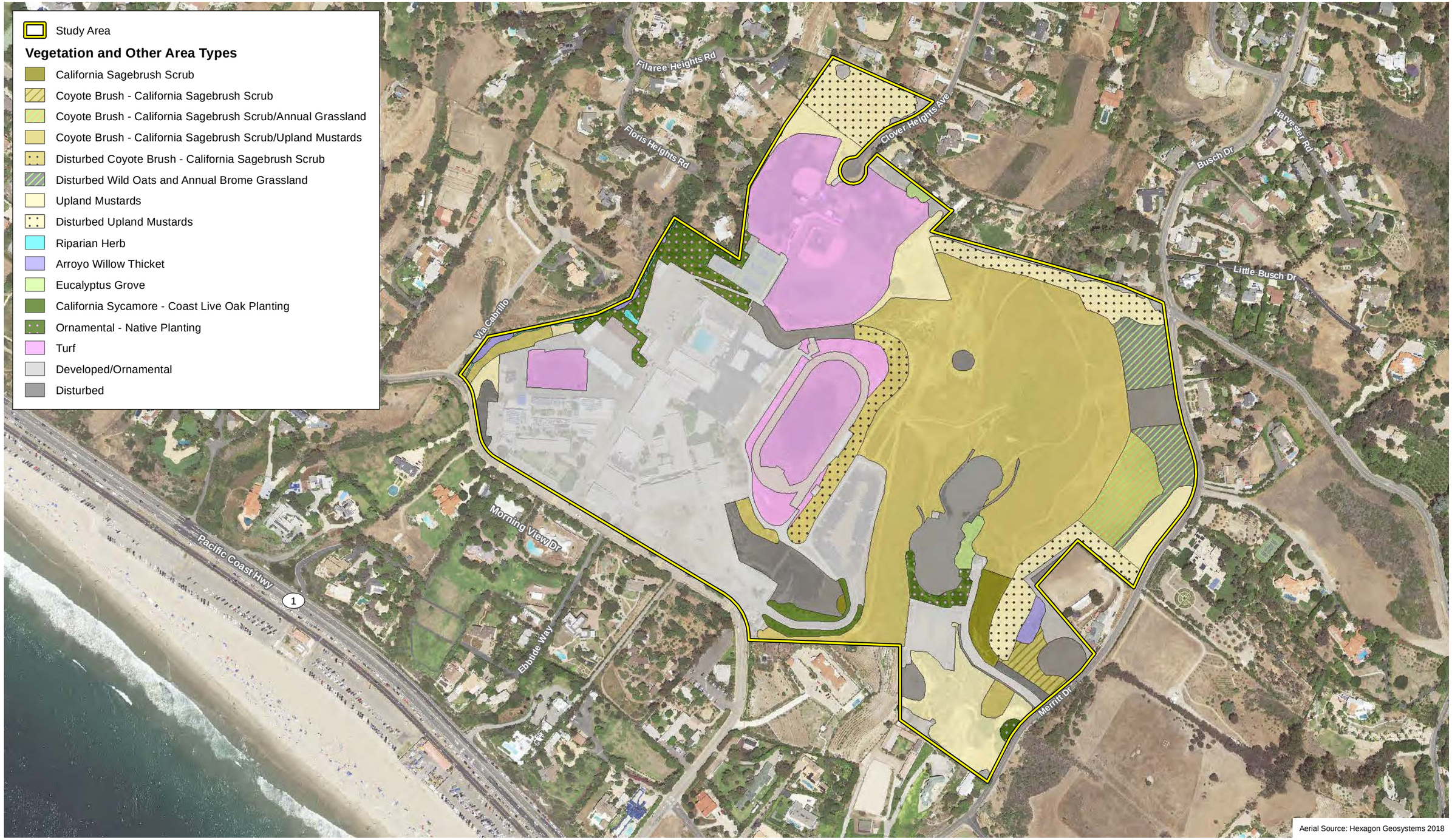

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Vegetation Types and Other Areas

Exhibit 3

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N W E S

350 175 0 350 Feet

PSOMAS

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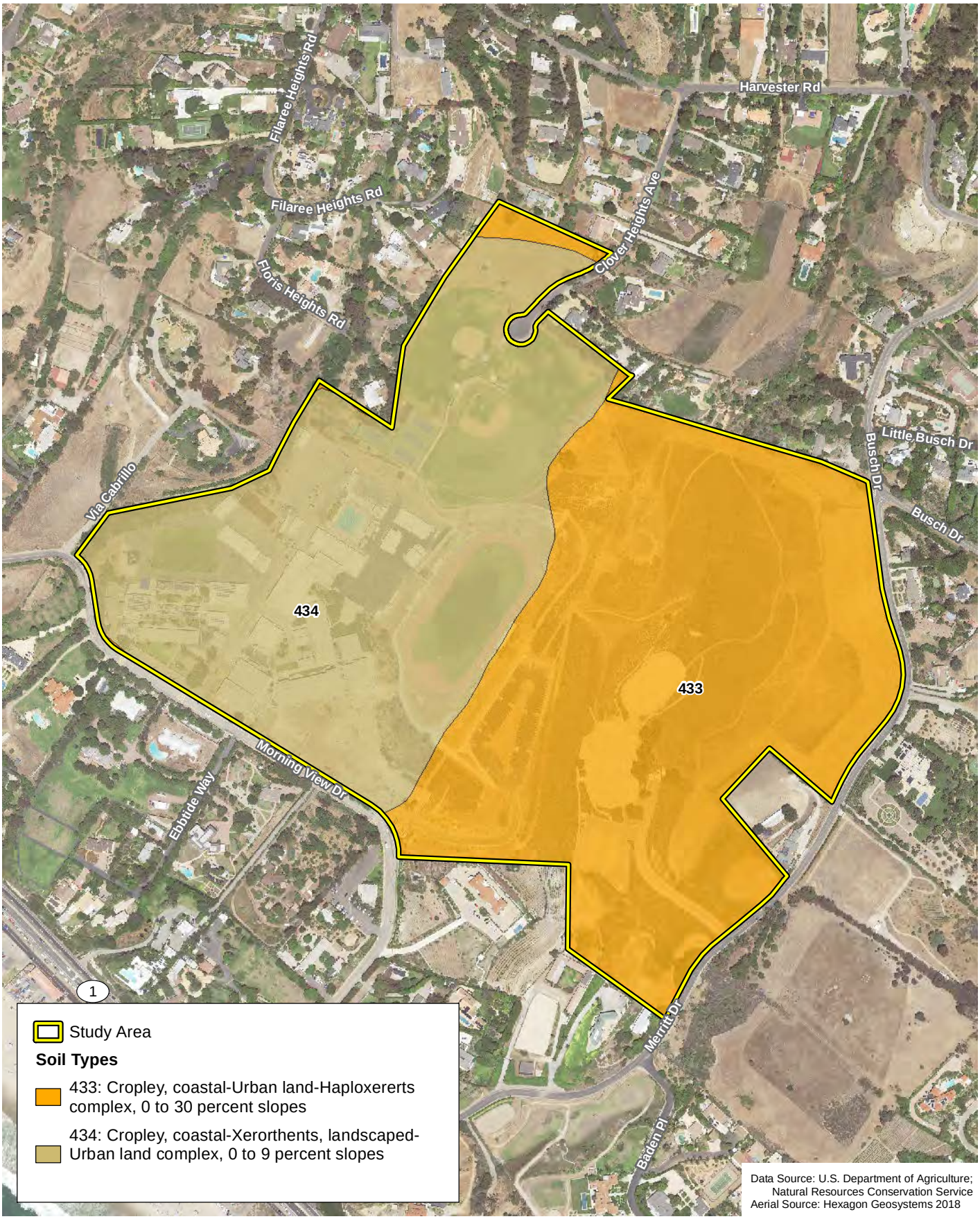

Data Source: U.S. Department of Agriculture; Natural Resources Conservation Service
Aerial Source: Hexagon Geosystems 2018

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Soils Map

Exhibit 4

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N W E S

450 225 0 450

Feet

PSOMAS

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Apart from the recently completed Buildings A/B and E, many of the existing buildings no longer meet the District's needs for flexible classrooms with the ability to support multiple learning zones. The Specific Plan would result in the demolition of 18 existing buildings on the combined campuses, with only the existing athletic fields, and the nearly or recently completed Buildings A/B and E on the MMHS campus remaining, and the construction of a new campus with dedicated spaces for Middle and High School. The Specific Plan would result in 32 classrooms and 8 labs and a total of 173,595 square feet of new building space, providing the MMHS campus with a total of 47 classrooms and 12 labs and a total of 222,425 square feet of building space (PlaceWorks 2021).

While the Specific Plan reflects the anticipated buildout condition of the MMHS campus, only Phase I of the Plan is designed and funded for construction. Construction of subsequent Phases will require additional financial resources before they can proceed. The Specific Plan relies on established City of Malibu land use and zoning regulations and procedures and provides development standards for the MMHS Campus Specific Plan. Both the City of Malibu Municipal Code and Local Coastal Plan (LCP) contain provisions for discretionary site plan review. The District anticipates that implementation of subsequent phases will be reviewed by the City for approval and compared to the Specific Plan and Environmental Impact Report for consistency.

1.2.1 Alternatives

1.2.1.1. Alternative 1 – No Project

The CEQA Guidelines require the analysis of a No Project Alternative. Under CEQA, the No Project Alternative must consider the effects of not approving the Proposed Project. The No Project Alternative describes the environmental conditions that exist at the time that the environmental analysis commences, as well as what would reasonably be expected to occur in the foreseeable future if the Proposed Project was not approved (CEQA Guidelines section 15126.6(e)(2)).

Under the No Project Alternative, the District would not approve any portion of the Proposed Project on the Project Site, and none of the mitigation measures identified within this Draft Environmental Impact Report would be necessary. No demolition would occur under the No Project Alternative, because the existing structures on the Project Site would be retained. Under the No Project Alternative, it is assumed that the reasonably foreseeable future at the Project Site would be the continued occupation of the existing buildings within the MMHS campus as in current conditions. MMHS would not be redeveloped and modernized, and buildings that are part of the former JCES would be used by existing students as needed (portable buildings and Building E, Library) or remain unoccupied. The school would continue to operate under its current conditions, and no changes would take place.

1.2.1.2. Alternative 2 – Development of Phase 1 and 2 Only

Under this Alternative, the Proposed Project would be limited to those activities included in Phases 1 and 2 only. Phases 3 and 4 would not be developed. Phase 1 consists of demolition of all existing former JCES campus buildings and portables P6 and P7 and construction of Building C (the High School Core building that includes classrooms, student support services, and administrative and campus support), Parking Lot C, Parking Lot D, and the drop-off/pick-up area. Phase 1 would also include infrastructure improvements, including drainage management areas and septic improvements. Construction of Phase 1 is anticipated to begin in fall 2022 and be completed by summer 2024. Phase 2 would consist of construction of Building D (Gymnasium/Fitness/PE and Student Activities and Food Services) and the Middle School Quad. Phase 2 would also include infrastructure improvements, including drainage management areas, septic improvements, and development of the solar panel system. Construction of Phase 2 is

anticipated to begin in fall 2024 and be completed by fall 2026 (contingent on passage of a new Bond measure). Under this alternative, the Project would construct a total of 90,395 square feet of new building space, which consists of 68,019 square feet under Phase 1 and 22,376 square feet under Phase 2.

Alternative 2 would not include development of Phases 3 and 4. As such, demolition of MMHS Buildings F, I, K, J, J1, Field House, Portables, Pool, Pool Building, JCES Portables P1-P5, Restroom Portables, Bus Barn, and M&O Warehouse would no longer occur. Construction of Buildings J (High School Gymnasium), and Buildings L, M, H, and I (shared facilities); Parking Lot E, F; the relocation of the bus barn; and relocation of the Boys and Girls Club would also not occur. Infrastructure improvements associated with Phases 3 and 4 also would not occur. Alternative 2 would result in an overall reduction of 93,200 square feet of redevelopment than the Proposed Project, and a reduction in demolition of 111,630 square feet of existing structures. Construction of Alternative 2 would be completed by fall 2026. Under this alternative, the ESHA would only be partially restored.

1.2.1.3. Alternative 3 – Elimination of Parking Lot F

Under Alternative 3, the Proposed Project would still be developed as described with the exception of Parking Lot F, located on the north end of the MMHS campus. This alternative results in 14 less vehicle parking spaces compared to the Proposed Project. Overall ground disturbance of approximately 5,600 square feet associated with Parking Lot F would be eliminated. Parking to serve the existing sports fields on the north side of the campus, especially for after-school programmed activities, would be from Lots D and E, and they would be accessed similar as in existing conditions. Clover Heights Avenue would continue to remain limited only to pedestrian access with locked gates during school hours. Operational use of the fields would be the same during the Proposed Project and existing conditions.

1.3 REGULATORY SETTING

1.3.1 Federal

Federal Endangered Species Act

The Federal Endangered Species Act of 1973 (FESA, 16 *United States Code* [USC] 153 et seq.) protects plants and animals that are listed by the federal government as “Endangered” or “Threatened”. The FESA is implemented by enforcing Sections 7 and 9 of the Act. A federally listed species is protected from unauthorized “take” pursuant to Section 9 of the FESA. “Take”, as defined by the FESA, means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or to attempt to engage in any such conduct”. All persons are presently prohibited from taking a federally listed species unless and until (1) the appropriate Section 10(a) permit has been issued by the U.S. Fish and Wildlife Service (USFWS) or (2) an Incidental Take Statement is obtained as a result of formal consultation between a federal agency and the USFWS pursuant to Section 7 of the FESA and the implementing regulations that pertain to it (50 *Code of Federal Regulations* [CFR] 402). It should be noted that the Proposed Project must have a federal nexus in order to request “take” pursuant to Section 7. If there is no federal nexus and there are impacts to federally listed species, preparation of a Habitat Conservation Plan will likely be required. “Person” is defined in the FESA as “an individual, corporation, partnership, trust, association, or any private entity; any officer, employee, agent, department, or instrument of the federal government; any State, Municipality, or political subdivision of the state; or any other entity subject to the jurisdiction of the United States”. The Project Applicant is a “person” for purposes of the FESA.

Section 404 and 401 of the Clean Water Act of 1972

Section 404 of the Clean Water Act (CWA, 33 USC 1251 et seq.) regulates the discharge of dredged or filled material into "Waters of the U.S.", including wetlands. "Waters of the U.S." include navigable coastal and inland waters, lakes, rivers, streams, and their tributaries; interstate waters and their tributaries; wetlands adjacent to such waters; intermittent streams; and other waters that could affect interstate commerce. The U.S. Army Corps of Engineers (USACE) is the designated regulatory agency responsible for administering the 404 permit program and for making jurisdictional determinations. This permitting authority applies to all "Waters of the U.S." where the material has the effect of (1) replacing any portion of "Waters of the U.S." with dry land or (2) changing the bottom elevation of any portion of "Waters of the U.S.". These fill materials would include sand, rock, clay, construction debris, wood chips, and materials used to create any structure or infrastructure in the "Waters of the U.S.". Dredge and fill activities are typically associated with development projects; water-resource related projects; infrastructure development and wetland conversion to farming; forestry; and urban development.

Under Section 401 of the CWA, an activity requiring a USACE Section 404 permit must obtain a State Water Quality Certification (or waiver thereof) to ensure that the activity will not violate established State water quality standards. The U.S. Environmental Protection Agency is the federal regulatory agency responsible for implementing the CWA. However, the State Water Resources Control Board (SWRCB), in conjunction with the 9 California Regional Water Quality Control Boards (RWQCBs), has been delegated the responsibility for administering the Section 401 water quality certification program.

The RWQCB is the primary agency responsible for protecting water quality in California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act. The RWQCB's jurisdiction extends to all "Waters of the State" and to all "Waters of the U.S.", including wetlands (isolated and non-isolated). Section 401 requires the RWQCB to provide "certification that there is reasonable assurance that an activity which may result in the discharge to 'Waters of the U.S.' will not violate water quality standards". Water Quality Certification must be based on a finding that the proposed discharge will comply with water quality standards, which contain numeric and narrative objectives that can be found in each of the 9 Regional Boards' Basin Plans.

Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act of 1918 (MBTA), as amended in 1972 (MBTA, 16 USC 703–711), makes it unlawful, unless permitted by regulations, to "pursue; hunt; take; capture; kill; attempt to take, capture or kill; possess; offer for sale; sell; offer to purchase; purchase; deliver for shipment; ship; cause to be shipped; deliver for transportation; transport; cause to be transported; carry or cause to be carried by any means whatever; receive for shipment, transportation, or carriage; or export, at any time, or in any manner, any migratory bird…for the protection of migratory birds…or any part, nest, or egg of any such bird" (16 USC 703).

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). The following 6 families of raptors that occur in North America were included in the amendment: *Accipitridae* (kites, hawks, and eagles), *Cathartidae* (New World vultures), *Falconidae* (falcons and caracaras), *Pandionidae* (ospreys), *Strigidae* (typical owls), and *Tytonidae* (barn owls). The provisions of the 1972 amendment to the MBTA protect all species and subspecies of these families.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC 668) provides for the protection of the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) by prohibiting—except under certain specified conditions—the taking, possession, and commerce of these 2 bird species. The 1972 amendments increased penalties for violating provisions of the Act and strengthened other enforcement measures. A 1978 amendment authorizes the Secretary of the Interior to permit the taking of golden eagle nests that interfere with resource development or recovery operations. A 1994 Memorandum (59 CFR 22953, April 29, 1994) from President William J. Clinton to the heads of Executive Agencies and Departments sets out the policy concerning collection and distribution of eagle feathers for Native American religious purposes.

1.3.2 State

California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA, *California Fish and Game Code,* Section 2050 et seq.) and Section 2081 of the *California Fish and Game Code,* an Incidental Take Permit from the California Department of Fish and Wildlife (CDFW) is required for projects that could result in the take of a State-listed Threatened or Endangered species. Under CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species, but the definition does not include "harm" or "harass", as the federal act does. As a result, the threshold for take under the CESA is higher than that under the FESA. A CDFW-authorized Incidental Take Permit would be required where a project could result in the take of a State-listed Threatened or Endangered Species. The application for an Incidental Take Permit under Section 2081(b) has a number of requirements, including the preparation of a conservation plan, generally referred to as a Habitat Conservation Plan.

The State of California considers an Endangered Species to be one whose prospects of survival and reproduction are in immediate jeopardy; a Threatened Species as one present in such small numbers throughout its range that it is likely to become an Endangered Species in the near future in the absence of special protection or management; and a Rare Species as one present in such small numbers throughout its range that it may become Endangered if its present environment worsens. The Rare Species designation applies only to California native plants. The CESA authorizes the CDFW to issue permits authorizing incidental take of Threatened and Endangered Species. A California Species of Special Concern is an informal designation that the CDFW uses for some declining wildlife species that are not State Candidates for listing. This designation does not provide legal protection but signifies that these species are recognized as special status by the CDFW.

California Environmental Quality Act

State law (*California Fish and Game Code,* Section 1802) confers upon the CDFW the trustee responsibility and authority for the public trust resource of wildlife in California. The CDFW may play various roles under the CEQA process. By State law, the CDFW has jurisdiction over the conservation, protection, and management of the wildlife, native plants, and habitat necessary to maintain biologically sustainable populations. The CDFW is responsible for consulting with CEQA lead and responsible agencies and provides the requisite biological expertise to review and comment upon environmental documents and impacts arising from Project activities.

As a trustee agency, the CDFW has jurisdiction over certain resources held in trust for the people of California. Trustee agencies are generally required to be notified of CEQA documents relevant to their jurisdiction, whether or not these agencies have actual permitting authority or approval power over aspects of the underlying project (14 *California Code of Regulations*, Section 15386).

The CDFW, as a trustee agency, must be notified of CEQA documents regarding projects involving fish and wildlife of the State, as well as Rare and Endangered native plants, wildlife areas, and ecological reserves. Although, the CDFW, as a trustee agency, cannot approve or disapprove a project, CEQA lead and responsible agencies are required to consult with the CDFW. The CDFW, as the trustee agency, has the authority to make recommendations regarding those resources held in trust for the people of California (*California Fish and Game Code,* Section 1802).

Lake and Streambed Alteration Program

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that support wildlife resources and/or riparian vegetation are subject to CDFW regulations, pursuant to Sections 1600 through 1616 of the *California Fish and Game Code.* Under Section 1602, it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by CDFW as waters within their jurisdiction without first notifying CDFW of such activity. Additionally, a person cannot use any material from the streambeds without first notifying the CDFW of such activity. For a project that may affect stream channels and/or riparian vegetation regulated under Sections 1600 through 1616 of the *California Fish and Game Code,* CDFW authorization is required in the form of a Streambed Alteration Agreement.

Native Plant Protection Act

The Native Plant Protection Act (*California Fish and Game Code,* Section 1900 et seq.) provides for the preservation, protection, and enhancement of Endangered or Rare native plants in California. These sections also allow for the adoption of regulations governing the taking, possession, propagation, transportation, exportation, importation, or sale of any Endangered or Rare native plants.

California Fully Protected Species

Bird, mammal, reptile, amphibian, and fish species are defined as California Fully Protected Species in Sections 3511, 4700, 5050, and 5515 of the *California Fish and Game Code*. Fully protected animals may not be harmed, taken, or possessed.

Nesting Bird Protection

Nesting birds are protected in Sections 3503, 3503.5, and 3513 of the *California Fish and Game Code.* These sections state that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by or any regulation made pursuant to this code. Section 3503.5 explicitly provides protection for all birds of prey, including their eggs and nests. Section 3513 makes it unlawful to take or possess any migratory non-game bird as designated in the MBTA.

Threatened and Endangered Species

The *California Code of Regulations* (Sections 670.2 and 670.5) lists species, subspecies, and varieties of plants (Section 670.2) and animals (Section 670.5) that are designated as Threatened or Endangered (as defined by Section 2067 of the *California Fish and Game Code*) or Rare (as defined by Section 1901 of the *California Fish and Game Code*) in California.

California Porter-Cologne Water Quality Control Act

Pursuant to the California Porter-Cologne Water Quality Control Act, the SWRCB and the 9 RWQCBs may require permits (known as "Waste Discharge Requirements" [WDRs]) for the fill or alteration of the "Waters of the State". The term "Waters of the State" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (*California Water Code,* Section 13050[e]). The State and Regional Boards have interpreted their authority to require WDRs to extend to any proposal to fill or alter "Waters of the State", even if those same waters are not under USACE jurisdiction. Pursuant to this authority, the State and Regional Boards may require the submission of a "report of waste discharge" under Section 13260 of the *California Water Code*, which is treated as an application for WDRs.

1.3.3 Local

City of Malibu Local Coastal Program Local Implementation Plan

The City of Malibu Local Coastal Program Local Implementation Plan was adopted by the California Coastal Commission on September 13, 2002, pursuant to the provisions of California PRC Section 30166.5. The stated purpose of the Plan is to implement the policies of the California Coastal Act of 1976, to carry out the policies of the City of Malibu Land Use Plan, and, in part, to:

- Assure orderly, balanced utilization and conservation of coastal zone resources, taking into account the social and economic needs of the people of this City and of the State;
- Protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and manmade resources;
- To protect and enhance the quality of the natural environment;
- To ensure that any development in the coastal zone preserves and enhances coastal resources; and protects coastal views and access; and guides growth, development, and environmental management in a manner consistent with the provisions of the Land Use Plan of the Local Coastal Program; and
- To provide adequate light and air, clean ground water, and non-polluting waste disposal.

This Biological Assessment Report was drafted in accordance with the requirements of the City of Malibu Local Coastal Program Local Implementation Plan for projects with potential for sensitive species or habitat, or if the proposed development (including required fuel modification) occurs within 200 feet of a known (mapped) ESHA.

1.3.4 Definitions of Special Status Biological Resources

A federally **Endangered** species is one facing extinction throughout all or a significant portion of its geographic range. A federally **Threatened** species is one likely to become Endangered within the foreseeable future throughout all or a significant portion of its range. The presence of any federally Threatened or Endangered species within a Project impact area generally imposes severe constraints on development, particularly if an action would result in "take" of the species or its habitat. The FESA defines the term "take" as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct. Harm, in this sense, can include any disturbance of habitats used by the species during any portion of its life history.

Proposed species or **Candidate** species are those officially proposed by the USFWS for addition to the federal Threatened and Endangered species list. Because proposed species may soon be listed as Threatened or Endangered, the presence of a Proposed or Candidate species may

impose constraints on development if they are listed prior to an action, particularly if the action would result in "take" of the species or its habitat.

The State of California considers an Endangered species as one whose prospects of survival and reproduction are in immediate jeopardy; a Threatened species as one present in such small numbers throughout its range that it is likely to become an Endangered species in the near future in the absence of special protection or management; and a Rare species as one present in such small numbers throughout its range that it may become Endangered if its present environment worsens. Rare species applies only to California native plants; these species are treated as State-listed species. State-listed Threatened and Endangered species are fully protected against take unless an Incidental Take Permit is obtained from the resource agencies. The presence of any State-listed Rare, Threatened, or Endangered species generally imposes constraints on proposed actions, particularly if the action would result in "take" of the species or its habitat.

California Species of Special Concern is an informal designation used by the CDFW for some declining wildlife species that are not State Candidates. This designation does not provide legal protection but signifies that these species are recognized as special status by the CDFW.

Species that are **California Fully Protected** and **Protected** include those protected by special legislation for various reasons, such as the mountain lion and white-tailed kite (*Elanus leucurus*). Fully Protected species may not be taken or possessed at any time. California Protected species include those species that may not be taken or possessed at any time except under special permit from the CDFW issued pursuant to the *California Code of Regulations* (Title 14, Sections 650, 670.7) or Section 2081 of the *California Fish and Game Code*.

The California Rare Plant Rank (CRPR), formerly known as California Native Plant Society (CNPS) List, is a ranking system by the Rare Plant Status Review group[1] and managed by the CNPS and the CDFW. A CRPR summarizes information on the distribution, rarity, and endangerment of California's vascular plants. Plants with a CRPR of **1A** are presumed extinct in California because they have not been seen in the wild for many years. Plants with a CRPR of **1B** are Rare, Threatened, or Endangered throughout their range. Plants with a CRPR of **2A** are presumed extirpated from California but are more common elsewhere. Plants with a CRPR of **2B** are considered Rare, Threatened, or Endangered in California, but are more common elsewhere. Plants with a CRPR of **3** require more information before they can be assigned to another rank or rejected; this is a "review" list. Plants with a CRPR of **4** are of limited distribution or infrequent throughout a broader area in California; this is a "watch" list. The Threat Rank is an extension added onto the CRPR to designate the level of endangerment by a 1 to 3 ranking. An extension of **.1** is assigned to plants that are considered to be "seriously threatened" in California (i.e., over 80 percent of the occurrences are threatened or having a high degree and immediacy of threat). Extension **.2** indicates the plant is "fairly threatened" in California (i.e., between 20 and 80 percent of the occurrences are threatened or have a moderate degree and immediacy of threat). Extension **.3** is assigned to plants that are considered "not very threatened" in California (i.e., less than 20 percent of occurrences are threatened or have a low degree and immediacy of threat or no current threats known). The absence of a threat code extension indicates plants lacking any threat information.

[1] A group of over 300 botanical experts from the government, academia, non-governmental organizations, and the private sector.

2.0 SURVEY METHODS

This section describes the methods used to conduct a literature review; perform general biological surveys; and assess the potential for the Study Area to support special status species. Representative site photos can be found in Appendix A.

2.1 LITERATURE REVIEW

An initial biological resource literature review was conducted based on existing records for the region. The CNPS's Inventory of Rare and Endangered Vascular Plants of California (CNPS 2021) and the CDFW's California Natural Diversity Database (CDFW 2021b) were reviewed to identify special status plants, wildlife, and habitats reported to occur within the Project vicinity. These standard databases searched the USGS' Point Dume, Malibu Beach, Triunfo Pass, Newbury Park, Thousand Oaks, and Calabasas 7.5-minute topographic quadrangles. A review of FESA critical habitat documents was used to identify any portion of the Study Area occurring within proposed or designated Critical Habitat. Additionally, readily available environmental documents created for the Malibu Middle and High School Campus Improvements Project were reviewed (GLA 2009).

2.2 VEGETATION MAPPING AND GENERAL BIOLOGICAL SURVEYS

A general biological survey was conducted by Psomas Senior Biologist Jonathan Aguayo and Senior Botanist Allison Rudalevige on November 12, 2019, and again on April 15, 2021.[2] to evaluate the potential presence of habitats that could support special status plant and wildlife species. Vegetation was mapped in the field by Ms. Rudalevige on an aerial photograph at a scale of 1-inch equals 200 feet (1″=200′).

Plants-Plant species were identified in the field or collected for subsequent identification using keys in Jepson eFlora (Jepson Flora Project 2019). Nomenclature of plant taxa conform to the Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2021d) for special status species and the Jepson eFlora (Jepson Flora Project 2019) for all other taxa; ornamental species not listed in the Jepson eFlora are named based on the Sunset Western Garden Book (Brenzel 2007). A list of plant species observed is included as Appendix B-1.

Wildlife-Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and by auditory recognition. Searches for mammals were conducted during the day and included searching for and identifying diagnostic sign, including scat, footprints, burrows, and trails. Nomenclature of wildlife taxa conform to the Special Animals List (CDFW 2021c) for special status species; nomenclature for non-special status wildlife generally follows Crother (2017) for amphibians and reptiles, American Ornithologists' Union (2021) for birds, and the Bradley et al. 2014 for mammals. All species observed were recorded in field notes. A list of wildlife species observed is included as Appendix B-2.

[2] Psomas Biologists Allison Rudalevige and Sarah Thomas visited the site to conduct a general survey and map the vegetation in the eastern portion of the Study Area, as the Study Area had expanded to include the area up to Merritt Drive.

2.3 JURISDICTIONAL DELINEATION AND ESHA MAPPING

Psomas Senior Biologist Irena Mendez and Land Surveyors Juan Jimenez and Philip Berredo conducted a topographic survey effort in order to map the California Coastal Commission (CCC) ESHA boundaries on May 21 and May 23, 2019. An initial jurisdictional assessment was conducted on November 12, 2019, by Psomas Senior Regulatory Specialist Allison Rudalevige and Psomas Senior Biologist Jonathan Aguayo. A jurisdictional delineation to further refine USACE, RWQCB, CDFW, and CCC jurisdictions was conducted on January 16, 2020, by Ms. Rudalevige and Mrs. Mendez. The topographic relief of the ESHA was established with a Leica Nova MS60 Multi-station with a Leica Allegro Controller for data collection. The data was processed using CAD and a 1-inch equals 20 feet (1″ = 20′) map was generated. Areas under USACE, RWQCB, and CDFW authority were delineated using a 1-inch equals 100 feet (1″ = 100′) scale aerial photograph loaded onto Avenza Maps application on an Apple iPad. Drainage features were delineated as a centerline with corresponding width measurements and waterbodies were delineated as polygons. Soil test pits were dug in areas that exhibited potential hydrophytic vegetation and wetland hydrology. It should be noted that private property was observed from the Study Area and was not directly accessed. Detailed methods for how the jurisdictional delineation was conducted can be found in Appendix C, Jurisdictional Delineation Report for the Malibu Middle and High School Specific Plan and LCP Amendment Project (Psomas 2021b).

2.4 FOCUSED BIOLOGICAL SURVEYS

2.4.1 Special Status Plant Species

Special status plant surveys were floristic in nature and conducted following the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018).

Rainfall received in the fall through spring determines the germination of many annual and perennial herb species. The Malibu Canyon sensor (CDEC Station MCY) is located along Malibu Canyon Road at Tapia Park, approximately 7.5 miles northeast of the Study Area. Its available data ranges are 2006 – 2007 and 2010 – 2021 (there is incomplete data for April to November 2005 and November 2007 to December 2009). The average annual precipitation for years with available data is 14.22 inches (Table 1). Rainfall during the current year (April 1, 2020 to March 31, 2021) is 8.49 inches, which is approximately 60 percent of the average for the years with available data.

TABLE 1
PRECIPITATION RECORDED AT THE MALIBU CANYON SENSOR

Year	Precipitation from April 1 to March 31 (inches)
2005 – 2006	Missing Data (>13.71)[a]
2006 – 2007	10.99
2007 – 2008	Missing Data [a]
2008 – 2009	Missing Data [a]
2009 – 2010	Missing Data (>18.02) [a]
2010 – 2011	25.90
2011 – 2012	11.85
2012 – 2013	8.99
2013 – 2014	5.46
2014 – 2015	9.96
2015 – 2016	10.00
2016 – 2017	22.91
2017 – 2018	9.12
2018 – 2019	25.20
2019 – 2020	15.99
Average 2005 – 2020	**14.22**
2020 – 2021	8.49

a The CDEC Station MCY was offline for a portion of this time period. Values in parentheses represent available data but are not included in the average between 2005 and 2020.

Reference populations of special status plants were monitored for annual and difficult-to-detect target species to ensure that the surveys were performed when target special status species were in bloom, and thus detectable (Table 2). This is especially relevant during periods of unusual rainfall patterns or below average rainfall. If conditions at a nearby reference population are suitable for germination and growth, then it can be inferred that conditions would also be suitable in the Study Area. Reference populations were not monitored for large perennials that would normally be identifiable throughout the year, or for species lacking a publicly accessible reference population.

TABLE 2
REFERENCE POPULATIONS MONITORED IN THE PROJECT REGION

Species	Date Observed	Location	Phenology
Calochortus clavatus var. *gracilis* Slender mariposa-lily	May 11, 2020	Santa Clarita	In bloom
Pentachaeta lyonia Lyon's pentachaeta	April 28, 2020	Westlake	In bloom

Surveys were conducted on May 4 and June 11, 2020, by Psomas Senior Biologist Allison Rudalevige. The total number of person-hours spent surveying was 5.75 hours. A systematic survey was conducted in all areas of suitable special status plant habitat in the Study Area[3] (Exhibit 5). All plant species observed were recorded in field notes.

Any special status plant species observed in the Study Area were mapped with a Global Positioning System (GPS) unit and data were collected on the number and phenology of individuals (estimated for large populations); and microsite characteristics such as slope, aspect, soil texture, surrounding habitat, and associated species.

2.4.2 Special Status Bird Survey

A total of two surveys were conducted for special status bird species, one during the breeding season (i.e., March 15 – August 31) and one during the non-breeding season (i.e., September 1 – March 14). Special status bird surveys were conducted by Mr. Aguayo on December 9, 2019, and May 21, 2020. Mr. Aguayo conducted the surveys during weather conditions appropriate for bird detection. Mr. Aguayo walked the entire Study Area using binoculars to survey all shrubs, trees, and potential bird foraging, roosting, and/or nesting locations. Survey dates, times, and weather data are shown in Table 3. All wildlife species detected during the surveys were recorded and are listed in Appendix B-2.

TABLE 3
SUMMARY OF SPECIAL STATUS BIRD
SPECIES SURVEY CONDITIONS

Survey Number	Survey Date	Time (Start/End)	Surveying Biologist	Weather Conditions		
				Temperature (°F) (Start/End)	Wind (mph) (Start/End)	Cloud Cover (%)
1	December 9, 2019	7:30 AM–10:50 AM	Aguayo	58/67	0–1/1–2	0
2	May 21, 2020	7:15 AM–9:10 AM	Aguayo	56/66	3/1	0
°F: degrees Fahrenheit; mph: miles per hour: %: percent						

2.4.3 Raptor Survey

Five morning surveys were conducted for raptors by Mr. Aguayo on January 8, March 26, April 23, June 3, and May 21, 2020. The surveys were conducted at least one week apart and during the early morning hours between dawn and 10:00 AM. In order to account for seasonal variations, surveys were conducted during the spring/breeding season (i.e., March 1 – June 15) as well as winter/non-breeding (i.e., December 1 – March 15). One raptor survey was conducted in the eastern portion of the Study Area by Psomas Biologist Sarah Thomas. Mr. Aguayo and Ms. Thomas conducted the surveys during weather conditions appropriate for diurnal raptor detection and walked the entire Study Area using binoculars to survey all shrubs, trees, and potential raptor foraging, roosting, and/or nesting locations. Survey dates, times, and weather data are shown in Table 4.

[3] The Survey Area expanded in 2021, after special status plant surveys were conducted; however, any special status plant species observed incidentally during vegetation mapping conducted in 2021 were recorded and mapped.

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Special Status Plant Survey Results

Exhibit 5

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

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TABLE 4
SUMMARY OF RAPTOR SURVEY CONDITIONS

Survey Number	Survey Date	Time (Start/End)	Surveying Biologist	Weather Conditions		
				Temperature (°F) (Start/End)	Wind (mph) (Start/End)	Cloud Cover (%)
1	January 8, 2020	6:40 AM–10:00 AM	Aguayo	48/57	3–4/4–5	30–70
2	March 26, 2020	6:40 AM–8:50 AM	Aguayo	43/46	2	0
3	April 23, 2020	7:05 AM–9:38 AM	Aguayo	64/74	1/3	0
4	June 3, 2020	7:30 AM–10:00 AM	Aguayo	69/72	4	10–0
5	May 21, 2020	7:15 AM–9:10 AM	Aguayo	56/66	3/1	0
6	June 21, 2021	7:30 AM–10:00 AM	Thomas	61/67	0/0	100%
°F: degrees Fahrenheit; mph: miles per hour: %: percent						

Since there was appropriate habitat for owls on site, three additional surveys were conducted during the period immediately before nightfall. A total of three owl surveys were by Mr. Aguayo on February 27, March 27, and April 27, 2020. Mr. Aguayo conducted the surveys during weather conditions appropriate for owl detection. Mr. Aguayo walked the entire Study Area using binoculars to survey all shrubs, trees, and potential owl foraging, roosting and/or nesting locations. Survey dates, times, and weather data are shown in Table 5. All wildlife species detected during the surveys were recorded and are listed in Appendix B-2.

TABLE 5
SUMMARY OF OWL SURVEY CONDITIONS

Survey Number	Survey Date	Time (Start/End)	Surveying Biologist	Weather Conditions		
				Temperature (°F) (Start/End)	Wind (mph) (Start/End)	Cloud Cover (%)
1	February 27, 2020	4:45 PM–6:15 PM	Aguayo	73/71	1–2/2–3	100
2	March 27, 2020	6:00 PM–7:30 PM	Aguayo	56/54	4	0
3	April 27, 2020	6:30 PM–8:00 PM	Aguayo	69/66	3/2	0
°F: degrees Fahrenheit; mph: miles per hour: %: percent						

2.4.4 Tree Survey

Psomas Certified Arborist Trevor Bristle (International Society of Arboriculture Certificate No. WE-10233A) performed the evaluation on February 1 and 2, and April 19th 2021, to document the type, quantity, and condition of trees present within the Project boundary. Each tree was assigned a numeric identifier and the trunk, branches, and foliage were carefully examined. During the evaluation, the following data were recorded: tree species, number of trunks, trunk diameter at breast height (dbh), tree height, and canopy diameter. Each tree was also given a qualitative assessment rating on health and aesthetic.

Trees within the Specific Plan area are regulated by the City of Malibu Native Tree Protection Ordinance (Chapter 5 of the City of Malibu LCP Local Implementation Plan). The LCP defines trees as plants reaching 15 feet tall with at least one well-defined stem or trunk. Native protected trees are specified as oak (*Quercus* sp.), California walnut (*Juglans californica*), western

sycamore (*Platanus racemosa*), alder (*Alnus rhombifolia*), or toyon (*Heteromeles arbutifolia*) with at least one trunk measuring 6 inches or more in dbh, or a combination of any two trunks measuring a total of 8 inches dbh or more.

Additional trees not protected by the City were recorded at the request of the District. All trees with one trunk measuring 3 inches dbh or more, or a combination of any two trunks measuring 1.5 inches dbh or more in diameter were documented.

3.0 EXISTING BIOLOGICAL RESOURCES

This section describes the biological resources that occur or potentially occur on the Project Site or within nearby off-site areas associated with the Project. The following topics are discussed below: fire history; unauthorized development; vegetation types and other areas; common wildlife; wildlife movement; special status biological resources, jurisdictional resources, and Environmentally Sensitive Habitat Area.

3.1 FIRE HISTORY

Traditionally, the fire season in Southern California is from May through September (OCFA 2008). In the past, fires were started by lightning and typically moved down slopes due to falling brands and coals; they only occasionally formed the hot runs on steep slopes that are typical of today's fires (Howard 1992). This fire regime resulted in a mosaic of numerous small burns. New fires were limited by recently burned regions with very little fuel; dead wood and other fuels could not accumulate for long.

Mediterranean shrub communities, including those found in the Study Area, are resilient to wildfires at a frequency range of every 20 to 50 years (Keeley 1986). Many plant species associated with chaparral and scrub communities exhibit characteristics that constitute adaptations to frequent fires. One of the effects of fire on native habitats is the opportunity for new growth and reproduction. Without fire, a mature chaparral stand may become senile, where growth and reproduction are reduced (Schoenherr 1992). Mature chaparral is highly flammable after 30 to 60 years without fire (Howard 1992). A new fire will then typically burn hot and high into the canopy, killing much of the aboveground biomass. These canopy fires can facilitate seed establishment by removing shrub cover and eliminating competitors. In the first few years after a fire, herbs and herbaceous shrubs—such as deerweed (*Acmispon glaber*), lupines (*Lupinus* spp.), paintbrushes (*Castilleja* spp.), and phacelias (*Phacelia* spp.)—are abundant. Because chaparral fires burn nitrogenous compounds in plant tissues and detritus, there is a large loss of nitrogen from the ecosystem. This allows species equipped with nitrogen-fixing bacteria to grow quickly after a fire.

While herbaceous species are establishing, the previously dominant chaparral species are also returning. Many chaparral species rely on fire to release and germinate seeds. Others resprout from roots or buds at the base of the stem. As the shrub canopy closes, whether due to resprouting of individuals burned by the fire or growth of seedlings, these herbaceous species decrease in importance.

Although natural fires are essential to the existence of chaparral and scrub communities, both unnatural increases and decreases in fire frequency can have a negative impact. Now most wildfires are started by humans, either through arson or accidents (Schoenherr 1992). Drought conditions contribute to an increase in dead fuels; dryer and more explosive fuels; and more intense fire behavior. In addition, sustained Santa Ana Winds increase the speed of fire and magnify the effects on the available fuel bed. Santa Ana Winds are strong, warm, and dry winds that flow down into the valleys when stable; during these conditions, high pressure air is forced across and then down the lee-side slopes of a mountain range. The descending air is warmed and dried, which produces critical fire weather conditions.

Anthropogenic increases in fire frequency can change the natural resilience of chaparral and coastal sage scrub communities. In general, when an area burns too often for the community to mature, native plants may not be able to maintain dominance. Ruderal species, including annual grasses and invasive forbs, often thrive in post-fire conditions. As a result, fires often promote the spread of non-native species into native habitats, including chaparral and scrub communities. In

turn, this high degree of non-native grass and forb cover can lead to more frequent fire return intervals (e.g., intervals of less than eight years have been reported) (Minnich and Dezzani 1998).

A decrease in fire frequency may also hinder reproduction of fire-adapted species. In the past, government agencies tried to prevent and stop the spread of wildfires through a policy of fire suppression. These efforts were found to be unsuccessful; they occasionally resulted in larger and more catastrophic fires. While they are less frequent, unnaturally large fires may burn so hot and intense that even the seeds of fire-adapted plants are destroyed.

On November 8, 2018, a fire ignited in Woolsey Canyon near the Santa Susana Field Laboratory in the Santa Susana Mountains. Strong Santa Ana wind conditions pushed the fire in a southerly direction throughout the first day toward the Santa Monica Mountains. The blaze spread rapidly, reaching the Pacific Coast Highway in Malibu. Full containment was not achieved until November 21, 2018; by then, over 96,000 acres had burned, forcing the evacuation of communities in Bell Canyon, Malibu, and Oak Park communities, among others. Nearly 300,000 people were evacuated from approximately 100,000 residences. In Malibu, the fire burned along both sides of Pacific Coast Highway and at the Study Area including landscaped and undeveloped areas on the eastern portion of the property. Psomas conducted a Post-Woolsey Fire Site Assessment on December 27, 2018, to evaluate site recovery and provide recommendations regarding the status of recovering vegetation as part of ongoing efforts to address campus safety concerns. Vegetation on the Study Area is currently recovering from this fire.

3.2 UNAUTHORIZED DEVELOPMENT

Unauthorized development was not observed within the Study Area during the field visits.

3.3 VEGETATION TYPES AND OTHER AREAS

The following vegetation types and other areas occur in the Study Area: California sagebrush scrub, coyote brush – California sagebrush scrub, coyote brush – California sagebrush scrub/upland mustards, coyote brush – California sagebrush scrub/annual grassland, disturbed coyote brush – California sagebrush scrub, upland mustards, disturbed wild oats and annual brome grassland, riparian herb, arroyo willow thicket, eucalyptus grove, California sycamore – coast live oak planting, ornamental – native planting, turf, developed/ornamental, disturbed (Table 6; Exhibit 3).

TABLE 6
VEGETATION TYPES AND OTHER AREAS IN THE STUDY AREA

Vegetation Type or Other Area	Amount in Study Area (acres)	Sensitive Natural Community[a]
California Sagebrush Scrub	0.72	no
Coyote Brush – California Sagebrush Scrub	0.54	no
Coyote Brush – California Sagebrush Scrub/Upland Mustards	21.12	no
Coyote Brush – California Sagebrush Scrub/Annual Grassland	1.53	no
Disturbed Coyote Brush – California Sagebrush Scrub	1.45	no
Upland Mustards	5.45	no
Disturbed Upland Mustards	4.82	no
Disturbed Wild Oats and Annual Brome Grassland	2.17	no
Riparian Herb	0.11	no[b]
Arroyo Willow Thicket	0.40	yes
Eucalyptus Grove	0.38	no
California Sycamore – Coast Live Oak Planting	0.55	no[c]
Ornamental – Native Planting	2.18	no[d]
Turf	11.86	no
Developed/Ornamental	26.98	no
Disturbed	6.42	no
Total	**86.69**	

[a] As determined by CDFW (2021a).
[b] While the riparian herb vegetation along the drainage may be considered part of the *Salix lasiolepis* Association, these areas currently do not support a willow canopy and may not be considered sensitive by the CDFW (2021a). The *Typha* Association is not considered sensitive.
[c] While the *Platanus racemosa – Quercus agrifolia* Association is considered sensitive by the CDFW (2021a), the on-site vegetation consists of ornamental landscaping of these native trees and would not provide the same biological functions and values as natural woodland.
[d] While the *Juglans californica* Association is considered sensitive by the CDFW (2021a), the on-site vegetation consists of a small number of isolated trees and would not provide the same biological functions and values as natural woodland.

3.3.1 California Sagebrush Scrub

California sagebrush scrub occurs as an isolated patch near the southern end of the Study Area. This vegetation type contains the densest cover of native species (approximately 90 percent) observed in the Study Area. It is composed of a continuous canopy of California sagebrush (*Artemisia californica*) with scattered coyote brush (*Baccharis pilularis* ssp. *consanguinea*).

This area was mapped as “coastal sage scrub” in the 2009 Biological Assessment and generally matches the previous description of “Venturan coastal sage scrub” (GLA 2009). It conforms to the *Artemisia californica* Association in *A Manual of California Vegetation* (CNPS 2019). This Association is not considered a sensitive natural community by the CDFW (CDFW 2021a). It should be noted that in certain cases California sagebrush scrub would be considered locally sensitive habitat for its ability to support Threatened or Endangered species. However, the sagebrush scrub that occurs on the Project Site does not have the potential to support any Threatened or Endangered species, and therefore would not be considered a sensitive habitat type.

3.3.2 Coyote Brush – California Sagebrush Scrub

Coyote brush – California sagebrush scrub occurs on the eastern edge of the Study Area. This vegetation type contains a relatively dense cover (approximately 80 percent) of coyote brush and California sagebrush with a small amount of laurel sumac (*Malosma laurina*) and the non-native shortpod mustard (*Hirschfeldia incana*).

This area was mapped as "disturbed/coastal sage scrub" in the 2009 Biological Assessment but generally matches the previous description of "Venturan coastal sage scrub" (GLA 2009). It conforms to the Baccharis pilularis – Artemisia californica Association in A Manual of California Vegetation (CNPS 2019). This Association is not considered a sensitive natural community by the CDFW (CDFW 2021a).

3.3.3 Coyote Brush – California Sagebrush Scrub/Upland Mustards

Coyote brush – California sagebrush scrub/upland mustards occurs on the periphery of the campus facilities in undeveloped portions of the Study Area. This vegetation type has approximately 15 to 20 percent cover of native species, primarily coyote brush, California sagebrush, and saw-toothed goldenbush (*Hazardia squarrosa*). It has been heavily degraded by the presence of non-native, weedy species such as shortpod mustard and fennel (*Foeniculum vulgare*).

These areas were mapped as "coastal sage scrub", "disturbed/Venturan coastal sage scrub", and "disturbed/coyote brush" in the 2009 Biological Assessment and generally match the previous description of "disturbed/coastal sage scrub" (GLA 2009). They conform to the *Baccharis pilularis – Artemisia californica* Association in *A Manual of California Vegetation* (CNPS 2019), though they are heavily degraded. This Association is not considered a sensitive natural community by the CDFW (CDFW 2021a).

3.3.4 Coyote Brush – California Sagebrush Scrub/Annual Grassland

Coyote brush – California sagebrush scrub/annual grassland occurs along the eastern side of the Study Area. This vegetation type has approximately 20 to 25 percent cover of native species, primarily California sagebrush and coyote brush with laurel sumac, deerweed, California everlasting (*Pseudognaphalium californicum*), needle grass (*Stipa* sp.), chilicothe (*Marah macrocarpa*), and western blue-eyed-grass (*Sisyrinchium bellum*). It has been degraded by the presence of non-native, annual grasses such as red brome (*Bromus rubens*), wild oat (*Avena fatua*), and soft chess (*Bromus hordeaceus*) with non-native forbs, such as fennel and petty spurge (*Euphorbia peplus*).

This area is mapped as "ruderal" in the 2009 GLA Biological Assessment and generally matches a combination of the previous descriptions of "disturbed Venturan coastal sage scrub" and "ruderal" (GLA 2009). It conforms to a combination of the Baccharis pilularis – Artemisia californica Association and the Baccharis pilularis/annual grass–herb Association in A Manual of California Vegetation (CNPS 2019). This Association is not considered a sensitive natural community by the CDFW (CDFW 2021a).

3.3.5 Disturbed Coyote Brush – California Sagebrush Scrub

Disturbed coyote brush – California sagebrush scrub occurs on a cut slope along the track on the eastern portion of the Study Area. This vegetation type has approximately 10 to 15 percent cover of native species, including coyote brush, California sagebrush, California buckwheat (*Eriogonum fasciculatum*), and stephanomeria (*Stephanomeria* sp.). While it contains non-native, weedy species such as fennel, red brome, and Geraldton carnation weed (*Euphorbia terracina*), the

weed cover is relatively low compared to coyote brush – California sagebrush scrub/upland mustards.

This area was mapped as "disturbed/coastal sage scrub" in the 2009 GLA Biological Assessment and generally matches the previous vegetation description of "disturbed Venturan coastal sage scrub" (GLA 2009). It conforms to the *Baccharis pilularis – Artemisia californica* Association in *A Manual of California Vegetation* (CNPS 2019), though it is characterized by ground disturbance. This Association is not considered a sensitive natural community by the CDFW (CDFW 2021a).

3.3.6 Upland Mustards/Disturbed Upland Mustards

Areas of upland mustards occur on the periphery of the campus in undeveloped portions of the Study Area. This vegetation type is dominated by non-native, weedy species—primarily shortpod mustard with fennel, Russian thistle (*Salsola tragus*), and Bermuda grass (*Cynodon dactylon*). Some of these areas were mowed at the time of the survey (indicated as "disturbed upland mustards" on Exhibit 3).

These areas were mapped as "turf", "ruderal" and "coastal sage scrub" in the 2009 GLA Biological Assessment and generally match the previous description of "ruderal" (GLA 2009). They conform to the *Hirschfeldia incana* Association in *A Manual of California Vegetation* (CNPS 2019). This Association is not considered a sensitive natural community by the CDFW (CDFW 2021a).

3.3.7 Disturbed Wild Oats and Annual Brome Grassland

Disturbed wild oats and annual brome grassland occurs along the eastern edge of the Study Area. This vegetation type is dominated by a mix of non-native, weedy grasses and forbs such as wild oat, red brome, ripgut grass (*Bromus diandrus*), soft chess, radish (*Raphanus sativus*), and petty spurge. These areas had previously been mowed.

These areas were mapped as "ruderal" in the 2009 GLA Biological Assessment and generally match the previous description of "ruderal" (GLA 2009). They conform to the *Avena* spp. – *Bromus* spp. Alliance in *A Manual of California Vegetation* (CNPS 2019). This Alliance is not considered a sensitive natural community by the CDFW (CDFW 2021a).

3.3.8 Riparian Herb

Riparian herb grows along the bed of the main drainage feature and in an adjacent basin on the western edge of the Study Area. The drainage contains patches of species typical of riparian understory such as watercress (*Nasturtium officinale*), California rose (*Rosa californica*), and California blackberry (*Rubus ursinus*) with non-native species including castor bean (*Ricinus communis*), garden nasturtium (*Tropaeolum majus*), and Saint Augustine grass (*Stenotaphrum secundatum*). No single species is dominant throughout the length of the drainage.

Vegetation in the drainage was included as part of the "arroyo willow riparian forest" in the 2009 Biological Assessment (GLA 2009), though the willow canopy has since burned. *A Manual of California Vegetation* (CNPS 2019) does not provide an Alliance or Association classification for areas dominated by a variety of riparian understory vegetation. On-site vegetation does not have a high enough relative cover of California rose or California blackberry for it to be considered part of the *Rosa californica* or *Rubus ursinus* Association and there is no classification for an area dominated by watercress or castor bean. Given that the area formerly had a more extensive willow canopy, it could be considered part of the *Salix lasiolepis* Association (CNPS 2019). This Association is considered sensitive by the CDFW (2019); however, the resource agencies may not consider areas currently lacking willows to be a sensitive natural community.

The basin is dominated by a patch of cattail (*Typha* sp.) surrounded by scattered natives such as an arroyo willow sapling (*Salix lasiolepis*), coyote brush, mule fat (*Baccharis salicifolia* ssp. *salicifolia*), and beardless wild-rye (*Elymus triticoides*).

Based on historic aerial images, the basin appears to have been constructed following the 2009 survey and so was not part of the 2009 GLA Biological Assessment (GLA 2009). It conforms to a *Typha* Association in *A Manual of California Vegetation* (CNPS 2019). This Association is not considered a sensitive natural community by the CDFW (CDFW 2021a).

3.3.9 Arroyo Willow Thicket

Arroyo willow thicket occurs along the main drainage feature on the western edge of the Study Area and along a drainage feature in the eastern portion of the Study Area. This vegetation type is characterized by individuals and patches of arroyo willows. The non-native castor bean is present in the understory. The patch in the eastern portion of the Study Area also contains blue elderberry (*Sambucus nigra* ssp. *caerulea*). Prior to the Woolsey fire, the vegetation on the western edge of the Study Area was more extensive. Many of the trees burned and some are regrowing while others remain as dead standing snags. Understory vegetation, where present, is similar to riparian herb, described above.

These areas were mapped as "arroyo willow riparian forest" in the 2009 Biological Assessment and generally match that previous vegetation description (GLA 2009). They conform to the *Salix lasiolepis* Association in *A Manual of California Vegetation* (CNPS 2019). This Association is considered sensitive by the CDFW (2019).

3.3.10 Eucalyptus Grove

Eucalyptus groves occur in two large patches at the northern end of the Study Area and in a patch adjacent to the equestrian center. This vegetation type consists of mature eucalyptus trees (*Eucalyptus* sp.), though some of the trees burned in the Woolsey fire and remain as standing snags.

These areas were included in the "ornamental vegetation" classification in the 2009 Biological Assessment (GLA 2009). It has been provided as its own vegetation category in the current report because *A Manual of California Vegetation* (CNPS 2019) includes a *Eucalyptus* Association and because coastal eucalyptus groves are known to support wintering monarch butterflies (discussed below in Section 4.3, Direct Impacts), a species of local concern and CDFW Special Animal. This non-native vegetation type is not considered a sensitive natural community by the CDFW (CDFW 2021a).

3.3.11 California Sycamore – Coast Live Oak Planting

A California sycamore – coast live oak planting occurs along a roadway at the southern end of the Study Area. This vegetation type consists of newly planted western sycamore and coast live oak saplings; many of the trees appeared dead or dying at the time of the survey. The understory consists of a planted prostrate coyote brush cultivar with scattered non-natives such as shortpod mustard and freeway iceplant (*Carpobrotus edulis*).

This area was not planted at the time of the 2009 Biological Assessment (GLA 2009) but is consistent with the "ornamental vegetation" classification used in that report. It generally conforms to the *Platanus racemosa – Quercus agrifolia* Association in *A Manual of California Vegetation* (CNPS 2019) due to the co-dominant tree species. This Association is considered a sensitive natural community by the CDFW (CDFW 2021a); however, the resource agencies would likely

not consider this landscaped area to provide the same biological functions and values as a natural sycamore – oak woodland.

3.3.12 Ornamental – Native Planting

Ornamental – native plantings occur primarily along the northwest periphery of the campus, near the equestrian center, and near the southern end of the Study Area. This vegetation type is very heterogeneous and consists of a mix of native and non-native planted individuals and naturalized weedy species. While this area could be considered part of the developed/ornamental vegetation type discussed below, the vegetation isn't as closely associated with structures and doesn't appear as "formally landscaped", even though many of the species appear to have been planted. The northern areas burned during the Woolsey fire. Species observed include natives such as coast live oak, Coulter's matilija poppy (*Romneya coulteri*) (a CRPR List 4.2 species), bladderpod (*Peritoma arborea*), laurel sumac, and California poppy (*Eschscholzia californica*) and non-natives such as European olive (*Olea europaea*), tree tobacco (*Nicotiana glauca*), Mexican sage (*Salvia leucantha*), shortpod mustard, castor bean, and Russian thistle. A patch of southern California black walnut (*Juglans californica*) occurs at the southeastern edge of the Study Area and consists of a few individual trees.

The areas along the northwest periphery of the campus were mapped as "ruderal" and "disturbed/coyote brush" in the 2009 GLA Biological Assessment (GLA 2009). The area near the equestrian center was mapped as "disturbed/developed". The southern California black walnut trees were mapped as "black walnut trees" but were not considered a "California walnut woodland" because the patch of trees is small, not contiguous with other woodland habitat, and functions as ornamental vegetation (GLA 2009). *A Manual of California Vegetation* (CNPS 2019) does not provide an Alliance or Association classification for vegetation as heterogeneous as is present in these areas. Due to the high diversity of non-native species, this vegetation type would not be considered a sensitive natural community by the CDFW (CDFW 2021a). Since the patch of black walnut trees is small and isolated, it would likely not be considered a sensitive natural community by the CDFW.

3.3.13 Turf

Turf occurs on the campus athletic fields throughout the Study Area. This vegetation consists of maintained turf grass. Unvegetated landcover closely associated with these fields (e.g., baseball diamonds, sidewalks, and dugouts) are included in this mapping.

These areas were mapped as "turf" in the 2009 GLA Biological Assessment (GLA 2009). *A Manual of California Vegetation* (CNPS 2019) does not provide an Alliance or Association classification for fields of cultivated grasses. As a non-native landscaped area, this vegetation type would not be considered a sensitive natural community by the CDFW (CDFW 2021a).

3.3.14 Developed/Ornamental

Developed/ornamental areas occur throughout the main campus and adjacent residential areas. This landcover includes buildings, paved roads, parking lots, the campus track, and other structures. A construction site that was active at the time of the field survey is also included in this landcover. Ornamental landscaping that is closely associated with these structures is included in this landcover and includes a variety of species such as pine (*Pinus* sp.), Mexican fan palm (*Washingtonia robusta*), pepper tree (*Schinus molle*), blue jacaranda (*Jacaranda mimosifolia*), southern magnolia (*Magnolia grandiflora*), bougainvillea (*Bougainvillea* sp.), cape leadwort (*Plumbago auriculata*), pampas grass (*Cortaderia selloana*), and turf grass.

These areas were mapped as "disturbed/developed" in the 2009 GLA Biological Assessment (GLA 2009). *A Manual of California Vegetation* (CNPS 2019) does not provide an Alliance or Association classification for developed areas or most ornamental landscaping. As a generally unvegetated area, this landcover would not be considered a sensitive natural community by the CDFW (CDFW 2021a).

3.3.15 Disturbed

Disturbed landcover occur throughout the Study Area. These areas consist of bare ground and are largely unvegetated (sparse weedy vegetation at less than 5 percent cover is present in some areas). Disturbed slopes had wattles placed along the slope contours to prevent erosion.

Some areas currently mapped as disturbed were vegetated at the time of the 2009 GLA Biological Assessment while other areas were not included in the 2009 study area (GLA 2009). *A Manual of California Vegetation* (CNPS 2019) does not provide an Alliance or Association classification for unvegetated areas. As an unvegetated area, this landcover would not be considered a sensitive natural community by the CDFW (CDFW 2021a).

3.4 COMMON WILDLIFE

The Study Area is comprised primarily of developed and non-native habitats, with some patchy native scrub habitat occurring scattered around the perimeter and center portions. Woodlands are also present on site, which consist of native plantings (California sycamore and coast live oak), and non-native eucalyptus plantings in the southeastern portion of the Survey Area. A small patch of arroyo willow thicket also occurs in the southeastern portion of the Survey Area. Common wildlife species observed or expected to occur in the Study Area are discussed below.

No portion of the Study Area supports perennial water, but there are no ponded areas. The seep in the upstream end of Drainage 1 has some intermittent flow. However, flow is only present a very short distance above ground and would not provide adequate habitat for fish. Therefore, no suitable habitat for fish species is present on the Study Area.

Amphibians require moisture for at least a portion of their life cycle and many require standing or flowing water for reproduction. Terrestrial species may or may not require standing water for reproduction. These species are able to survive in dry areas by aestivating (i.e., remaining beneath the soil in burrows or under logs and leaf litter and emerging only when temperatures are low and humidity is high). Many of these species' habitats are associated with water and they emerge to breed once the rainy season begins. Soil moisture conditions can remain high throughout the year in some habitat types depending on factors such as the amount of vegetation cover, elevation, and slope aspect. Amphibian species that may occur include western toad (*Anaxyrus boreas*) and Baja California treefrog (*Pseudacris hypochondriaca*).

Reptilian diversity and abundance typically vary with vegetation type and character. Many species prefer only one or two vegetation types; however, most species will forage in a variety of habitats. Most species occurring in open areas use rodent burrows for cover, protection from predators, and refuge during extreme weather conditions. The only reptile species observed in the Study Area was the western fence lizard (*Sceloporus occidentalis*). Other reptile species that may occur in all vegetation types on the Study Area include common side-blotched lizard (*Uta stansburiana*), southern alligator lizard (*Elgaria multicarinata*), California striped racer (*Masticophis lateralis lateralis*), San Diego night snake (*Hypsiglena ochrorhyncha*), San Diego gopher snake (*Pituophis catenifer annectens*), California lyresnake (*Trimorphodon lyrophanes*) and southern pacific rattlesnake (*Crotalus oreganus helleri*).

A variety of bird species are expected to be residents in the Study Area, using the habitats throughout the year. Other species are present only during certain seasons. For example, the white-crowned sparrow (*Zonotrichia leucophrys*) is expected to occur on the Project Site during the winter season and then migrate north in the spring to breed during the summer. On the Project Site, chaparral and scrub vegetation supports bird populations composed of species adapted to the dense vegetation that typifies these areas. Although large numbers of individuals can often be found inhabiting these vegetation types, species diversity is usually low to moderate, depending on the season. A relatively high proportion of the birds breeding in these habitats are year-round residents. Such species observed during the surveys include mourning dove (*Zenaida macroura*), Bewick's wren (*Thryomanes bewickii*), wrentit (*Chamaea fasciata*), northern mockingbird (*Mimus polyglottos*), spotted towhee (*Pipilo maculatus*), and California towhee (*Pipilo crissalis*).

Other bird species observed on the Study Area include Anna's hummingbird (*Calypte anna*), Allen's hummingbird (*Selasphorus sasin*), black-bellied plover (*Pluvialis squatarola*), killdeer (*Charadrius vociferus*), ring-billed gull (*Larus delawarensis*), western gull (*Larus occidentalis*), California gull (*Larus californicus*), Nuttall's woodpecker *(Picoides nuttallii*), nanday parakeet (*Aratinga nenday*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), Cassin's kingbird (*Tyrannus vociferans*), western kingbird (*Tyrannus verticalis*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), northern rough-winged swallow (*Stelgidopteryx serripennis*), cliff swallow (*Petrochelidon pyrrhonota*), barn swallow (*Hirundo rustica*), oak titmouse (*Baeolophus inornatus*), bushtit (*Psaltriparus minimus*), blue-gray gnatcatcher (*Polioptila caerulea*), ruby-crowned kinglet (*Regulus calendula*), wrentit (*Chamaea fasciata*), western bluebird (*Sialia mexicana*), European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), American pipit (*Anthus rubescens*), house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*), song sparrow (*Melospiza melodia*), Lincoln's sparrow (*Melospiza lincolnii*), white-crowned sparrow, dark-eyed junco (*Junco hyemalis*), Bullock's oriole (*Icterus bullockii*), red-winged blackbird (*Agelaius phoeniceus*), brown-headed cowbird (*Molothrus ater*), Brewer's blackbird (*Euphagus cyanocephalus*), common yellowthroat (*Geothlypis trichas*), yellow-rumped warbler (*Setophaga coronata*), and Wilson's warbler (*Cardellina pusilla*).

Birds of prey (raptors) observed on the Study Area include northern harrier (*Circus cyaneus*), a California Species of Special Concern when nesting; red-shouldered hawk (*Buteo lineatus*); red-tailed hawk (*Buteo jamaicensis*); great horned owl (*Bubo virginianus*); burrowing owl (*Athene cunicularia*), a California Species of Special Concern when nesting and wintering; American kestrel (*Falco sparverius*); and American peregrine falcon (*Falco peregrinus anatum*) (flyover occurrence), a CDFW Fully Protected species. Other raptors expected to occur on the Project Site include the turkey vulture (*Cathartes aura*), Cooper's hawk (*Accipiter cooperii*), barn owl (*Tyto alba*), red-tailed hawk, barn owl, great horned owl, red-shouldered hawk, Cooper's hawk, and American kestrel. The burrowing owl may occur for wintering or breeding.

As with other taxonomic groups, the presence of different vegetation types on the Project Site offers mammals a variety of habitats. The Project Study Area being mostly developed, or disturbed habitat is expected to support a relatively low diversity, but potentially moderately high abundance, of mammals. Small, ground-dwelling mammals observed in the Study Area include western gray squirrel (*Sciurus griseus*), California ground squirrel (*Otospermophilus beecheyi*), and Botta's pocket gopher (*Thomomys bottae*). Other common small mammals that may occur on the Study Area include North American deermouse (*Peromyscus maniculatus*), California pocket mouse (*Chaetodipus californicus*), house mouse (*Mus musculus*), and black rat (*Rattus rattus*). Medium to large-sized mammals or their sign observed during the survey include desert cottontail (*Sylvilagus audubonii*), brush rabbit (*Sylvilagus bachmani*), and coyote (*Canis latrans*). Other common medium to large-sized mammals that may occur on the Study Area include striped skunk (*Mephitis mephitis*), bobcat (*Felis rufus*), mule deer (*Odocoileus hemionus*), Virginia

opossum (*Didelphis virginiana*), gray fox (*Urocyon cinereoargenteus*), and northern raccoon (*Procyon lotor*).

Bats occur throughout most of Southern California and may use any portion of the Project Site as foraging habitat. The trees in the Survey Area also provide potential roosting opportunities for the hoary bat (*Aeorestes cinereus*) or the western red bat (*Lasiurus frantzii*). Species that may occur include but are not limited to the Brazilian free-tailed bat (*Tadarida brasiliensis*), big brown bat (*Eptesicus fuscus*), canyon bat (*Parastrellus hesperus*), and California myotis (*Myotis californicus*) may all occur in the Study Area.

3.4.1 Wildlife Movement

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information (MacArthur and Wilson 1967; Soule 1987; Harris and Gallagher 1989; Bennett 1990). Corridors mitigate the effects of this fragmentation by (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing routes for wildlife to escape from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (e.g., fire or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move in their home ranges in search of food, water, mates, and other necessary resources (Noss 1983; Fahrig and Merriam 1985; Simberloff and Cox 1987; Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (e.g., foraging for food or water, defending territories or searching for mates, breeding areas, or cover). A number of terms such as "wildlife corridor", "travel route", "habitat linkage", and "wildlife crossing" have been used in various wildlife movement studies to refer to areas in which wildlife move from one area to another. To clarify the meaning of these terms and to facilitate the discussion on wildlife movement in this analysis, these terms are defined as follows:

- **Travel Route –** a landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and to provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another. It contains adequate food, water, and/or cover while moving between habitat areas and it provides a relatively direct link between target habitat areas.
- **Wildlife Corridor –** a piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bound by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and to facilitate movement while in the corridor. Larger, landscape-level corridors (often referred to as "habitat linkages" or "landscape linkages") can provide both transitory and resident habitat for a variety of species.
- **Wildlife Crossing –** a small, narrow area, relatively short in length and generally constricted in nature that allows wildlife to pass under or through an obstacle or barrier

that otherwise hinders or prevents movement. Crossings typically are man-made and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These often represent "choke points" along a movement corridor, which may impede wildlife movement and increase the risk of predation.

It is important to note that, in a large open space area where there are few or no man-made or naturally occurring physical constraints to wildlife movement, wildlife corridors (as defined above) may not yet exist. Given an open space area that is both large enough to maintain viable populations of species and to provide a variety of travel routes (e.g., canyons, ridgelines, trails, riverbeds, and others), wildlife will use these "local" routes while searching for food, water, shelter, and mates and will not need to cross into other large open space areas. Based on their size, location, vegetative composition, and availability of food, some of these movement areas (e.g., large drainages and canyons) are used for longer lengths of time and serve as source areas for food, water and cover, particularly for small- and medium-sized animals. This is especially true if the travel route is within a larger open space area. However, once open space areas become constrained and/or fragmented as a result of urban development or construction of physical obstacles (e.g., roads and highways), the remaining landscape features or travel routes that connect the larger open space areas become corridors as long as they provide adequate space, cover, food, and water, and do not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement.

In general, animals discussed within the context of movement corridors typically include larger, more mobile species (e.g., mule deer, black bear, mountain lion, fox [*Urocyon* sp.], and coyote). Most of these species have relatively large home ranges through which they move to find adequate food, water, and breeding and wintering habitat. It is assumed that corridors that serve larger, more vagile species (i.e., those that can move freely, such as birds) also serve as corridors for many smaller, less mobile species, such as reptiles, amphibians, and rodents (generally discussed within the context of local movement). For smaller species, these local movements are compared to "stepping stones" as individuals move between populations; this facilitated gene flow on the regional scale.

The availability of open space corridors is generally considered less important for bird species. Most bird species are believed to fly in more or less direct paths to desired locations; however, some habitat-specific species may not move great distances from their preferred habitat types and are believed to be less inclined to travel across unsuitable areas.

Ideally, an open space corridor should encompass a heterogeneous mix of vegetation types to accommodate the ecological requirements of a wide variety of resident species in any particular region. Most species typically prefer adequate vegetation cover during movement, which can serve as both a food source and as protection from weather and predators. Drainages, riparian areas, and forested canyon bottoms typically serve as natural movement corridors because these features provide cover, food, and often water for a variety of species. Very few species will move across large expanses of open, uncovered habitat unless it is the only option available to them. For some species, landscape linkages must be able to support animals for sustained periods, not just for travel. Smaller or less mobile animals (e.g., rodents and reptiles) require long periods to traverse a corridor, so the corridor must contain adequate food and cover for survival.

The Study Area is relatively flat and does not contain any important travel routes or corridors such as canyons or ridgelines, and the Study Area does not connect any large regional open space areas. Any movement occurring in the Study Area would be restricted to local movement of resident wildlife species using the site to forage or disperse from breeding grounds. The overwhelming majority of Project impacts are contained to areas that were previously developed.

In addition, restoration occurring in and adjacent to the ESHA would be a net benefit for any local wildlife movement occurring in that area.

3.5 SPECIAL STATUS BIOLOGICAL RESOURCES

The following section addresses special status biological resources reported from the region. These resources include plant and wildlife species that have been afforded special status and/or are recognized by federal and State resource agencies, as well as private conservation organizations. In general, the principal reason an individual taxon (i.e., species, subspecies, or variety) is given such recognition is the documented or perceived decline or limitations of its population size, geographic range, and/or distribution resulting in most cases from habitat loss. This list includes species reported by the California Natural Diversity Database (CNDDB), and CNPS and is supplemented with species from the author's experience that could occur based on the presence of suitable habitat. In addition, special status biological resources include vegetation types and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. These resources have been defined by federal, State, and local government conservation programs. Sources used to determine the special status of biological resources are listed below.

Habitats – the CNDDB (CDFW 2021b) and the CDFW's *California Natural Communities List* (CDFW 2021a).

Plants – the Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2021); the CNDDB (CDFW 2021b); various USFWS *Federal Register* notices regarding listing status of plant species; and the CDFW's *List of Special Vascular Plants, Bryophytes, and Lichens* (CDFW 2021d).

Wildlife – the CNDDB (CDFW 2021b); various USFWS *Federal Register* notices regarding listing status of wildlife species; and the CDFW's *List of Special Animals* (CDFW 2021c).

3.5.1 Special Status Vegetation Types

In addition to providing an inventory of special status plant and wildlife species, the CDFW provides a list of vegetation Alliances, Associations, and Special Stands that are considered "Sensitive Natural Communities" based on their rarity and threat (CDFW 2021a). Sensitive natural communities are "of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects"; they may or may not contain special status species (CDFW 2018). Determination of the level of imperilment is based on the NatureServe Heritage Program Status Ranks that rank both species and vegetation types on a global (**G**) and statewide (**S**) basis according to their rarity; trend in population size or area; and recognized threats (e.g., proposed developments, habitat degradation, and non-native species invasion). The ranks are scaled from 1 to 5. NatureServe considers **G1 or S1** communities to be critically imperiled and at a very high risk of extinction or elimination due to extreme rarity, very steep declines, or other factors; **G2 or S2** communities to be imperiled and at high risk of extinction or elimination due to very restricted range, very few populations or occurrences, steep declines, or other factors; **G3 or S3** communities to be vulnerable and at moderate risk of extinction or elimination due to a restricted range, relatively few populations or occurrences, recent and widespread declines, or other factors; **G4 or S4** communities to be apparently secure and uncommon but not rare with some cause for long-term concern due to declines or other factors; and **G5 or S5** communities to be secure (Faber-Langendoen et al. 2009).

All vegetation alliances[4] that have State ranks of S1 to S3 are considered to be highly imperiled. Currently, association ranks are not provided, but associations ranked as S3 or rarer are noted. One of the vegetation types on the Study Area is considered special status: arroyo willow thicket (Table 6).

3.5.2 Special Status Plant Species

Many special status plant species have been reported from the Project region. Table 7 provides a list of these species; their listing status; and their potential to occur in each portion of the Study Area. Locations of special status plant species can be found on Exhibit 5.

[4] A vegetation alliance is "a classification unit of vegetation, containing one or more associations and defined by one or more diagnostic species, often of high cover, in the uppermost layer or the layer with the highest canopy cover" (Sawyer et al. 2009).

TABLE 7
SPECIAL STATUS PLANT SPECIES OF THE PROJECT REGION

Scientific Name	Common Name	USFWS	CDFW	CRPR	Species Background	Potential
Abronia maritima	red sand-verbena			4.2	Perennial herb. Coastal dunes; 0–328 ft. Southern California County Distribution: Los Angeles, Orange, San Diego, and Ventura. Blooming period: February–November.	Not expected to occur; no suitable habitat.
Astragalus brauntonii	Braunton's milk-vetch	FE		1B.1	Perennial herb. Recently burned and disturbed areas, in sandstone and carbonite soils, in chaparral, coastal scrub, and grasslands; 13–2,099 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, Ventura. Blooming period: January–August.	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Atriplex coulteri	Coulter's saltbush			1B.2	Perennial herb. Alkaline or clay soils in coastal bluff scrub, coastal dunes, coastal scrub, and grassland; 9–1,509 ft. Southern California County Distribution: Los Angeles, Orange, San Bernardino, San Diego, Ventura. Blooming period: March–October.	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Atriplex serenana var. *davidsonii*	Davidson's saltscale			1B.2	Annual herb. Alkaline conditions in coastal bluff scrub and coastal scrub; 32–656 ft. Southern California County Distribution: Los Angeles (Presumed extirpated; Occurrence confirmed, but possibly extirpated), Orange, Riverside, San Diego, Ventura. Blooming period: April–October.	Not expected to occur; limited, marginally suitable habitat; few records in the region.
Baccharis malibuensis	Malibu baccharis			1B.1	Deciduous shrub. Chaparral, coastal scrub, cismontane and riparian woodland; 492–1,000 ft. Southern California County Distribution: Los Angeles, Orange. Blooming period: August.	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Calochortus catalinae	Catalina mariposa lily			4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, and grassland; 49–2,296 ft. Southern California County Distribution: Los Angeles, Orange, San Bernardino, San Diego, Ventura. Blooming period: February–June.	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Calochortus clavatus var. *clavatus*	club-haired mariposa lily			4.3	Perennial bulbiferous herb. Clay, rocky, or serpentine soils in chaparral, coastal scrub, cismontane woodland, grassland; 246–4,264 ft. Southern California County Distribution: Los Angeles, Ventura. Blooming period: May–June.	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Calochortus clavatus var. *gracilis*	slender mariposa lily			1B.2	Perennial bulbiferous herb. Chaparral, coastal scrub, grassland; 0–3,280 ft. Southern California County Distribution: Los Angeles, Ventura. Blooming period: March–June.	Limited potential to occur; marginally suitable habitat.
Calochortus plummerae	Plummer's mariposa lily			4.2	Perennial bulbiferous herb. Granitic and rocky areas in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and grassland; 0–5,576 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Bernardino, Ventura. Blooming period: May–July.	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Camissoniopsis lewisii	Lewis' evening-primrose			3	Annual herb. Sandy or clay soils in coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and grassland; 0–984 ft. Southern California County Distribution: Los Angeles, Orange (Presumed extirpated), San Diego. Blooming period: March–June.	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Centromadia parryi ssp. *australis*	southern tarplant			1B.1	Annual herb. Found within the margin of marshes and swamps, vernally mesic soils in grassland, and vernal pools; 0–1,574 ft. Southern California County Distribution: Los Angeles, Orange, San Diego, Ventura. Blooming period: May–November.	Not expected to occur; no suitable habitat.
Cercocarpus betuloides var. *blancheae*	island mountain-mahogany			4.3	Evergreen shrub. Closed-cone coniferous forests and chaparral; 98–1,968 ft. Southern California County Distribution: Los Angeles, Ventura. Blooming period: February–May.	Not expected to occur; no suitable habitat.
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion			1B.1	Annual herb. Sandy soils in coastal bluff scrub and coastal dunes; 0–328 ft. Southern California County Distribution: Los Angeles, Orange (Presumed extirpated), San Diego, Ventura. Blooming period: January–August.	Not expected to occur; no suitable habitat.
Chorizanthe parryi var. *fernandina*	San Fernando Valley spineflower		SE	1B.1	Annual herb. Sandy soil in coastal scrub and grassland; 492–4,002 ft. Southern California County Distribution: Los Angeles, Orange (Presumed extirpated), Ventura. Blooming period: April–July.	Not expected to occur; no suitable soils.
Chorizanthe parryi var. *parryi*	Parry's spineflower			1B.1	Annual herb. Sandy or rocky openings in chaparral, coastal scrub, cismontane woodland, and grassland; 902–4,001 ft. Southern California County Distribution: Los Angeles, Riverside, San Bernardino. Blooming period: April–June.	Not expected to occur; outside current known elevational range.
Convolvulus simulans	small-flowered morning-glory			4.2	Annual herb. Friable clay soils or serpentine seeps in chaparral openings, coastal scrub, and grassland; 98–2,297 ft. Southern California County Distribution: Kern, Los Angeles, Orange, Riverside, San Diego. Blooming period: March–July.	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Dichondra occidentalis	western dichondra			4.2	Perennial rhizomatous herb. Chaparral, cismontane woodland, coastal scrub, grassland; 164–1,640 ft. Southern California County Distribution: Los Angeles (Uncertain about distribution or identity), Orange, San Diego, Ventura. Blooming period: January–July.	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya			1B.1	Perennial herb. Rocky, often clay or serpentine soils in coastal bluff scrub, chaparral, coastal scrub, and grassland; 16–1,476 ft. Southern California County Distribution: Los Angeles, Orange, San Diego, Ventura. Blooming period: April–June.	Not expected to occur; not observed during focused surveys; marginally suitable habitat.

TABLE 7
SPECIAL STATUS PLANT SPECIES OF THE PROJECT REGION

Scientific Name	Common Name	USFWS	CDFW	CRPR	Species Background	Potential
Dudleya cymosa ssp. *agourensis*	Agoura Hills dudleya	FT		1B.2	Perennial herb. Rocky and volcanic soils in chaparral and cismontane woodland; 656–1,640 ft. Southern California County Distribution: Los Angeles, Ventura. Blooming period: May–June.	Not expected to occur; no suitable habitat.
Dudleya cymosa ssp. *marcescens*	marcescent dudleya	FT	SR	1B.2	Perennial herb. Rocky and volcanic soils in chaparral; 492–1,706 ft. Southern California County Distribution: Los Angeles, Ventura. Blooming period: April–July.	Not expected to occur; no suitable habitat.
Dudleya cymosa ssp. *ovatifolia*	Santa Monica dudleya	FT		1B.1	Perennial herb. Shaded, volcanic or sedimentary rocky soils in chaparral and coastal scrub; 492–5,494 ft. Southern California County Distribution: Los Angeles, Orange. Blooming period: March–June.	Not expected to occur; no suitable habitat.
Hordeum intercedens	vernal barley			3.2	Annual herb. Coastal dunes, coastal scrub, saline flats and depressions in grassland, and vernal pools; 16–3,280 ft. Southern California County Distribution: Kern, Los Angeles, Orange, Riverside, San Diego, Ventura. Blooming period: March–June.	Not expected to occur; no suitable habitat.
Horkelia cuneata var. *puberula*	mesa horkelia			1B.1	Perennial herb. Sandy and gravelly soils in maritime chaparral, cismontane woodland, and coastal scrub; 229–2,657 ft. Southern California County Distribution: Los Angeles, Orange, Riverside (Presumed extirpated), San Bernardino, San Diego (Presumed extirpated), Ventura. Blooming period: February–July (September).	Not expected to occur; no suitable soils.
Isocoma menziesii var. *decumbens*	decumbent goldenbush			1B.2	Perennial shrub. Chaparral and in sandy coastal scrub, often in sandy disturbed areas; 33–443 ft. Southern California County Distribution: Los Angeles, Orange, San Diego. Blooming period: April–November.	Not expected to occur; no suitable habitat.
Juglans californica	Southern California black walnut			4.2	Deciduous tree. Alluvial areas in chaparral, cismontane woodland, and coastal scrub; 164–2,952 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura. Blooming period: March–August.	Observed; suitable habitat.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields			1B.1	Annual herb. Coastal salt marsh, coastal salt swamps, playas, vernal pools; 3–4,001 ft. Southern California County Distribution: Kern (Presumed extirpated), Los Angeles (Presumed extirpated), Orange, Riverside, San Bernardino (Presumed extirpated), San Diego, Ventura. Blooming period: February–June.	Not expected to occur; no suitable habitat.
Lepechinia fragrans	fragrant pitcher sage			4.2	Perennial herb. Chaparral; 66–4,297 ft. Southern California County Distribution: Los Angeles, San Bernardino, Ventura (Uncertain about distribution or identity). Blooming period: March–October.	Not expected to occur; no suitable habitat.
Lilium humboldtii ssp. *ocellatum*	ocellated Humboldt lily			4.2	Perennial bulbiferous herb. Openings in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland; 98–5,904 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura. Blooming period: March–July (August).	Not expected to occur; no suitable habitat.
Monardella hypoleuca ssp. *hypoleuca*	white-veined monardella			1B.3	Perennial herb. Chaparral and cismontane woodland; 164–5,002 ft. Southern California County Distribution: Los Angeles, Ventura. Blooming period: April–December.	Not expected to occur; no suitable habitat.
Navarretia ojaiensis	Ojai navarretia			1B.1	Annual herb. Openings in chaparral and coastal sage scrub and grassland; 275–620 m (902–2,034 ft). Southern California County Distribution: Los Angeles (Uncertain about distribution or identity), Ventura. Blooming period: May–July.	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Pentachaeta lyonii	Lyon's pentachaeta	FE	SE	1B.1	Annual herb. Rocky or clay soils in coastal scrub, grassland, and openings in chaparral; 98–2,066 ft. Southern California County Distribution: Los Angeles, Ventura. Blooming period: March–August.	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Phacelia hubbyi	Hubby's phacelia			4.2	Annual herb. Gravelly to rocky soil or talus in chaparral, coastal scrub, grassland; 0–3,280 ft. Southern California County Distribution: Kern, Los Angeles, Ventura. Blooming period: April–July.	Not expected to occur; no suitable soils.
Phacelia ramosissima var. *austrolitoralis*	south coast branching phacelia			3.2	Perennial herb. Sandy, sometimes rocky soils in chaparral, coastal dunes, coastal scrub, coastal salt marshes and swamps; 16–984 ft. Southern California County Distribution: Orange, Los Angeles, San Diego, Ventura. Blooming period: March–August.	Not expected to occur; no suitable habitat.
Quercus dumosa	Nuttall's scrub oak			1B.1	Perennial evergreen shrub. Sandy or clay loam in closed-cone coniferous forest, chaparral, and coastal scrub; 49–1,312 ft. Southern California County Distribution: Los Angeles, Orange, San Diego, Ventura. Blooming period: February–August.	Not expected to occur; not observed during focused surveys; marginally suitable habitat.
Romneya coulteri	Coulter's matilija poppy			4.2	Perennial rhizomatous herb. Chaparral and coastal scrub; often in burned areas; 65–3,936 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Diego. Blooming period: March–July.	Observed; suitable habitat.
Senecio aphanactis	chaparral ragwort			2B.2	Annual herb. Chaparral, cismontane woodland, coastal scrub, and alkaline flats; 49–2,624 ft. Southern California County Distribution: Los Angeles, Orange, Riverside, San Diego, Ventura. Blooming period: January–April.	Not expected to occur; no suitable habitat.

TABLE 7
SPECIAL STATUS PLANT SPECIES OF THE PROJECT REGION

Scientific Name	Common Name	USFWS	CDFW	CRPR	Species Background	Potential
Thelypteris puberula var. *sonorensis*	Sonoran maiden fern			2B.2	Perennial rhizomatous herb. Meadows, seeps, and streams; 164–2,001 ft. Southern California County Distribution: Los Angeles, Riverside, San Bernardino. Blooming period: January–September.	Not expected to occur; not observed during focused surveys; marginally suitable habitat.

USFWS: U.S. Fish and Wildlife Service; CDFW: California Department of Fish and Wildlife; CRPR: California Rare Plant Rank; ft: feet; m: meter.

Species Status

Federal (USFWS) **State (CDFW)**

FE Endangered SE Endangered
FT Threatened SR Rare

CRPR

1B Plants Rare, Threatened, or Endangered in California and elsewhere
2B Plants Rare, Threatened, or Endangered in California, but more common elsewhere
3 Plants about which we need more information – review list
4 Plants of limited distribution – watch list

CRPR Threat Code Extension

None Plants lacking any threat information
.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
.2 Moderately threatened in California (20–80% of occurrences threatened; moderate degree and immediacy of threat)
.3 Not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known)

Species that were observed [on site] are shown in **boldface** type.

3.5.3 Special Status Wildlife

Many special status wildlife species have been reported from the Project region. Table 8 provides a list of these species; their listing status; and their potential to occur in each portion of the Survey Area. Locations of special status wildlife species can be found on Exhibit 6.

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Special Status Wildlife Observations

Exhibit 6

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N W E S

450 225 0 450

Feet

PSOMAS

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TABLE 8
SPECIAL STATUS WILDLIFE SPECIES REPORTED FROM THE PROJECT AREA

Species	General Habitat/Range Description	USFWS	CDFW	Potential for Occurrence
Invertebrates				
Danaus plexippus pop. 1 monarch (California overwintering population)[a]	Primarily occurs in coastal, lowland, and foothill areas with milkweed (*Ascelpias* spp.), though also in deserts and mountains; overwinters in large numbers on trees.	–	SA	May occur; limited suitable wintering habitat in eucalyptus grove. Eucalyptus groves will not be impacted by the Project.
Euphydryas editha quino Quino checkerspot butterfly	Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties. Hills and mesas near the coast. Need high densities of food plants *Plantago erecta*, *P. insularis*, and *Orthocarpus purpurescens*.	FE	–	Not expected to occur; outside of species range.
Bombus crotchii Crotch bumble bee	Occurs in open grassland and scrub habitats; nests underground. Feeds on milkweed (*Asclepias* sp.), pincushion (*Chaenactis* sp,), lupine (*Lupinus* sp.), alfalfa (*Medicago* sp.), phacelia (*Phacelia* sp.), and sage (*Salvia* sp.), among others.	–	CE	Not expected to occur; no suitable habitat.
Fish				
Gila orcuttii arroyo chub	Occurs in coastal freshwater streams and rivers with sustained flows and emergent vegetation with substrates consisting primarily of sand or mud.	–	SSC	Not expected to occur; no suitable habitat.
Oncorhynchus mykiss irideus pop. 10 steelhead – southern California DPS	Occurs in perennial streams and rivers that connect to the ocean.	FE	–	Not expected to occur; no suitable habitat.
Eucyclogobius newberryi tidewater goby	Occurs in in waters of coastal lagoons, estuaries, and marshes.	FE	SSC	Not expected to occur; no suitable habitat.
Amphibians				
Anaxyrus californicus arroyo toad	Occurs in semi-arid regions near washes or intermittent streams; requires suitable breeding pools.	FE	SSC	Not expected to occur; no suitable habitat.
Spea hammondii western spadefoot	Occurs in a wide range of habitats including lowlands to foothills, grasslands, open chaparral, and pine-oak woodlands. It prefers shortgrass plains, and sandy or gravelly soil (e.g., alkali flats, washes, alluvial fans). It is fossorial and breeds in temporary rain pools and slow-moving streams (e.g., areas flooded by intermittent streams).	–	SSC	Not expected to occur; limited terrestrial habitat with no suitable breeding habitat (no breeding pools).

TABLE 8
SPECIAL STATUS WILDLIFE SPECIES REPORTED FROM THE PROJECT AREA

Species	General Habitat/Range Description	USFWS	CDFW	Potential for Occurrence
Reptiles				
Emys marmorata western pond turtle	Occurs in ponds, lakes, marshes, rivers, streams, and irrigation ditches with a rocky or muddy bottom and aquatic vegetation.	–	SSC	Not expected to occur; no suitable habitat.
Phrynosoma blainvillii coast horned lizard	Occurs in scrubland, grassland, coniferous forests, and broadleaf woodland vegetation types.	–	SSC	Not expected to occur; sage scrub habitat is too degraded and isolated.
Aspidoscelis tigris stejnegeri coastal whiptail	Occurs in hot and dry areas with sparse foliage and open areas. Found in forests, woodland, chaparral, and riparian areas.	–	SSC	May occur; limited suitable habitat. Only very rarely expected to occur within the Project impact area.
Anniella stebbinsi southern California legless lizard	Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Sometimes found in suburban gardens in Southern California. Spends most of its life beneath the soil, under rocks, boards, driftwood, logs, debris, or in leaf litter. Prefers areas with loose, sandy soil, moisture, warmth, and plant cover.	–	SSC	Not expected to occur; no suitable habitat.
Thamnophis hammondii two-striped garter snake	Occurs in wetlands, freshwater marsh, and riparian habitats with perennial water.	–	SSC	Not expected to occur; no suitable habitat.
Birds				
Aquila chrysaetos golden eagle (nesting and wintering)	Nests in open and semi-open habitats, such as tundra, shrublands, grasslands, woodland-brushlands, coniferous forests, farmland, and riparian habitats. Forages in broad expanses of open country.	–	FP	Not expected to occur; no suitable habitat.
Circus cyaneus northern harrier (nesting)	Occurs from annual grassland up to lodgepole pine and alpine meadow habitats, as high as 3000 m (10,000 ft). Frequents meadows, grasslands, open rangelands, desert sinks, and fresh and saltwater emergent wetlands; seldom found in wooded areas. Permanent resident of the northeastern plateau and coastal areas; less common resident of the Central Valley. Widespread winter resident and migrant in suitable habitat. Uses tall grasses and forbs in wetland, or at wetland/field border, for cover.	–	SSC	Observed as a flyover (Exhibit 6); not expected to occur for breeding due to lack of suitable habitat. May forage in the undeveloped grassland and scrub habitat in the Study Area. Not expected to forage in the impact area.
Falco peregrinus anatum American peregrine falcon (nesting)	Nests on cliffs and tall buildings near wetlands, lakes, rivers, or other large water features.	–	FP	Observed as a flyover (Exhibit 6); not expected to occur for breeding. May forage in the undeveloped grassland and scrub habitat in the Study Area. Not expected to forage in the impact area.

TABLE 8
SPECIAL STATUS WILDLIFE SPECIES REPORTED FROM THE PROJECT AREA

Species	General Habitat/Range Description	USFWS	CDFW	Potential for Occurrence
Athene cuniculari burrowing owl (burrow sites and some wintering sites)	Occurs in sparse vegetation in arid and semi-arid habitats such as grasslands, steppes, deserts, prairies, and agricultural areas. Nests in mammal burrows or man-made cavities.	–	SSC	Observed; may occur for breeding and wintering.
Polioptila californica californica coastal California gnatcatcher	In California, this species is an obligate resident of several distinct sub-associations of the coastal sage scrub vegetation type. The gnatcatcher has been recorded from sea level to approximately 3,000 feet above msl (USFWS 2003); however, greater than 90 percent of gnatcatcher records are from between sea level and 820 feet above msl along the coast and between sea level and 1,800 feet above msl inland (Atwood and Bolsinger 1992).	FT	SSC	Not expected to occur; limited suitable habitat; lack of historical records in the Project region; outside of species range.
Agelaius tricolor tricolored blackbird (nesting)	This colonial nesting species prefers to breed in freshwater marshes dominated by cattails and bulrushes, with willows and nettles (*Urtica* spp.) also common. The introduced mustards (*Brassica* spp.), blackberries (*Rubus* spp.), thistles (*Circium* spp.), and mallows (*Malva* spp.) have also been used for several decades.	–	ST, SSC	Not expected to occur; no suitable habitat.
Mammals				
Macrotus californicus California leaf-nosed bat	Occurs in desert riparian, desert wash, desert scrub, desert succulent scrub, alkali scrub, and palm oasis habitats.	–	SSC	Not expected to occur; no suitable habitat.
Euderma maculatum spotted bat	Occurs in a variety of habitats such as arid desert, grassland, and mixed conifer forest (Zeiner et al. 1990). Roosts in rock crevices (Williams 1986).	–	SSC	Not expected to occur; no suitable habitat.
Lasiurus blossevillii western red bat	Prefers riparian areas dominated by walnuts, oaks, willows, cottonwoods, and sycamores where they roost in these broad-leafed trees.	–	SSC	Low potential to occur; suitable foraging habitat and limited suitable roosting habitat.
Eumops perotis californicus western mastiff bat	Occurs in many open semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, palm oases, chaparral, desert scrub, and urban areas. Typically forages in open areas with high cliffs and roosts in crevices on cliff faces and occasionally in man-made structures with at least 15 ft of unobstructed space below roost.	–	SSC	May occur for foraging; suitable foraging habitat; not expected to occur for roosting; no suitable roosting habitat.

TABLE 8
SPECIAL STATUS WILDLIFE SPECIES REPORTED FROM THE PROJECT AREA

Species	General Habitat/Range Description	USFWS	CDFW	Potential for Occurrence
Taxidea taxus American badger	Most abundant in the drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. When inactive, occupies underground burrow.	–	SSC	Not expected to occur; no suitable habitat.
Neotoma lepida intermedia San Diego desert woodrat	Common to abundant in Joshua tree, pinyon-juniper, mixed and chamise-redshank chaparral, sagebrush, and most desert habitats. Also found in a variety of other habitats. Most abundant in rocky areas with Joshua trees. Elevational range from sea level to 8,500 ft. Northern and elevational distribution may be limited by temperature.	–	SSC	Not expected to occur; no suitable habitat.

USFWS: U.S. Fish and Wildlife Service; CDFW: California Department of Fish and Wildlife; USFS: U.S. Forest Service; msl: mean sea level; ft: feet; m: meter.

[a]: This is a species of local concern because they historically roost in large numbers along the coast in large trees such as gum trees (*Eucalyptus* spp.) and it was therefore added to the table, however, other CDFW Special Animal species that may occur in the Project region are not included in this table.

Status Definitions

Federal (USFWS) Status

FE Endangered
FT Threatened

State (CDFW) Status

ST Threatened
CE Candidate for Listing as Endangered
SSC Species of Special Concern
FP California Fully Protected
WL Watch List
SA Special Animal (tracked by CNDDB)

Notes: Scientific and common names for wildlife species follow the most current list of Special Animals (July 2021) available from the CDFW (https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals).

3.5.4 Jurisdictional Resources

Riparian habitats are often under the jurisdiction of the USACE, the RWQCB, and/or the CDFW due to their association with wetlands, "Waters of the U.S.", or streambeds. However, it should be noted that the riparian habitats described above are not equivalent to delineated areas subject to the jurisdiction of the USACE, the RWQCB, and/or the CDFW. Only the portion of these habitats associated within a discernible streambed and/or adjacent wetlands that meet certain criteria are within the jurisdiction of these regulatory agencies. Similarly, upland habitat types (e.g., mixed coastal sage scrub and mixed chaparral) or disturbed and developed areas may be within the jurisdiction of these agencies if they occur within a discernible streambed.

A total of five potential jurisdictional features were mapped in the Study Area: Drainage 1, Drainage 2, Drainage 3, Drainage 4, and Basin (Exhibits 7 and 8). Table 9 summarizes the type and extent of the jurisdictional features in the Study Area. A detailed analysis of the jurisdictional resources found in the Survey Area can be found within the Draft Jurisdictional Delineation Report for the Malibu Middle and High School Campus Specific Plan (Psomas 2021b) included as Appendix C.

TABLE 9
SUMMARY OF JURISDICTIONAL RESOURCES IN THE STUDY AREA

	Existing Resources (Acres)					
	Drainage					
Jurisdictional Features	**1**	**2**	**3**	**4**	**Basin**	**Total**
USACE Waters of the United States						
Wetlands	0.007	n/a	n/a	n/a	n/a	0.007
Non-wetland Waters	0.063	n/a	n/a	n/a	n/a	0.063
Total USACE Waters of the United States	0.070	n/a	n/a	n/a	n/a	0.070
RWCQB Waters of the State						
Wetlands	0.007	n/a	n/a	n/a	n/a	0.007
Non-wetland Waters	0.063	0.076	0.030	0.023	0.033	0.225
Total RWQCB Waters of the State	**0.070**	**0.076**	**0.030**	**0.023**	**0.033**	**0.232**
Total CDFW Jurisdictional Resources	**0.681**	**0.127**	**0.030**	**0.331**	**0.033**	**1.202**
Total CCC Jurisdictional Resources	**0.681**	**0.127**	**0.030**	**0.331**	**0.033**	**1.202**

USACE: U.S. Army Corps of Engineers; RWQCB: Regional Water Quality Control Board; CDFW: California Department of Fish and Wildlife; CCC: California Coastal Commission.

3.5.5 Regulated Tree Resources

Trees protected pursuant to City ordinance within the Project Study Area include eight western sycamores, one Southern California black walnut, and one coast live oak. Their locations are provided on Exhibit 2 of the Tree Survey Report (Psomas 2021c) and denoted as "LCP Protected Trees". Generally, these trees are located on slopes or in drainages over 30 feet from existing structures. The walnut tree is located next to a residential structure in the southeast corner of the Study Area.

3.6 ENVIRONMENTALLY SENSITIVE HABITAT AREA

According to the City of Malibu Local Coastal Program ESHA Overlay Map 2: Zuma Beach to Escondido, a mapped ESHA in the northwestern portion of the Survey Area. The ESHA consists of an approximately 1,100-foot long drainage (Drainage 1) along the western edge of the Campus

Study Area

Sampling Points

Ordinary High Water Mark

Non-wetland

Wetland*

* Based on USACE three-parameter approach.

Match Line - Exhibit 7b

Drainage 1

2

Basin

Map Extent

7a 7b 7c 7d 7e 7f

Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Ordinary High Water Mark

Exhibit 7a

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N W E S

50 25 0 50 Feet

PSOMAS

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Study Area

Sampling Points

Ordinary High Water Mark

Non-wetland

Wetland*

* Based on USACE three-parameter approach.

1A

1B

Drainage 1

Drainage 2

Match Line - Exhibit 7c

Match Line - Exhibit 7a

Map Extent

7a

7b

7c

7d

7e

7f

Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Ordinary High Water Mark

Exhibit 7b

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N W E S

50 25 0 50 Feet

PSOMAS

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Study Area

Sampling Points

Ordinary High Water Mark

Non-wetland

Wetland*

* Based on USACE three-parameter approach.

Drainage 2

Match Line - Exhibit 7b

Map Extent

7a

7b

7c

7d

7e

7f

Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Ordinary High Water Mark

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

Exhibit 7c

N W E S

50 25 0 50 Feet

PSOMAS

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Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Ordinary High Water Mark

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

Exhibit 7d

N W E S

50 25 0 50 Feet

PSOMAS

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Study Area

Sampling Points

Ordinary High Water Mark

Non-wetland

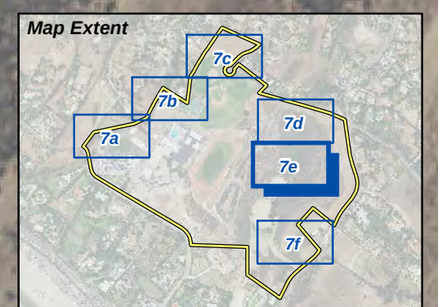
Wetland*

* Based on USACE three-parameter approach.

Match Line - Exhibit 7d

Drainage 3

Map Extent



Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Ordinary High Water Mark

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

Exhibit 7e

N W E S

50 25 0 50 Feet

PSOMAS

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Study Area

Sampling Points

Ordinary High Water Mark

Non-wetland

Wetland*

* Based on USACE three-parameter approach.

Drainage 4

Map Extent

7a 7b 7c 7d 7e 7f

Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Ordinary High Water Mark

Exhibit 7f

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N W E S

50 25 0 50 Feet

PSOMAS

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Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Top of Bank/Riparian Canopy

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

Exhibit 8a

N W E S

60 30 0 60 Feet

PSOMAS

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Study Area
Limits of ESHA Delineated in the Field
Sampling Points
Top of Bank/Riparian Canopy

1A
1B
2
Drainage 1
Drainage 2
Match Line - Exhibit 8a
Match Line - Exhibit 8c

8a
8b
8c
8d
8e
8f

Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Top of Bank/Riparian Canopy

Exhibit 8b

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N
W E
S

60 30 0 60
Feet

PSOMAS

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Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Top of Bank/Riparian Canopy

Exhibit 8c

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N W E S

60 30 0 60 Feet

PSOMAS

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Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Top of Bank/Riparian Canopy

Exhibit 8d

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N
W E
S

60 30 0 60 Feet

PSOMAS

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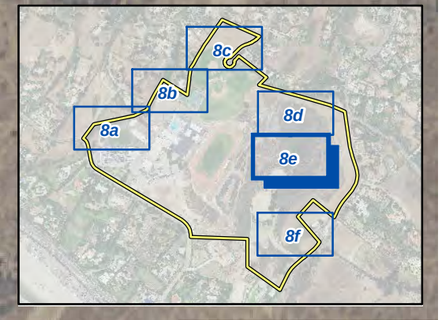
Study Area

Top of Bank/Riparian Canopy

Match Line - Exhibit 8d

Drainage 3



Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Top of Bank/Riparian Canopy

Exhibit 8e

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N W E S

60 30 0 60 Feet

PSOMAS

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Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Top of Bank/Riparian Canopy

Exhibit 8f

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N W E S

60 30 0 60 Feet

PSOMAS

(Rev: 09/02/2021 MMD) R:\Projects\1SAN\082310\Graphics\BioTech\ex_JD_TOB_.pdf

(Exhibit 9). It receives flow from an undeveloped lot north of the property, road runoff, and runoff from an adjacent parking lot. A culvert at the cul-de-sac of Clover Heights Avenue also carries flow underground and into this drainage. At the downstream end, the drainage flows into a corrugated pipe culvert under Morning View Drive. Based on aerial imagery and USGS topographic contours, this drainage continues primarily above ground until it is undergrounded at Pacific Coast Highway and discharges onto Zuma Beach at the Pacific Ocean (Psomas 2021a).

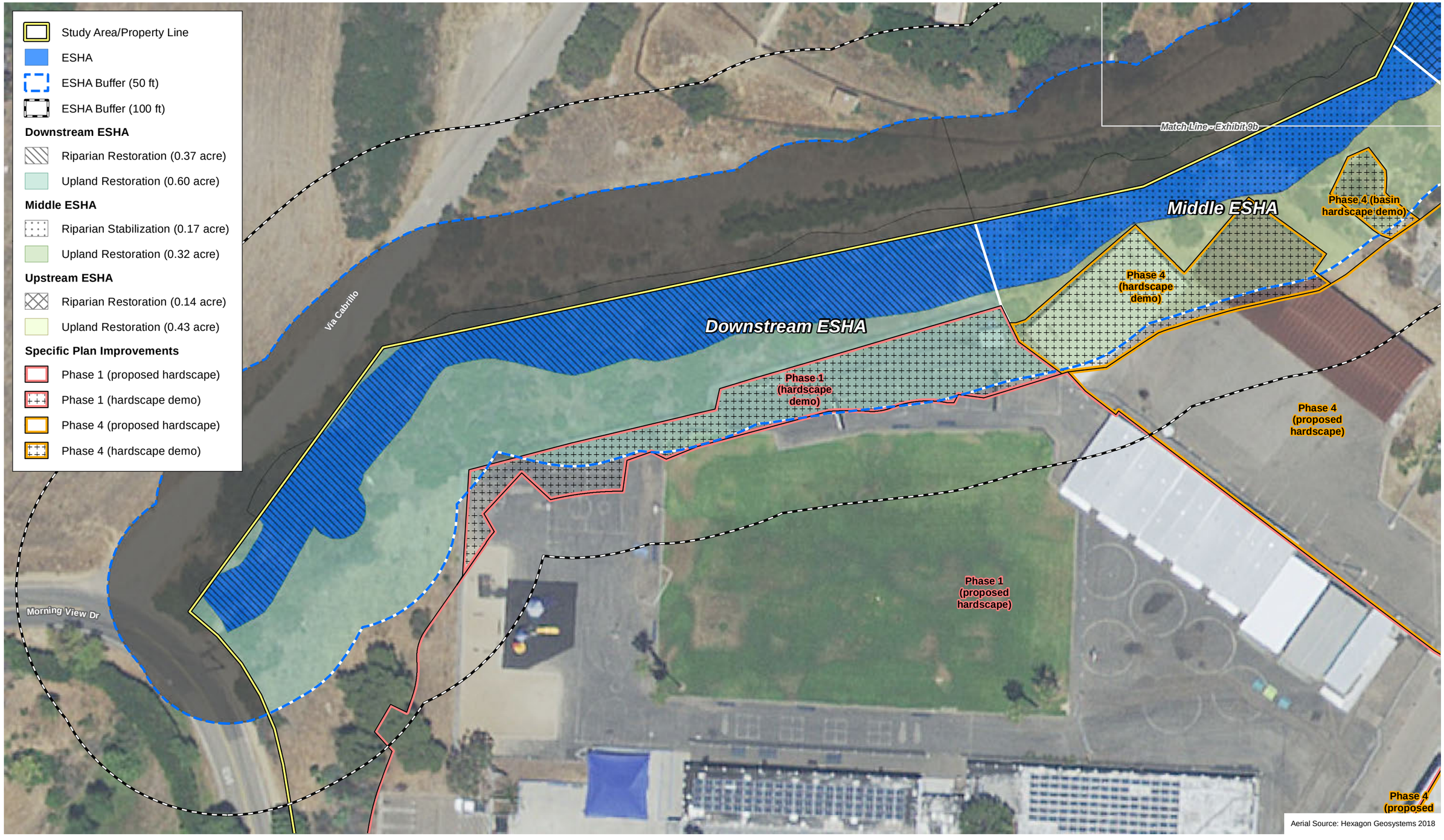
The drainage is unlined along its entire length in the Study Area. The upstream end of the drainage has a broad, concave cross-section with no abrupt break in bank slope. Soils in this area were saturated and surface water was present during multiple site visits. The middle and downstream end of the drainage is more incised, with steep slopes and a narrow channel bed. Some banks are eroded or undercut. Surface water was not present during multiple site visits and the soils were not saturated near the surface along the middle and downstream portions of the drainage.

Vegetation types within the ESHA and 50-foot buffer consist of riparian herb and arroyo willow thicket in the drainage bottom transitioning to coyote brush – California sagebrush scrub/upland mustards, upland mustards, and ornamental – native planting.

Drainage 4, which also contains riparian habitat (arroyo willow thicket), would also be considered an ESHA; however, this ESHA is not within 100 feet of planned impacts and is therefore not discussed further in this report.

3.7 CRITICAL HABITAT

The Study Area is not located within any USFWS Designated Critical Habitat. The nearest Designated Critical Habitat occurs approximately 0.80 mile to the north for Braunton's milk-vetch (*Astragalus brauntonii*).



Aerial Source: Hexagon Geosystems 2018

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Mapped ESHA

Exhibit 9a

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N W E S

50 25 0 50 Feet

PSOMAS

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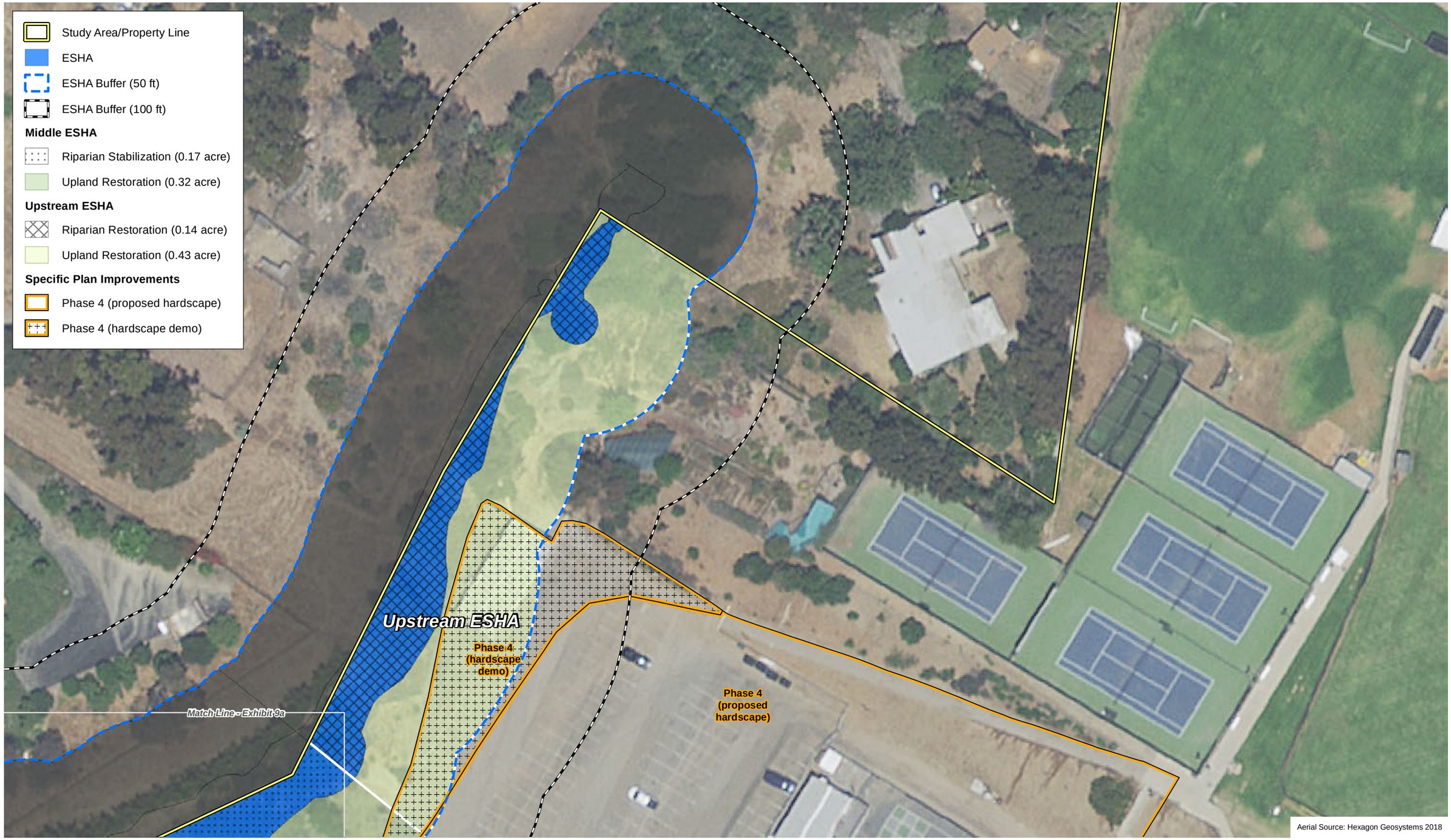

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Mapped ESHA

Exhibit 9b

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N W E S

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PSOMAS

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4.0 PROJECT IMPACTS

This section presents a general impact analysis of the Project. The determination of impacts in this analysis is based on a comparison of maps depicting the Project impact boundary and maps of biological resources in the Study Area. All construction activities, including equipment storage and laydown areas, are assumed to be within the Project impact areas identified on Exhibit 10. Permanent impact areas are typically defined as changes to or removal of an existing vegetation type or "other areas," including disturbed or developed (e.g., paved) that are permanent as a result of Project implementation.

Temporary access/impact areas are typically defined as areas that may be subject to traversing vehicles or other mobile equipment, staging of equipment, stockpiles of soil, minor soil disturbance where there is no permanent alteration to the existing grade (e.g., no permanent holes, trenches, or berms), and no vegetation or tree removal.

Both direct and indirect impacts on biological resources have been evaluated. Direct impacts are those that involve the initial loss of habitats due to grading, construction, and construction-related activities. Indirect impacts are those that would be related to impacts on the adjacent remaining habitat due to construction activities (e.g., noise, dust) or operation of the Project (e.g., human activity, operational noise, indirect lighting).

Biological impacts associated with the Project were evaluated with respect to the following special status biological issues:

- Federally or State-listed Endangered or Threatened plant or wildlife species;
- Non-listed species that meet the criteria in the definition of "Rare" or "Endangered" in the CEQA Guidelines (i.e., 14 *California Code of Regulations,* Section 15380)[5];
- Species designated as California Species of Special Concern;
- Streambeds, wetlands, and their associated vegetation;
- Habitats suitable to support a federally or State-listed Endangered or Threatened plant or wildlife species;
- Habitats, other than wetlands, considered special status by regulatory agencies (e.g., the USFWS, the CDFW) or resource conservation organizations; and
- Other species or issues of concern to regulatory agencies or conservation organizations.

The actual and potential occurrence of these resources in the Project impact area was correlated with the significance criteria listed in the next section in order to determine whether Project impacts on these resources would be considered significant.

4.1 SIGNIFICANCE CRITERIA

The environmental impacts relative to biological resources are assessed using impact significance criteria that mirror the policy contained in CEQA, Section 21001(c) of the *California*

[5] Section 15380 of the CEQA Guidelines indicates that a lead agency can consider a non-listed species (e.g., CNPS List 1B plants) to be Endangered, Rare, or Threatened if the species can be shown to meet the criteria in the definition of Rare or Endangered. For the purposes of this discussion, the current scientific knowledge on the population size and distribution for each special status species was considered in determining if a non-listed species meets the definitions for Rare and Endangered according to Section 15380 of the CEQA Guidelines.

Study Area
Project Impacts
Southern California Black Walnut
Coulter's Matilija Poppy Population Location

Vegetation and Other Area Types

California Sagebrush Scrub
Coyote Brush - California Sagebrush Scrub
Coyote Brush - California Sagebrush Scrub/Annual Grassland
Coyote Brush - California Sagebrush Scrub/Upland Mustards
Disturbed Coyote Brush - California Sagebrush Scrub
Disturbed Wild Oats and Annual Brome Grassland
Upland Mustards
Disturbed Upland Mustards
Riparian Herb
Arroyo Willow Thicket
Eucalyptus Grove
California Sycamore - Coast Live Oak Planting
Ornamental - Native Planting
Turf
Developed/Ornamental
Disturbed

Filaree Heights Rd
Floris Heights Rd
Clover Heights Ave
Busch Dr
Harvester Rd
Little Busch Dr
Via Cabrillo
Morning View Dr
Pacific Coast Hwy
1
Ebbtide Way
Merritt Dr

Phase 3 (Lot F)
Population 1
Population 2
Phase 4 (hardscape demo)
Phase 4 (basin hardscape demo)
Phase 4 (hardscape demo)
Phase 1 (hardscape demo)
Phase 4 (proposed hardscape)
Phase 1 (proposed hardscape)
Phase 3
Phase 4B
Phase 2
Phase 2
Phase 4 (proposed hardscape)
Southern CA Black Walnut

Aerial Source: Hexagon Geosystems 2018

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Project Impacts – Biological Resources

Exhibit 10

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N W E S

350 175 0 350 Feet

PSOMAS

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Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State to:

> Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities…

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to Section 15064.7, Thresholds of Significance, of the State CEQA Guidelines, each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A significant threshold is a quantitative, qualitative, or performance level of a particular environmental effect. The agency would normally determine an impact to be "significant" if it exceeds the threshold. In the development of significance thresholds for impacts to biological resources, CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and Appendix G, Environmental Checklist Form, of the State CEQA Guidelines. Appendix G of the CEQA Guidelines is more specific in addressing biological resources and encompasses a broader range of resources to be considered, including candidate, sensitive, or special status species; riparian habitat or other sensitive natural vegetation types; federally protected wetlands; fish and wildlife movement corridors; local policies or ordinances protecting biological resources; and adopted habitat conservation plans. These factors are considered through the checklist of questions answered during the Initial Study process used to determine appropriate environmental documentation for a project (i.e., Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report [EIR]). Because these questions are derived from standards in other laws, regulations, and commonly used thresholds, it is reasonable to use these standards as a basis for defining significance thresholds in an EIR. For each of the thresholds identified below, the section of CEQA upon which the threshold was derived has been provided. For the purpose of this analysis, impacts to biological resources are considered significant (before considering offsetting mitigation measures) if one or more of the following conditions would result from implementation of the Proposed Project if it would:

1. *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 CDFW or USFWS;*
2. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;*
3. *Have a substantial adverse effect on federally or State protected wetlands (including, but not limited to, marshes, vernal pools, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;*
4. *Interfere substantially with the movement of any native or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;*
5. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or*
6. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.*

An evaluation of whether an impact on biological resources would result in a "substantial adverse effect" must consider both the resource itself and how that resource fits into a regional context. For the Project, the regional setting includes the quadrangles used to conduct the literature review. The following analysis of impacts is based on the Project impact map relative to the amount of the biological resource within the Project Study Area and its distribution in the surrounding region.

For the purposes of the impact analysis, "substantial adverse effect" is defined as the loss or harm of a magnitude which, based on current scientific data and knowledge, would (1) substantially diminish population numbers of a species or distribution of a habitat type within the region or (2) eliminate the functions and values of a biological resource in the region.

4.2 DIRECT IMPACTS

The Specific Plan would be constructed in four phases, with construction activities anticipated to begin in fall 2022 and completed in summer 2030. Each phase would include the following activities—grading and excavation, trenching for site utilities, demolition, and construction of the buildings, paving, and finishing (PlaceWorks 2021). Direct impacts for the Proposed Project would include such impacts as indicated by a red boundary on Exhibit 10. A brief description of each Phase follows.

Phase 1

Phase 1 would consist of demolition of all existing former JCES campus buildings and associated portables and construction of Building C (see Figure 7 of the Specific Plan, Proposed Building C Elevation), Parking Lot C, Parking D, and the Drop-off/Pick-up area (see Figure 8 of the Specific Plan, Specific Plan Phasing-Construction). Phase I is anticipated to begin in Fall 2022 and completed by Summer 2024.

Phase 2

Phase 2 would consist of construction of the Building D and the Middle School Quad. Phase 2 is anticipated to begin in Fall 2024 and completed by Fall 2026.

Phase 3

Phase 3 would consist of demolition of MMHS Buildings F, I; the existing field house; and the portables adjacent to the existing pool, and construction of Buildings J, L, and M and Parking Lot E and F. Phase 3 is anticipated to begin in Fall 2028 and completed by Fall 2030.

Phase 4

Phase 4 would involve the demolition of MMHS Buildings K, J, J1; the pool and pool building; and Bus Barn, and the relocation of the Boys & Girls Club and construction of the new Buildings H and I. This phase would also require the demolition of the existing MMHS Building H. Phase 4 is anticipated to begin in Spring 2030 and completed by Spring 2031.

4.2.1 Vegetation Types and Other Areas Impacts

Vegetation types and other areas that will be impacted are listed in Table 10 and illustrated on Exhibit 3.

TABLE 10
IMPACTS TO VEGETATION TYPES AND OTHER AREAS IN THE STUDY AREA

Vegetation Type or Other Area	Phase 1	Phase 2	Phase 3	Phase 4	Total
California Sagebrush Scrub	–	0.04	–	–	0.04
Coyote Brush – California Sagebrush Scrub	–	-	–	–	–
Coyote Brush – California Sagebrush Scrub/Upland Mustards	–	0.24	–	–	0.24
Coyote Brush – California Sagebrush Scrub/Annual Grassland	–	–	–	–	–
Disturbed Coyote Brush – California Sagebrush Scrub	–	–	–	–	–
Upland Mustards	0.03	–	–	0.21	0.24
Disturbed Upland Mustards	–	–	0.17	–	–
Disturbed Wild Oats and Annual Brome Grassland	–	–	–	–	–
Riparian Herb	–	–	–	0.03	0.03
Arroyo Willow Thicket	–	–	–	–	–
Eucalyptus Grove	–	–	–	–	–
California Sycamore – Coast Live Oak Planting	–	0.29	–	–	0.29
Ornamental – Native Planting	–	–	–	0.29	0.29
Turf	0.77	–	–	–	0.77
Developed/Ornamental	5.09	1.64	3.30	6.90	16.87
Disturbed	0.05	1.63	0.04	0.25	1.97
Total	**5.93**	**3.84**	**3.50**	**7.68**	**20.95**

Approximately 0.04-acre of California sagebrush scrub would be impacted by the Project in Phase 2. California sagebrush scrub may be considered locally sensitive due to its ability to support the Federally Threatened coastal California gnatcatcher (*Polioptila californica californica*). However, the 0.04 acres of California sagebrush scrub in the Survey Area is isolated and limited in extent rendering it unsuitable to support breeding or foraging gnatcatcher. In addition, the coastal California gnatcatcher does not occur within the vicinity of the Study Area and is not expected to occur in the Study Area. Therefore, impacts to 0.04 acre of this vegetation type are considered adverse but less than significant, and no mitigation would be required.

Approximately 0.24-acre of coyote brush – California sagebrush scrub/upland mustards would be impacted by Project implementation in Phase 2. This is a small, isolated patch of degraded scrub habitat with relatively low biological value due to: (1) the low cover of native species and high cover of noxious weeds which are not preferred by wildlife; and (2) distance from healthy native habitat that would support a suite of native wildlife species. Impacts to 0.24-acre of this vegetation type are considered adverse but less than significant, and no mitigation would be required.

Approximately 0.24-acre of upland mustard by implementation of the Project in in Phases 1 and 4, and 0.17-acre of disturbed upland mustards habitat will be impacted by implementation of the Project in Phase 3. Upland mustard habitat is dominated by weedy non-native species, while disturbed upland mustard habitat is also dominated by weedy non-native species but also contains visible mechanical disturbances. These vegetation types are considered low biological value because they are not preferred by native wildlife species. Impacts to this vegetation type is considered less than significant, and no mitigation would be required.

Approximately 0.03-acre of riparian herb habitat will be impacted by implementation of the Project in Phase 4. Impacts on this vegetation type would be considered adverse but relatively minor because of the isolated nature, extremely limited extent, and the species composition is considered relatively common in the Project region. Therefore, impacts to this vegetation type are considered less than significant, and no mitigation would be required.

Approximately 0.29-acre of California sycamore – coast live oak planting would be impacted by Project implementation in Phase 2. This vegetation type is intended to be ornamental and therefore, offers much lower biological value than a naturally occurring woodland with mature trees and a healthy understory. Therefore, impacts to this vegetation type are considered less than significant, and no mitigation would be required.

Approximately 0.29-acre of ornamental – native planting would be impacted by Project implementation in Phase 4. This vegetation type is not naturally occurring and offers low biological value due to the high proportion of non-native weedy species. Impacts to this vegetation type are considered less than significant, and no mitigation would be required.

Approximately 0.77-acre of turf would be impacted by Project implementation in Phase 1. Impacts on this vegetation type would be considered adverse but relatively minor because this vegetation type is common throughout the region, not naturally occurring, and of low biological value. Therefore, impacts to these vegetation types are considered less than significant, and no mitigation would be required.

Approximately 16.87-acres of developed/ornamental and 1.97-acres of disturbed habitat would be impacted by Project implementation in Phases 1 through 4. Impacts on these vegetation types would be considered adverse but relatively minor because these vegetation types are considered common in the Project region and offer limited biological value because they are mostly devoid of any vegetation, and the vegetation that does occur is non-native which is not preferred by native wildlife species. Therefore, impacts to these vegetation types are considered less than significant, and no mitigation would be required.

The vegetation types discussed above are all common throughout the region. The special status vegetation type that occurs in the Study Area, arroyo willow thicket, will not be impacted during Project implement, therefore mitigation would not be required. Impacts to special status vegetation types would be considered potentially significant. Vegetation types in the Study Area may change over the course of time. In order to ensure no special status vegetation types are impacted during the course of the Project, Mitigation Measure (**MM**) **1** is included which requires future assessments of vegetation types to ensure conditions remain the same. If impacts to special status vegetation types are anticipated, **MM 2**, which requires habitat restoration, would be implemented to ensure impacts are reduced to less than significant.

Alternatives

Alternative 1, the no Project alternative, would not impact any vegetation types or other areas and no mitigation would be required.

Alternative 2, which would involve development of Phases 1 and 2 only, would impact 9.77 acres of non-native vegetation types and other areas (6.72 acres of developed/ornamental, 1.68 acres of disturbed, 0.77 acre of turf, and 0.03 acre of upland mustard). None of these vegetation types are considered special status and no mitigation would be required. Vegetation types in the Study Area may change over the course of time. **MM 1** and **MM 2**, as described above, would be implemented to ensure impacts are reduced to less than significant.

Alternative 3, which would eliminate parking lot F, would lessen impacts to disturbed upland mustards by 0.17-acre, and developed/ornamental by 0.05-acre vegetation types for a total of 0.21-acre combined. Project impacts would total 20.73-acres under Alternative 3. None of these vegetation types are considered special status and no mitigation would be required. Vegetation types in the Study Area may change over the course of time. **MM 1** and **MM 2**, as described above, would be implemented to ensure impacts are reduced to less than significant.

4.2.2 Common Wildlife

Native vegetation provides nesting, foraging, roosting, and denning opportunities for a variety of wildlife species. The Project would result in the loss of approximately 0.60-acre of native habitat. The Project would also impact approximately 16.87-acres of developed/ornamental vegetation and a total of approximately 1.97-acres of impacts to disturbed areas. A total of 1.01-acres of non-native or weedy vegetation (turf and upland mustards) would be impacted. A total of 0.29-acre of ornamental – planted habitat would be impacted by the Project. Removing or altering non-native habitats on the Project Site would result in the loss of small mammals, reptiles, amphibians, and animals of slow mobility that live in the Proposed Project's direct impact area. More mobile wildlife species now using the Project Site would be forced to move into remaining areas of open space, consequently increasing competition for available resources in those areas. This situation may result in the loss of individuals that cannot successfully compete. The loss of native and non-native vegetation that provides wildlife habitat is considered an adverse impact. However, the loss of a small pocket of native habitat (0.60 acre) and disturbed, developed, and/or non-native habitat (20.14 acres) would not be expected to reduce wildlife populations below self-sustaining levels because the combined 20.74 acres of habitat are expected to support small numbers of individuals due to the existing habitat's marginal suitability for resident wildlife based on its fragmented nature, lack of species diversity and lack of connectivity to adjacent native habitat, combined with existing developed areas surrounding the proposed Project. Therefore, impacts to these areas are considered adverse but less than significant, and no mitigation would be required.

Wildlife Movement and Habitat Fragmentation

The Project Site does not represent an area of important regional movement. The existing structures and paved parking lots, adjacent Pacific Coast Highway, and surrounding residential streets and structures present a barrier to movement for wildlife moving through the area. Wildlife looking to move through the foothills would likely utilize canyons in the open space north of the Project Site. Project activities would not impact these open space areas. The adjacent canyons would continue to be available for movement; thus, regional wildlife movement would not be disrupted, and impacts on regional wildlife movement would be considered less than significant, and no mitigation would be required.

Construction activities would create dust and noise within and adjacent to the Impact Area. During active construction, wildlife movement may be deterred by noise and human activity; however, most wildlife movement would occur at night while construction activities would occur during the day. Project implementation would not isolate any native habitats or create any bottle necks for wildlife movement because small amounts of native vegetation, on the edges of disturbance or development, would be impacted. Therefore, construction impacts on local wildlife movement would be considered adverse, but less than significant, and no mitigation would be required.

4.2.3 Special Status Biological Resource Impacts

Implementation of the Project may result in impacts on special status plant and wildlife species that occur in the Survey Area. Potential impacts on special status species were evaluated by determining the impacts on habitat that the species are expected to occupy or may occupy.

Special Status Plants

Of the 37 special status plant species known to occur in the region and listed in Table 2, 34 of these have no potential to occur in the Study Area due to lack of suitable habitat and/or they were not observed during focused surveys. Therefore, there would be no impact on those species. One of the species listed in Table 2, the slender mariposa lily, has limited potential to occur; and two species, the California black walnut and Coulter's matilija poppy, were observed within the Study Area, but outside the impact area for all Phases. While focused special status plant surveys were not conducted for the far eastern portion of the Study Area (which includes a portion of Phase 4 only), special status plants incidentally observed were mapped during vegetation mapping. Potentially suitable habitat for special status plant species does not occur within or adjacent to this portion of Phase 4, based on a habitat assessment during the April 15, 2021, field visit.

No impacts to special status plants would occur through Project implementation because no special status plants currently occur and are not expected to occur in the future within the Project Impact Area for all Phases. Habitat suitability for special status plants is expected to stay at baseline or degrade further in the future due anticipated future development in the surrounding area. Therefore, no impacts to special status plants would occur with Project implementation, and no mitigation would be required.

Wildlife

Eucalyptus groves within the Project boundary have the potential to support overwintering monarch butterflies. Monarch butterfly overwintering sites are not known from the Study Area but are known from the Project region in recent history and are presumed extant according to the California Natural Diversity Database (CDFW 2021b). No direct impacts to the eucalyptus groves in the Study Area will occur during Project implementation, and the groves are at enough distance (approximately 170 feet) that indirect impacts are not expected. No impacts to monarch butterflies are anticipated; therefore, no mitigation would be required.

One special status reptile has the potential to occur in the Project impact area, the San Diegan tiger whiptail. Project implementation would result in the loss of 0.31 acre of potentially suitable habitat types (e.g., California sagebrush scrub, coyote brush – California sagebrush scrub/upland mustards, and riparian herb) for this species. This 0.31 acre would support very small numbers of individuals and the loss is considered very small. These impacts would be considered adverse but not substantial enough to cause regional populations to drop below self-sustaining numbers. Therefore, these impacts are considered less than significant, and no mitigation would be required.

A burrowing owl was incidentally observed to be wintering on the Project Site in the north-central portion of the site (outside of the Project impact area) (Exhibit 6). Potentially suitable burrowing owl habitat occurs in Phase 3, Parking Lot F. Implementation of Phase 3 may directly impact 0.17-acre of potentially suitable habitat for the burrowing owl, while implementation of Phases 2 and 4 may indirectly impact the burrowing owl, if present in adjacent potentially suitable habitat. Any impacts to burrowing owl would be considered potentially significant. Implementation of **MM 3**, which requires adherence to the CDFW Burrowing Owl Mitigation Guidelines, would reduce potential impacts to less than significant.

Several common bird and raptor species may nest in the Survey Area. The MBTA protects migratory birds, their nests, and eggs. If construction is initiated during nesting season for passerines and raptors (i.e., February 1–August 31), it could impact nesting birds protected by the MBTA and *California Fish and Game Code* Sections 3503, 3503.5, and 3513. Common raptor species including owls have the potential to nest on the Project Site. Should an active raptor nest be found on the Project Site, the loss of an active nest would be considered a violation of the

California Fish and Game Code (Sections 3503, 3503.5, and 3513). The loss of any active bird or raptor nest would be considered a potentially significant impact. Implementation of **MM 4** requiring nesting bird surveys and protection would reduce this impact to a less than significant level.

The western mastiff bat has the potential to occur in the Study Area for foraging. There is no suitable roosting habitat in the Survey Area. Construction activities would only occur during daylight hours; therefore, nocturnal foraging would continue to be available over the Project Impact Area throughout the duration of construction and would remain unchanged following completion of the Project. There are no impacts to western mastiff bat would occur with Project implementation, and mitigation would not be required.

4.2.4 Jurisdictional Resources

The Proposed Project would impact a total of 0.033 acres of waters of the State under the jurisdiction of RWQCB(Exhibits 11 and 12, Table 11) (Appendix C). Phase 4 of the Project would impact a total of 0.033 acres of waters under the jurisdiction of CDFW. No other Phase of the Project impacts jurisdictional features. Jurisdictional resources are protected by Sections 401 and 404 of the CWA and by the *California Fish and Game Code* (Sections 1600 through 1616). Impacts on jurisdictional resources would be significant and would require permitting with each of the resource agencies. Implementation of **MM 5** would reduce this impact to less than significant.

TABLE 11
SUMMARY OF JURISDICTIONAL IMPACTS

Jurisdictional Resources	Total (acres)
Total USACE Jurisdiction	–
Total RWQCB Jurisdiction	0.033
Total CDFW Jurisdiction	0.033
USACE: U.S. Army of Engineers; RWQCB: Regional Water Quality Control Board; CDFW: California Department of Fish and Wildlife	

Alternatives

Alternative 2 would eliminate Project related jurisdictional impacts. Under this alternative, the ESHA would only be partially restored. Because there would be no Project related jurisdictional impacts, no mitigation would be required.

Alternative 3 would impact a total of 0.033 acres of waters of the State under the jurisdiction of RWQCB and a total of 0.033 acres of waters under the jurisdiction of CDFW, which is equal to the Proposed Project. Impacts on jurisdictional resources would be significant and would require permitting with each of the resource agencies. Implementation of **MM 5** would reduce this impact to less than significant.

4.2.5 Trees

The Malibu Local Coastal Program Native Tree Protection Ordinance protects five native tree species (oak [*Quercus* sp.], California walnut [*Juglans californica*], western sycamore [*Platanus racemosa*], alder [*Alnus rhombifolia*], and toyon [*Heteromeles arbutifolia*]) that have at least one trunk measuring six inches or more in diameter, or a combination of any two trunks measuring a total of eight inches or more in diameter. A number of protected trees have been mapped in the Study Area (Exhibit 2 of Appendix D). Protected tree species may occur within close proximity to Project activities. Impacts to protected trees may be potentially significant. Implementation of **MM 6**, which requires adherence to the Malibu Local Coastal Program Native Tree Protection

Study Area

Project Impacts

Sampling Points

Ordinary High Water Mark

Non-wetland

Wetland*

* Based on USACE three-parameter approach.

Match Line - Exhibit 11b

Drainage 1

Phase 4 (basin hardscape demo)

2

Basin

Phase 4 (hardscape demo)

Phase 1 (hardscape demo)

Phase 4 (proposed hardscape)

Phase 1 (proposed hardscape)

Map Extent

11b

11a

Aerial Source: Hexagon Geosystems 2018

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Project Impacts – Ordinary High Water Mark

Exhibit 11a

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N W E S

50 25 0 50 Feet

PSOMAS

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Study Area
Project Impacts
Sampling Points

Ordinary High Water Mark

Non-wetland
Wetland*

* Based on USACE three-parameter approach.

1A
1B
Drainage 1
Drainage 2
Phase 4
(hardscape demo)
Phase 4 (proposed
hardscape)
Match Line - Exhibit 11a

Map Extent

11b
11a

Aerial Source: Hexagon Geosystems 2018

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Project Impacts – Ordinary High Water Mark

Exhibit 11b

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N
W
E
S

50 25 0 50 Feet

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Aerial Source: Hexagon Geosystems 2018

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Project Impacts - Top of Bank/Riparian Canopy

Exhibit 12a

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N W E S

60 30 0 60 Feet

PSOMAS

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Study Area
Project Impacts
Sampling Points
Top of Bank/Riparian Canopy

1A
1B
Drainage 1
Drainage 2
Phase 4
(hardscape demo)
Phase 4 (proposed
hardscape)
Phase 4 (basin
hardscape demo)
Match Line - Exhibit 12a
2
12b
12a

Aerial Source: Hexagon Geosystems 2018

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Project Impacts – Top of Bank/Riparian Canopy

Exhibit 12b

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

N
W
E
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60 30 0 60
Feet

PSOMAS

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Ordinance prior to the commencement of each Phase of construction, would reduce any potentially significant impacts to less than significant.

4.2.6 Environmentally Sensitive Habitat Area

Consistent with guidelines provided in the LCP, Psomas delineated the ESHA boundary as the outer edge of the canopy of riparian vegetation and where riparian vegetation was not present, the ESHA boundary was determined by the top of bank. While the LCP ESHA overlay zone specifies a buffer to "ensure continued protection of the habitat areas" and for new development specifically references a 100 foot buffer "from the outer edge of the bank of the subject stream as the area within the top of bank and outer riparian canopy boundaries", it was noted that over 85% of the ESHA's 100 foot buffer had been developed in the years prior to the enactment of the California Coastal Act of 1972.

During the early stages of the specific planning process, among other project objectives, the District recognized that the ESHA offered opportunities to enhance their educational goals of providing for outdoor learning spaces and interpretive opportunities; as well as providing an opportunity to restore the natural environment and improve campus connectivity through the development of the proposed pedestrian pathways. The District recognized that the existing conditions included incompatible development into the edge of the ESHA bank as well as the degraded nature of the ESHA itself. In discussions with the CCC the District decided that it could restore the degraded drainage comprised of approximately 0.7 acres as well as 1.35 acres of upland areas within the ESHA's 50-ft buffer, and still meet the educational and design goals for the campus. In addition, within the remaining 100 feet beyond the 50-foot ESHA buffer, the Proposed Project would include land uses compatible with the natural habitat that would not incur in significant impacts to the natural habitat, including a looping trail, and interpretive stations overlooking the ESHA. The restoration of the degraded 0.7-acre of drainage and 1.35-acres of upland areas within the ESHA's 50-foot buffer does not constitute mitigation for any significant impact to a biological resource, but rather is a voluntary effort on the part of the District that will be implemented during Phase 1 construction of the Project as well as Phase 4 construction planned for the future.

4.3 INDIRECT IMPACTS

Indirect impacts are those related to disturbance by construction (e.g., noise, dust, and urban pollutants), long-term use of the Project Site, and the Project's operational effect on adjacent habitat areas to common species. The indirect impact discussion below includes a general assessment of the potential indirect effects (i.e., noise, increased dust and urban pollutants, night lighting, and human activity) of the construction and operation of the Proposed Project. Noise Impacts

Noise levels in the Survey Area would be expected to increase over present levels during construction and operation of the Project. During construction and operation, temporary noise impacts have the potential to disrupt foraging, nesting, roosting, and/or denning activities for wildlife species occurring within or adjacent to Project Work Areas. Although final use may increase noise over ambient, it would be less than construction. Wildlife species stressed by noise may disperse from the habitat located in the immediate vicinity of the Project. Because the Project disturbance areas are limited in extent, this impact is considered adverse but less than significant, and no mitigation would be required. However, if raptor species are nesting in the vicinity of the Project during construction, they may be temporarily displaced by construction noise. Indirect noise impacts on these species would be considered significant because nesting birds are protected by the *California Fish and Game Code.* Impacts on active nests would be reduced to a less than significant level with implementation of **MM 3** requiring nesting bird surveys and protection.

4.3.1 Increased Dust and Urban Pollutants

Grading and other construction activities would disturb soils and result in the accumulation of dust on the surface of the leaves of trees, shrubs, and herbs within or immediately adjacent to Project Impact Area. The respiratory function of the plants in these areas could be impaired if dust accumulation is excessive. Because the Project Impact Area is limited in extent, this indirect impact is considered adverse but less than significant, and no mitigation would be required.

During construction and operation, excess silt, petroleum, or chemicals on the soil surface within the Project Impact Area could be washed into drainages during storms and may affect areas downstream of the Project. Adverse effects on water quality could indirectly impact species that use riparian areas within the watershed by affecting the food web interactions (e.g., abundance of insects or other prey) or through biomagnification (i.e., the buildup of pesticides to toxic levels in higher trophic levels). With implementation of standard Water Quality Best Management Practices required by the State's General Construction permit administered by the RWQCB through Stormwater Pollution Prevention Plan, this impact is expected to be less than significant, and no mitigation would be required.

4.3.2 Night Lighting

The Project does not include night lighting. Therefore, there would be no impact as a result of night lighting, and mitigation is not required.

4.3.3 Invasive Exotic Plant Species

Landscaping for Phase 1 would be provided along pathways, building perimeters, and within and around new parking lot areas. The plant pallet for all Phases does not include invasive species as listed by CAL-IPC. Therefore, there would be no impact as a result of invasive species, and no mitigation would be required.

4.3.4 Human Activity

The Project is not expected to result in increased human activity other than minimal, temporary increase during Project construction for all Phases. No new access points to open space are expected to result from the Project. The looping trail to be constructed beyond the 50-ft buffer of the ESHA is intended for passive recreation and use by student with interpretive stations overlooking the ESHA and not as an access point to the ESHA. Signage posted at the interpretive stations will alert users to stay on the trail. Therefore, there would be no impact as a result of human activity.

5.0 MITIGATION MEASURES

Strategies to mitigate each identified potentially significant impact to a less than significant level are described below.

5.1 MM 1 – VEGETATION ASSESSMENTS

Vegetation types shall be verified prior to work activities occurring in Phases 2 and 4 if seven years have elapsed from the latest point in time the vegetation mapping described in this Biological Assessment was conducted (April 15, 2021). Vegetation types in the Study Area shall be assessed during a field visit and compared to the vegetation types mapped and described herein. Any changes shall be documented in a revised vegetation map and provided to the City of Malibu and the District. Special status vegetation types shall be identified, and if impacts are anticipated, the Project shall comply with MM 2.

5.2 MM 2 – SPECIAL STATUS VEGETATION TYPES

The loss of special status vegetation types within the impact area is considered a significant impact. These vegetation types will be restored onsite or, if appropriate, offsite at a ratio of not less than 1:1, as agreed to by the City of Malibu and the District. A revegetation program will be implemented in accordance with a City-approved landscape palette on all graded areas not utilized for improvements or structures. The revegetation program will be submitted to the City of Malibu for review and approval by a qualified biologist prior to issuance of grading permits. Restoration will consist of seeding and container planting of appropriate species. Impacts are considered less than significant after implementation of the following measures:

A detailed restoration program will be developed prior to map recordation and implemented, and will contain the following items:

a. *Responsibilities and qualifications of the personnel to implement and supervise the plan*. The responsibilities of the landowner, specialists, and maintenance personnel that will supervise and implement the plan will be specified.

b. *Site selection*. The site(s) for mitigation will be determined in coordination with the District and the City of Malibu. The site will be located in a dedicated open space area and will be contiguous with other natural open space areas.

c. *Site preparation and planting implementation*. The site preparation will include the following: 1) protection of existing native species, 2) trash and weed removal, 3) native species salvage and reuse (i.e., duff), 4) soil treatments (i.e., imprinting, decompacting), 5) erosion control measures (i.e., rice or willow wattles), and 6) native seed mix application.

d. *Schedule.* Establishment of restoration/revegetation sites will be conducted between October 1 and January 30. Seeding and planting of container plants will take place immediately after preparation of the restoration sites.

e. *Maintenance plan/guidelines*. The maintenance plan will include the following: 1) weed control, 2) herbivory control, 3) trash removal, 4) irrigation system maintenance, 5) maintenance training, and 6) replacement planting.

f. *Monitoring Plan*. The monitoring plan will include the following: 1) qualitative monitoring (i.e., photographs and general observations), 2) quantitative monitoring (i.e., randomly placed transects), 3) performance criteria as approved by the City, 4) monthly reports for the first year and bimonthly reports thereafter, and 5) annual reports which will be

submitted to the City for three to five years. The monitoring will be conducted for three to five years, depending upon the performance of the mitigation site.

g. *Long-term preservation.* Long-term preservation of the site will be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development.

h. *Performance standards will be identified and will apply for the revegetation of special status vegetation types.* Revegetation will be considered successful at three years if the percent cover and species diversity of the restored and/or created habitat areas are similar to percent cover and species diversity of adjacent existing habitats, as determined by quantitative testing of existing, restored, and created habitat areas.

In addition, earth-moving equipment will avoid maneuvering in areas outside the identified limits of grading in order to avoid disturbing open space areas that will remain undeveloped. Prior to grading, the construction boundary limits will be marked by the construction supervisor and the Project biologist. These limits will be identified on the grading plan. The District will submit a letter to the City of Malibu verifying that construction limits have been flagged in the field. No earth-moving equipment will be allowed outside of the construction boundary.

5.3 MM 3 – PRE-CONSTRUCTION BURROWING OWL SURVEYS

In the year prior to initiation of Proposed Project activities in Phases 3 and 4, and/or before recommencing construction activities if suspended/delayed for six months or more, a qualified biologist shall conduct pre-construction burrowing owl surveys in accordance with the 2012 CDFW Burrowing Owl Consortium Survey Protocol and Mitigation Guidelines (CDFW 2012). If wintering or breeding burrowing owl are observed adjacent to the impact area, mitigation shall be conducted in accordance with the CDFW guidelines (CDFW 2012).

5.4 MM 4 – PRE-CONSTRUCTION NESTING BIRD SURVEYS

To the extent possible, vegetation removal will be conducted during the non-breeding season (i.e., September 1 to January 31) in order to minimize direct impacts on nesting birds and raptors. If construction activities would be initiated during the breeding season for nesting birds/raptors (i.e., February 1–August 31), a pre-construction survey will be conducted by a qualified Biologist within three days prior to the initiation of construction (including demolition of structures). If construction activities are delayed or suspended for more than 7 days during the breeding season, nesting bird surveys shall be repeated before construction activities can begin or restart. In addition, nesting bird surveys shall be conducted prior to starting phased Project construction and activities. The absence of nesting birds and raptors shall be considered valid only until the following breeding season. The area will be surveyed for 2 hours between dawn and 10:00 AM on five occasions with at least one week between surveys. If there is appropriate habitat for owls on site, on at least three of the surveys, surveys will also be conducted during the period immediately before nightfall. The nesting bird/raptor Survey Area will include a buffer of 300 feet around the work area for nesting birds and a buffer of 500 feet around the work area for nesting raptors (including burrowing owl). If the Biologist does not find any active nests in or immediately adjacent to the impact area, construction activities can proceed.

If the Biologist detects an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted or breeding activities substantially disrupted by increased activity around the nest, the Biologist will determine an appropriate protective buffer around the nest depending on the sensitivity of the species and the nature of the construction activity. The protective buffer shall be between 25 to 300 feet for nesting birds; 300 to 500 feet for nesting raptors. The active nest will be protected within the designated buffer until nesting activity has ended. Any protective buffers will be mapped on construction plans and designated as

"Environmentally Sensitive Areas". Construction can proceed within the protective buffer when the qualified Biologist has determined that the nest is no longer active (i.e., fledglings have left the nest or the nest has failed).

5.5 MM 5 – RWQCB AND CDFW JURISDICTION AREAS

Upon completion of construction activities, impacts to approximately 0.033-acre of non-wetland RWQCB and CDFW jurisdictional waters will be mitigated within the Proposed Project boundaries at a minimum ratio (i.e., no less than) of 1:1) through the creation of 0.033-acre of non-wetland jurisdictional waters. Acquisition of a Section 1602 "lake or streambed alteration" agreement from the CDFW and waste discharge requirements from the RWQCB would be required.

Prior to the final submittal of a Report of Waste Discharge from the RWQCB, and/or CDFW notification of lake or streambed alteration, the District will develop a mitigation plan for the RWQCB, CDFW, and City of Malibu. The objective of the mitigation is to ensure no net loss of habitat values as a result of the Project. The detailed restoration program will contain the following items:

a. *Responsibilities and qualifications of the personnel to implement and supervise the plan*. The responsibilities of the landowner, specialists, and maintenance personnel that would supervise and implement the plan will be specified and shall include the demonstration of having successfully completed at least 3 mitigation projects of similar size and scope within the last 5 years including the design and implementation of an irrigation system to ensure that the plantings and seeds are irrigated during periods of below average rainfall. The specialists that would supervise and implement the plan would include habitat restoration specialists, wildlife biologists, arborists, botanists, landscape contractor, and irrigation specialists.

b. *Site selection*. The site(s) for the mitigation will be determined in coordination with the Project Applicant and resource agencies. The site will be located in a dedicated open space area and will be contiguous with other natural open space.

c. *Site preparation and planting implementation.* The site preparation will include the following: 1) protection of existing native species, 2) trash and weed removal, 3) native species salvage and reuse (i.e. duff), 4) soil treatments (i.e., imprinting, decompacting), 5) temporary irrigation installation, 6) erosion control measures (i.e., rice or willow wattles), 7) native seed mix application, and 8) native container species.

d. *Schedule. A* schedule will be developed which includes planting and seeding to occur in late fall and early winter, between October 1 and January 30 in order to optimize the successful establishment and germination of native plants and seeds.

e. *Maintenance plan/guidelines.* The maintenance plan will include the following: 1) weed control, 2) herbivory control, 3) trash removal, 4) irrigation system maintenance, 5) maintenance training, and 6) replacement planting

f. *Monitoring Plan.* The monitoring plan will include the following: 1) qualitative monitoring (i.e., photographs and general observations), 2) quantitative monitoring (i.e., randomly placed transects), 3) performance criteria as approved by the resource agencies, 4) monthly reports for the first year and bimonthly reports thereafter, and 5) annual reports which will be submitted to the resource agencies for three to five years. Coordination will take place on a regular basis between the biological monitor, landscape contractor and irrigation specialist with regard to non-native species targeted for removal as well as irrigation schedule to ensure that the restoration in on track for achievement of performance criteria. In addition, remedial as well as contingency measures shall also be specified should the site not meet specified performance standards. The site will be

monitored and maintained for five years to ensure successful establishment of riparian habitat within the restored and created areas; however, if there is successful coverage prior to five years, the District may request from RWQCB and CDFW to be released from monitoring requirements.

g. *Long-Term Preservation.* Long-term preservation of the site will be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development.

h. Performance standards will be identified and will apply for the restoration of riparian habitat. Revegetation will be considered successful at three years if the percent cover and species diversity of the restored and/or created habitat areas are similar to percent cover and species diversity of adjacent existing habitats, as determined by quantitative testing of existing and restored and/or created habitat areas. The qualifications of the personnel to implement and supervise the plan would include the demonstration of having successfully completed at least 3 mitigation projects of similar size and scope within the last 5 years including the design and implementation of an irrigation system to ensure that the plantings and seeds are irrigated during periods of below average rainfall. The specialists that would supervise and implement the plan would include habitat restoration specialists, wildlife biologists, arborists, botanists, landscape contractor, and irrigation specialists.

5.6 MM 6 – ADHERENCE TO CITY OF MALIBU TREE PROTECTION ORDINANCE

Prior to initiation of Project activities in each Phase of the Project, the tree survey map created for the Project (Psomas 2021c) shall be consulted and if impacts to any protected trees are anticipated, the Project shall comply with mitigation included in the Malibu Local Coastal Program Native Tree Protection Ordinance.

6.0 ALTERNATIVES ASSESSMENT

6.1 NO PROJECT ALTERNATIVE

Under Alterative 1, the No Project Alternative, none of the District's objectives for the Proposed Project would be met. No construction would occur under the No Project Alternative, and the campus would continue to operate as it currently does. Potential impacts to biological resources during construction (e.g., removal of trees) would be less than the less-than-significant impacts associated with the Proposed Project (after mitigation). Restoration of the adjacent ESHA would also not occur under this alternative. Operational impacts would be similar to current conditions and impacts to biological resources would be less than significant, as with the Proposed Project. However, this alternative would not realize the beneficial biological impacts of the ESHA restoration and therefore would not be preferable.

6.2 ALTERNATIVE 2: DEVELOPMENT OF PHASES 1 AND 2 ONLY

No shared facilities or separate middle school campus would be developed under this alterative. Therefore, the Development of Phase 1 and 2 Only Alternative would only partially meet Objectives 1, 8, and 9 as outlined in the Specific Plan. This alternative would meet Objectives 2, 3, 6, 7, and 10 but to a lesser extent than the Proposed Project. The Phase 1 and 2 Only Alternative would not meet Objectives 4 and 5.

This alternative would result in less construction than the Proposed Project, which would reduce direct and indirect impacts to vegetation and wildlife on-site, including reduction in tree removal and direct impacts to potentially suitable burrowing owl habitat. In addition, impacts to jurisdictional features would be eliminated. During construction, this alternative would result in a reduction of impacts compared to the Proposed Project, and impacts would be less than significant after mitigation, as under the Proposed Project.

This alternative would operate similar to existing conditions, which would reduce impacts compared to the Proposed Project. However, this alternative would not implement restoration efforts across the entire ESHA (upstream, middle, and downstream) since a portion of the restoration efforts would be implemented in later phases. As discussed in Chapter 3, Project Description, Phase 1 would include weed abatement, invasive species control, bank stabilization, and erosion controls within the upstream and downstream areas. Additionally, only the existing JCES campus within the 100 feet of the ESHA would be demolished. Other existing structures within 100 feet of the ESHA would remain, such as the bus barn and surface parking. Therefore, this alternative would not result in the full beneficial impacts of restoring the ESHA. The combination of reduced restoration efforts of the ESHA and the unrealized Objectives 4 and 5, and partially met Objectives 1, 2, 3, 6, 7, 8, 9, and 10, would render this alterative not preferable to the Preferred Project.

6.3 ALTERNATIVE 3: ELIMINATION OF PARKING LOT F

Alternative 3, Elimination of Parking Lot F, would fully meet all project objectives, except for Objective 6, improve access, circulation, and drop-off, and increase on-campus parking, which it would meet to a lesser extent compared to the Proposed Project.

Without Parking Lot F, the northern portion of the Project Site would remain in its existing condition, which consists of disturbed undeveloped land and ornamental/developed land. Since this alternative would result in a minor reduction of impacts to wildlife habitat (e.g., potentially suitable burrowing owl habitat) and vegetation such as trees, this alternative would slightly reduce the biological impacts compared to the Proposed Project during construction and operation.

Although the Proposed Project would result in direct impacts to an additional 0.21-acre relative to Alternative 3, these impacts are fully mitigable. Because the Proposed Project would meet all Project Objectives, the Proposed Project is the preferred alternative.

7.0 CUMULATIVE IMPACTS

Implementation of Proposed Project, inclusive of the mitigation measures, would result in a negligible impact on biological resources of the region. The Project Site largely occurs in developed/ornamental habitat of low biological value and other projects in the area are expected to have similar results due to limited development of undeveloped lands. With mitigation implementation, the biological effects of the Project and other proposed projects of the region are expected to be relatively minor and would be considered cumulatively less than significant.

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APPENDIX A

REPRESENTATIVE SITE PHOTOGRAPHS

Photo 1: Overview of the southeastern portion of the Study Area, facing south. The foreground shows the disturbed coyote brush - California sagebrush scrub vegetation type followed by turf on the background. The structures on the right of the photograph are associated with the Malibu High School campus.

Photo 2: View of the California sagebrush scrub vegetation on the southeastern portion of the Study Area, facing north.

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Representative Site Photographs

Appendix A-1

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Photo 3: View of the coyote brush-California sagebrush scrub/upland mustards vegetation on eastern portion of the Study area, facing south.

Photo 4: View of the disturbed coyote brush-California sagebrush scrub/upland mustards vegetation on eastern portion of the Study area, facing west.

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Representative Site Photographs

Appendix A-2

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

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Photo 5: View of the upland mustards vegetation on the eastern portion of the Study Area, facing north.

Photo 6: View of the disturbed uplands mustards vegetation on the northern portion of the Study Area, facing north.

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Representative Site Photographs — Appendix A-3

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

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Photo 7: View of the arroyo willow thicket and riparian herb vegetations on the western portion of the Study Area, facing south.

Photo 8: View of the eucaluptus grove on the northern portion of the Study area, facing southwest.

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Representative Site Photographs

Appendix A-4

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

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Photo 9: View of the California sycamore - coast live oak plantings in the southeastern portion of the Study Area, facing north.

Photo 10: View of the ornamental - native plantings in the northern portion of the Study Area, facing northeast.

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Representative Site Photographs

Appendix A-5

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

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Photo 11: View of turf on the northern portion of the Study Area, facing south.

Photo 12: View of developed/ornamental associated with Malibu High School campus on the southern portion of the Study Area, facing south.

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Representative Site Photographs — Appendix A-6

Malibu Middle and High School Campus Specific Plan and LCP Amendment Project

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Photo 13: View of a disturbed area in the southeastern portion of the Study Area, facing west.

Photo 14: View of area where a burrowing owl was observed flying around and staying hidden located in the eastern portion of the Study Area, facing northwest.

Photo 15: View of a burrow where a burrowing owl was observed.

Photo 16: View of potential burrowing owl wing feathers found in the vicinity of suitable burrows for burrowing owl.

APPENDIX B

PLANT AND WILDLIFE COMPENDIA

APPENDIX B-1
PLANT SPECIES OBSERVED DURING SURVEYS

Species		Special Status	Wetland Rank	Cal-IPC Rank
Scientific Name	**Common Name**			
EUDICOTS				
AIZOACEAE – FIG–MARIGOLD FAMILY				
*Carpobrotus edulis**	freeway iceplant			High
ANACARDIACEAE – SUMAC FAMILY				
Malosma laurina	laurel sumac			
*Schinus molle**	pepper tree		FACU	Limited
APIACEAE – CARROT FAMILY				
Apiastrum angustifolium	narrow-leaved apiastrum			
*Foeniculum vulgare**	fennel			High
APOCYNACEAE – DOGBANE FAMILY				
*Nerium oleander**	common oleander			
ASTERACEAE – SUNFLOWER FAMILY				
Artemisia californica	California sagebrush			
Artemisia dracunculus	tarragon			
Baccharis pilularis ssp. *consanguinea*	coyote brush			
Baccharis salicifolia ssp. *salicifolia*	mule fat		FAC	
*Centaurea melitensis**	tocalote			Moderate
*Cotula australis**	Australian cotula		FAC	
*Cynara cardunculus**	artichoke			Moderate
Deinandra fasciculata	fascicled tarplant		FACU	
Encelia californica	California encelia			
Erigeron canadensis	horseweed		FACU	
*Gazania linearis**	parallel-sided treasure flower			Moderate
*Glebionis coronaria**	crown daisy			Moderate
Hazardia squarrosa	saw-toothed goldenbush			
*Hedypnois cretica**	Crete's hedypnois			
*Helminthotheca echioides**	bristly ox-tongue		FAC	Limited
Isocoma menziesii var. *vernonioides*	Vernonia-like coastal goldenbush		FAC	
*Lactuca serriola**	prickly lettuce		FACU	
Malacothrix saxatilis	rocky malacothrix			
Pseudognaphalium biolettii	Bioletti's cudweed			

APPENDIX B-1
PLANT SPECIES OBSERVED DURING SURVEYS

Species		Special Status	Wetland Rank	Cal-IPC Rank
Scientific Name	**Common Name**			
Pseudognaphalium californicum	California cudweed			
*Pseudognaphalium luteoalbum**	white lamb cudweed		FAC	
*Silybum marianum**	milk thistle			Limited
Sonchus asper ssp. *asper**	prickly sow thistle		FAC	
*Sonchus oleraceus**	common sow thistle			
*Taraxacum officinale**	common dandelion		FACU	
Venegasia carpesioides	carpesium-like canyon-sunflower			
BIGNONIACEAE – BIGNONIA FAMILY				
*Jacaranda mimosifolia**	blue jacaranda			
BORAGINACEAE – BORAGE FAMILY				
*Echium candicans**	pride of Madeira			Limited
BRASSICACEAE – MUSTARD FAMILY				
*Brassica nigra**	black mustard			Moderate
*Hirschfeldia incana**	grayish shortpod mustard			Moderate
*Lepidium didymum**	lesser swine grass			
Nasturtium officinale	water cress		OBL	
*Raphanus sativus**	radish			Limited
Sisymbrium sp.	sisymbrium			
CACTACEAE – CACTUS FAMILY				
*Opuntia ficus-indica**	mission prickly-pear			
CHENOPODIACEAE – GOOSEFOOT FAMILY				
*Chenopodium album**	Lamb's quarters		FACU	
*Salsola tragus**	Russian thistle		FACU	
CLEOMACEAE – SPIDERFLOWER FAMILY				
Peritoma arborea	bladderpod			
CONVOLVULACEAE – MORNING–GLORY FAMILY				
Calystegia macrostegia	large-bracted morning-glory			
EUPHORBIACEAE – SPURGE FAMILY				
Euphorbia albomarginata	rattlesnake sandmat			
*Euphorbia peplus**	petty spurge			
*Ricinus communis**	common castor bean		FACU	Limited

APPENDIX B-1
PLANT SPECIES OBSERVED DURING SURVEYS

Species		Special Status	Wetland Rank	Cal-IPC Rank
Scientific Name	**Common Name**			
FABACEAE – LEGUME FAMILY				
Acmispon glaber	deerweed			
Lupinus succulentus	arroyo lupine			
*Medicago polymorpha**	variable burclover		FACU	Limited
*Melilotus albus**	white sweetclover			
*Melilotus indicus**	sourclover		FACU	
FAGACEAE – OAK FAMILY				
Quercus agrifolia	coast live oak			
GERANIACEAE – GERANIUM FAMILY				
*Erodium botrys**	long-beaked filaree		FACU	
*Erodium cicutarium**	redstem filaree			Limited
JUGLANDACEAE – WALNUT FAMILY				
Juglans californica	southern California black walnut	CRPR 4.2	FAC	
LAMIACEAE – MINT FAMILY				
Lavandula sp.*	lavender			
*Marrubium vulgare**	common horehound		FACU	Limited
Salvia apiana	white sage			
Salvia mellifera	black sage			
MALVACEAE – MALLOW FAMILY				
Malacothamnus fasciculatus var. *fasciculatus*	chaparral mallow			
*Malva nicaeensis**	bull mallow			
*Malva parviflora**	cheeseweed			
MYRSINACEAE – MYRSINE FAMILY				
*Lysimachia arvensis**	scarlet pimpernel		FAC	
MYRTACEAE – MYRTLE FAMILY				
Eucalyptus sp.*	gum tree			
NYCTAGINACEAE – FOUR O'CLOCK FAMILY				
Bougainvillea sp.	bougainvillea			
OLEACEAE – OLIVE FAMILY				
*Olea europaea**	European olive			Limited

APPENDIX B-1
PLANT SPECIES OBSERVED DURING SURVEYS

Species		Special Status	Wetland Rank	Cal-IPC Rank
Scientific Name	**Common Name**			
PAPAVERACEAE – POPPY FAMILY				
Eschscholzia californica	California poppy			
Romneya coulteri	Coulter's matilija poppy	CRPR 4.2		
PLATANACEAE – SYCAMORE FAMILY				
Platanus racemosa	western sycamore		FAC	
PLUMBAGINACEAE – LEADWORT FAMILY				
*Plumbago auriculata**	cape leadwort			
POLYGONACEAE – BUCKWHEAT FAMILY				
Eriogonum cinereum	coastal wild buckwheat			
Eriogonum fasciculatum	California buckwheat			
*Rumex crispus**	curly dock		FAC	Limited
RHAMNACEAE – BUCKTHORN FAMILY				
Ceanothus sp.	ceanothus (cultivar)			
ROSACEAE – ROSE FAMILY				
*Prunus persica**	peach			
Rosa californica	California rose		FAC	
Rubus ursinus	California blackberry		FAC	
SALICACEAE – WILLOW FAMILY				
Populus fremontii ssp. *fremontii*	Fremont cottonwood		FAC	
Salix lasiolepis	arroyo willow		FACW	
SCROPHULARIACEAE – FIGWORT FAMILY				
*Myoporum laetum**	myoporum		FACU	Moderate
SOLANACEAE – NIGHTSHADE FAMILY				
Datura wrightii	Wright's jimsonweed			
*Nicotiana glauca**	tree tobacco		FAC	Moderate
Solanum americanum	American nightshade		FACU	
Solanum douglasii	Douglas' nightshade		FAC	
TROPAEOLACEAE – NASTURTIUM FAMILY				
*Tropaeolum majus**	garden nasturtium			
VALERIANACEAE – VALERIAN FAMILY				
*Centranthus ruber**	red valerian			

APPENDIX B-1
PLANT SPECIES OBSERVED DURING SURVEYS

Species		Special Status	Wetland Rank	Cal-IPC Rank
Scientific Name	**Common Name**			
MONOCOTS				
AGAVACEAE – AGAVE FAMILY				
Yucca sp.*	yucca			
ARECACEAE – PALM FAMILY				
Phoenix sp.*	date palm			
*Washingtonia robusta**	Mexican fan palm		FACW	Moderate
CYPERACEAE – SEDGE FAMILY				
Cyperus sp.	flatsedge			
IRIDACEAE – IRIS FAMILY				
Sisyrinchium bellum	western blue-eyed-grass		FACW	
POACEAE – GRASS FAMILY				
*Arundo donax**	giant reed		FACW	High
*Avena barbata**	slender wild oat			Moderate
*Avena fatua**	wild oat			Moderate
*Bromus diandrus**	ripgut grass			Moderate
*Bromus rubens**	red brome			High
*Cortaderia selloana**	pampas grass		FACU	High
*Cynodon dactylon**	Bermuda grass		FACU	Moderate
Elymus triticoides	beardless wild rye		FAC	
*Festuca myuros**	rattail sixweeks grass		FACU	Moderate
*Festuca perennis**	rye grass		FAC	Moderate
*Hordeum murinum**	wall barley		FACU	Moderate
Muhlenbergia rigens	deer grass		FAC	
Paspalum distichum	knot grass		FACW	
*Pennisetum setaceum**	crimson fountain grass			Moderate
Phalaris sp.	canary grass			
*Polypogon monspeliensis**	annual beard grass		FACW	Limited
*Stenotaphrum secundatum**	Saint Augustine grass		FAC	
Stipa miliacea var. *miliacea**	smilo grass			Limited
Subfamily Bambusoideae	bamboo			

APPENDIX B-1
PLANT SPECIES OBSERVED DURING SURVEYS

Species		Special Status	Wetland Rank	Cal-IPC Rank
Scientific Name	**Common Name**			
TYPHACEAE – CATTAIL FAMILY				
*Typha angustifolia**	narrow-leaved cattail		OBL	

CRPR: California Rare Plant Rank; Cal-IPC: California Invasive Plant Council.

* Non-native or invasive species

Species Status:

CRPR

.2 Moderately threatened in California (20–80% of occurrences threatened; moderate degree and immediacy of threat)

Threat Code Extensions

4 Plants of limited distribution – watch list

Cal-IPC Rank:

Limited These species are invasive, but their ecological impacts are minor on a statewide level. They have low to moderate rates of colonization. Although their distribution is generally limited, these species may be locally persistent and problematic.

Moderate These species have substantial and apparent—but generally not severe—ecological impacts on the surrounding habitat. They have moderate to high rates of dispersal. Distribution may range from limited to widespread.

High These species have severe ecological impacts on the surrounding habitat. They have moderate to high rates of dispersal and establishment, and most are widely distributed.

Wetland Designations:

FACU Plants that are not wetland dependent. They are non-wetland plants by habitat preference.

FAC These plants can occur in wetlands or non-wetlands. They can grow in hydric, mesic, or xeric habitats.

FACW Plants dependent on and predominantly occur with hydric soils, standing water, or seasonally high-water tables in wet habitats.

OBL Wetland-dependent plants that require standing water or seasonally saturated soils near the surface.

APPENDIX B-2
WILDLIFE SPECIES OBSERVED DURING SURVEYS

Species	
Scientific Name	**Common Name**
LIZARDS	
PHRYNOSOMATIDAE – SPINY LIZARD FAMILY	
Sceloporus occidentalis	western fence lizard
BIRDS	
COLUMBIDAE – PIGEON AND DOVE FAMILY	
Zenaida macroura	mourning dove
TROCHILIDAE – HUMMINGBIRD FAMILY	
Calypte anna	Anna's hummingbird
Selasphorus sasin	Allen's hummingbird
CHARADRIIDAE – PLOVER FAMILY	
Pluvialis squatarola	black-bellied plover
Charadrius vociferus	killdeer
LARIDAE – GULL AND TERN FAMILY	
Larus delawarensis	ring-billed gull
Larus occidentalis	western gull
Larus californicus	California gull
ACCIPITRIDAE – HAWK FAMILY	
Circus cyaneus	northern harrier
Buteo lineatus	red-shouldered hawk
Buteo jamaicensis	red-tailed hawk
STRIGIDAE – TYPICAL OWL FAMILY	
Bubo virginianus	great horned owl
Athene cunicularia	burrowing owl
PICIDAE – WOODPECKER FAMILY	
Picoides nuttallii	Nuttall's woodpecker
FALCONIDAE – FALCON FAMILY	
Falco sparverius	American kestrel
Falco peregrinus	peregrine falcon
PSITTACIDAE – PARROT FAMILY	
Aratinga nenday	nanday parakeet*
TYRANNIDAE – TYRANT FLYCATCHER FAMILY	
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus vociferans	Cassin's kingbird
Tyrannus verticalis	western kingbird
CORVIDAE – JAY AND CROW FAMILY	
Corvus brachyrhynchos	American crow
Corvus corax	common raven
HIRUNDINIDAE – SWALLOW FAMILY	
Stelgidopteryx serripennis	northern rough-winged swallow
Petrochelidon pyrrhonota	cliff swallow
Hirundo rustica	barn swallow
PARIDAE – TITMOUSE FAMILY	
Baeolophus inornatus	oak titmouse

APPENDIX B-2
WILDLIFE SPECIES OBSERVED DURING SURVEYS

Species	
Scientific Name	**Common Name**
AEGITHALIDAE – BUSHTIT FAMILY	
Psaltriparus minimus	bushtit
TROGLODYTIDAE – WREN FAMILY	
Thryomanes bewickii	Bewick's wren
POLIOPTILIDAE – GNATCATCHER FAMILY	
Polioptila caerulea	blue-gray gnatcatcher
REGULIDAE – KINGLET FAMILY	
Regulus calendula	ruby-crowned kinglet
SYLVIIDAE – SILVIID WARBLERS FAMILY	
Chamaea fasciata	wrentit
TURDIDAE – THRUSH FAMILY	
Sialia mexicana	western bluebird
MIMIDAE – MOCKINGBIRD AND THRASHER FAMILY	
Mimus polyglottos	northern mockingbird
STURNIDAE – STARLING FAMILY	
*Sturnus vulgaris**	European starling*
PASSERIDAE – OLD WORLD SPARROW FAMILY	
*Passer domesticus**	house sparrow*
MOTACILLIDAE – PIPIT AND WAGTAIL FAMILY	
Anthus rubescens	American pipit
FRINGILLIDAE – FINCH FAMILY	
Haemorhous mexicanus	house finch
Spinus psaltria	lesser goldfinch
PASSERELLIDAE – NEW WORLD SPARROW FAMILY	
Melozone crissalis	California towhee
Melospiza melodia	song sparrow
Melospiza lincolnii	Lincoln's sparrow
Zonotrichia leucophrys	white-crowned sparrow
Junco hyemalis	dark-eyed junco
ICTERIDAE – BLACKBIRDS AND ORIOLES	
Icterus bullockii	Bullock's oriole
Agelaius phoeniceus	red-winged blackbird
Molothrus ater	brown-headed cowbird
Euphagus cyanocephalus	Brewer's blackbird
PARULIDAE – WOOD-WARBLER FAMILY	
Geothlypis trichas	common yellowthroat
Setophaga coronata	yellow-rumped warbler
Cardellina pusilla	Wilson's warbler
MAMMALS	
SCIURIDAE – SQUIRREL FAMILY	
Sciurus griseus	western gray squirrel
Otospermophilus beecheyi	California ground squirrel
GEOMYIDAE – POCKET GOPHER FAMILY	
Thomomys bottae	Botta's pocket gopher

APPENDIX B-2
WILDLIFE SPECIES OBSERVED DURING SURVEYS

Species	
Scientific Name	**Common Name**
LEPORIDAE – HARE AND RABBIT FAMILY	
Sylvilagus audubonii	desert cottontail
CANIDAE – CANID FAMILY	
Canis latrans	coyote (scat)
* Non-native or invasive species	

APPENDIX C

DRAFT JURISDICTIONAL DELINEATION REPORT

Jurisdictional Delineation Report

For the Malibu Middle and High School Specific Plan and LCP Amendment Project in Malibu, California

Prepared for

Santa Monica-Malibu Unified School District
Facility Improvement Projects
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September 2021

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EXECUTIVE SUMMARY

This report provides baseline data regarding the type and extent of jurisdictional resources in support of the Malibu Middle and High School Specific Plan and Local Coastal Program Amendment Project. Jurisdictional resources considered for this report include wetland and non-wetland waters of the United States (WOTUS) regulated by the U.S. Army Corps of Engineers (USACE); waters of the State regulated by the Regional Water Quality Control Board (RWQCB); waters, including the bed, bank, and channel of all lakes, rivers, and/or streams (and associated wetland and riparian vegetation), as regulated by the California Department of Fish and Wildlife (CDFW); and wetlands and waters in the Coastal Zone, as regulated by the California Coastal Commission (CCC).

The limits of non-wetland WOTUS and waters of the State were identified by the presence of an Ordinary High Water Mark (OHWM). Wetland features were identified based on the USACE's three-parameter approach in which wetlands are defined by the presence of hydrophytic vegetation, hydric soils, and wetland hydrology indicators. The limits of RWQCB waters and wetlands were determined to equal those of the USACE unless isolated conditions were present. The limits of CDFW jurisdictional waters were identified as either the top of bank or the outer drip line of riparian vegetation associated with the feature. The CCC's wetland boundary is based on a "one-parameter" definition determined by at least one of the following: hydrology, hydric soils, and hydrophytic vegetation.

The jurisdictional assessment was performed by Psomas on November 12, 2019. Jurisdictional boundaries were further refined on January 16, 2020 and April 15, 2021. Based on the results of all the field work, it was determined that the total amount of jurisdictional resources in the Study Area are as follows:

- **USACE Jurisdiction:** 0.070 acre (0.007 acre of wetland WOTUS and 0.063 acre of non-wetland WOTUS)
- **RWQCB Jurisdiction:** 0.232 acre (0.007 acre of wetland waters of the State and 0.225 acre of non-wetland waters of the State)
- **CDFW Jurisdiction:** 1.202 acres
- **CCC Jurisdiction:** 1.202 acres (1.012 acre of ESHA)

1.0 INTRODUCTION

This Jurisdictional Delineation Report (report) was prepared for the Santa Monica-Malibu Unified School District (District) to provide baseline data concerning the type and extent of water resources under the jurisdiction of the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), the California Department of Fish and Wildlife (CDFW), and the California Coastal Commission (CCC) in support of the Malibu Middle and High School Specific Plan and Local Coastal Program (LCP) Project.

1.1 PROJECT LOCATION

The Malibu Middle and High School (MMHS) campus is located at 30215 Morning View Drive in the City of Malibu (the City), Los Angeles County, California (Exhibit 1). The Study Area includes the MMHS campus and surrounding open space owned by the Santa Monica-Malibu High School District. The campus is located east of Via Cabrillo, north of Morning View Drive, west of Merritt Drive, and south of Heights Road, approximately 0.25 mile northeast of Pacific Coast Highway (PCH). The Study Area is depicted on the U.S. Geological Survey's (USGS') Point Dume 7.5-minute topographic quadrangle of the San Bernardino Meridian in Township 02S, Range 19W, Section 01 (Exhibit 2). It is within the Santa Monica Bay Watershed (Hydrologic Unit Code 18070104).

1.2 PROJECT DESCRIPTION

As the design concepts in the Campus Plan are set to develop in several phases over a long period of time, the City recommended preparation of a specific plan so that a consistent set of development standards could be adopted. Once adopted, the standards in the specific plan would become the regulations against which later phases of the project would be reviewed by the City. Based on the City's recommendation, the *Malibu Middle and High School Campus Specific Plan* establishes the development standards and plan for the MMHS campus over the next 10 to 15 years (Placeworks 2021). The existing MMHS campus was constructed as Malibu Park Junior High School beginning in 1963, and in 1992 the school was converted for use as a high school. The Project Site is situated on three of nine parcels: Assessor's Parcel Numbers (APN) 4469-017-900 (40.06 acres), 4469-018-900 (9.40 acres), and 4459-018-904 (2.57 acres). The total acreage of the Project Site is 52.03 acres (Placeworks 2021).

Apart from the recently completed Buildings A/B and E, many of the existing buildings no longer meet the District's needs for flexible classrooms with the ability to support multiple learning zones. The Specific Plan would result in the demolition of 18 existing buildings on the combined campuses; with only the existing athletic fields, and the nearly or recently completed Buildings A/B and E on the MMHS campus would remain, and the construction of a new campus with dedicated spaces for Middle and High School. The Specific Plan would result in 32 classrooms and 8 labs and a total of 173,595 square feet of new building space, providing the MMHS campus with a total of 47 classrooms and 12 labs and a total of 222,425 square feet of building space (Placeworks 2021).

While the Specific Plan reflects the anticipated buildout condition of the MMHS campus, only Phase I of the Plan is designed and funded for construction. Construction of subsequent Phases will require additional financial resources before they can proceed. The Specific Plan relies on established City of Malibu land use and zoning regulations and procedures and provides development standards for the MMHS Campus Specific Plan. Both the City of Malibu Municipal Code and LCP contain provisions for discretionary site plan review. The District anticipates that implementation of subsequent phases will be reviewed by the City for approval and compared to the Specific Plan and Environmental Impact Report for consistency.

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Project Location

Exhibit 1

Malibu Middle and High School Specific Plan and LCP Amendment Project

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USGS 7.5-Minute Digital Quadrangle

Exhibit 2

Malibu Middle and High School Specific Plan and LCP Amendment Project

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1.3 REGULATORY AUTHORITY

This section summarizes the regulations of those federal and state agencies that have regulatory authority over activities that occur within their areas of jurisdiction. A detailed explanation of each agency's regulatory authority is provided in Attachment A.

1.3.1 U.S. Army Corps of Engineers

The USACE Regulatory Branch regulates activities that discharge dredged or fill materials into waters of the United States (WOTUS) under Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Its authority applies to all WOTUS where the material (1) replaces any portion of a water of the United States with dry land or (2) changes the bottom elevation of any portion of any WOTUS. Activities that result in fill or dredge of WOTUS require a permit from the USACE. Presently, WOTUS are defined to include territorial seas and Traditional Navigable Waters (TNWs)[1]; perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters (USACE and USEPA 2010).

1.3.2 Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB), in conjunction with the nine RWQCBs, is the primary agency responsible for protecting water quality in California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The SWRCB's and RWQCBs' jurisdictions extend to all WOTUS, but also to waters of the State that are outside federal jurisdiction, including wetlands.

On August 28, 2019, the Office of Administrative Law (OAL) approved the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to waters of the State. The procedures went into effect on May 28, 2020. Under these new regulations, the SWRCB and its nine RWQCBs assert jurisdiction over all existing WOTUS, and all waters that would have been considered WOTUS under the 2015 Rule. Thus, the WOTUS that would no longer be under USACE jurisdiction would be under SWRCB jurisdiction.

1.3.3 California Department of Fish and Wildlife

The CDFW regulates activities that may affect rivers, streams, and lakes pursuant to the *California Fish and Game Code* (§§1600–1616). According to Section 1602 of the *California Fish and Game Code,* the CDFW has jurisdictional authority over any work that will (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

[1] Traditional Navigable Waters are "all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide" (33 *Code of Federal Regulations* § 328.3).

1.3.4 California Coastal Commission

The CCC, in partnership with coastal Cities and Counties, plans and regulates the use of land and water in the Coastal Zone, an area covering a 3-mile-wide band of ocean and extending inland from the mean high tide line to a variable distance based on surrounding land cover. Development in the Coastal Zone requires a Coastal Development Permit (CDP) issued by either the CCC or a local government with a certified LCP.

The City of Malibu has a certified LCP that provides for protection and preservation of environmentally sensitive habitat areas (ESHAs). An ESHA is defined 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 which could be easily disturbed or degraded by human activities and developments". ESHAs include rare or valuable habitat, habitat that contributes to the viability of plant or animal species that are designated or are candidates for listing under State or Federal law, habitat that contributes to the viability of species that are designated as "fully protected" or "species of special concern" under State law, habitat that contributes to the viability of species for which there is other compelling evidence of rarity (e.g., species with a California Rare Plant Rank of 1 or 2), designated Areas of Special Biological Significance or Marine Protected Area, and Streams.

2.0 METHODS

2.1 LITERATURE REVIEW

Prior to conducting the delineation and during the course of report preparation, Psomas reviewed the following documents to identify areas that may fall under agency jurisdiction: The City of Malibu LCP Local Implementation Plan (Malibu 2002); the USGS' Point Dume 7.5-minute quadrangle map; color aerial photography provided by the Hexagon Geosystems (2018); soil data provided by the U.S. Department of Agriculture's Natural Resources Conservation Service (Exhibit 3); the National Hydric Soils List (USDA NRCS 2019); the National Wetlands Inventory's Wetland Mapper (Exhibit 4); the Water Quality Control Plan for the Los Angeles Region (Los Angeles RWQCB 2013), and previous documentation for MMHS campus (Atkins 2011; GLA 2009).

USGS Topographic Quadrangle. USGS quadrangle maps show geological formations and their characteristics and describe the physical settings of an area through topographic contour lines and other major surface features. These features include lakes, streams, rivers, buildings, roadways, landmarks, and other features that may fall under the jurisdiction of one or more regulatory agencies. In addition, the USGS maps provide topographic information that is useful in determining elevations; connectivity of streams, rivers, and other water features; latitude and longitude; and Universal Transverse Mercator Grid coordinates for the Study Area.

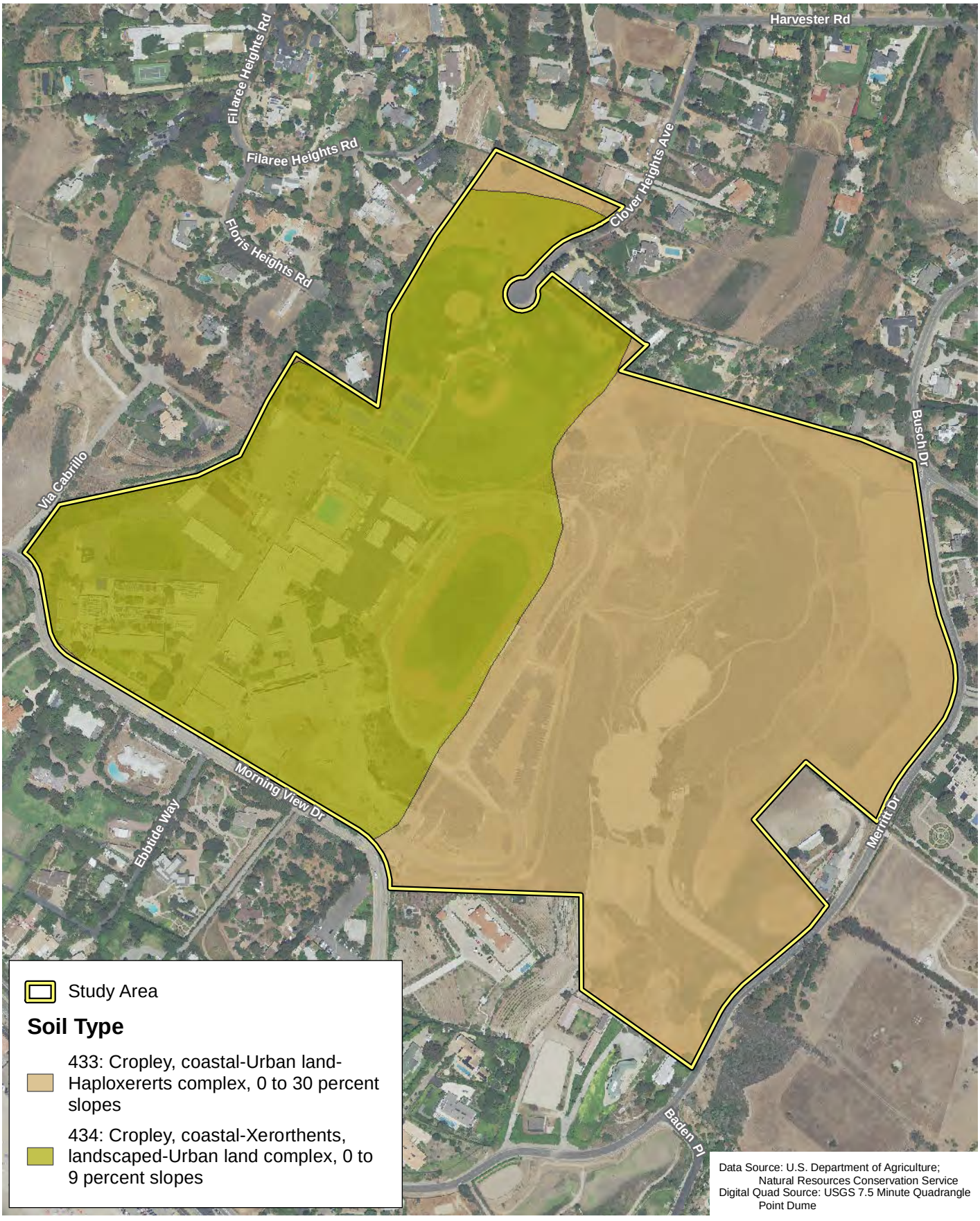
Color Aerial Photography. Color aerial photographs were reviewed prior to conducting the field delineation to identify the extent of any drainages and riparian vegetation occurring in the Study Area.

U.S. Department of Agriculture, Natural Resources Conservation Service. The presence of hydric soils is one of the chief indicators of jurisdictional wetlands. Psomas reviewed U.S. Department of Agriculture (USDA) soil data for the Study Area.

U.S. Fish and Wildlife Service, National Wetlands Inventory: The Wetlands Mapper shows wetland resources available from the Wetlands Spatial Data Layer of the National Spatial Data Infrastructure (USFWS 2019). This resource provides the classification of known wetlands following the *Classification of Wetlands and Deepwater Habitats of the United States* (FGDC 2013). This classification system is arranged in a hierarchy of (1) Systems that share the influence of similar hydrologic, geomorphologic, chemical, or biological factors (i.e., Marine, Estuarine, Riverine, Lacustrine, and Palustrine); (2) Subsystems (i.e., Subtidal and Intertidal; Tidal, Lower Perennial, Upper Perennial, and Intermittent; or Littoral and Limnetic); (3) Classes, which are based on substrate material and flooding regime or on vegetative life forms; (4) Subclasses, which recognize finer differences in life forms or substrate material than the Class; and (5) Dominance Types, which are named for the dominant plant or wildlife forms. In addition, modifying terms are applied to Classes or Subclasses.

The mapped water resources are used to provide additional guidance on planning the field surveys. Given that wetland features mapped by the National Wetlands Inventory (NWI) may or may not exist at a site because of changing conditions and development, this resource provides only preliminary data and historic data based on aerial photographic interpretation and, therefore, must be ground-truthed.

Regional Water Quality Control Plans. California has nine RWQCBs. The Study Area is located in RWQCB Region 4, the Los Angeles Region. The Los Angeles RWQCB has adopted a Water Quality Control Plan (or "Basin Plan") for this region. The Basin Plan contains goals and policies, descriptions of conditions, and proposed solutions to surface and groundwater issues. The Basin



Data Source: U.S. Department of Agriculture; Natural Resources Conservation Service
Digital Quad Source: USGS 7.5 Minute Quadrangle Point Dume

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Soil Types

Exhibit 3

Malibu Middle and High School Specific Plan and LCP Amendment Project

N W E S

400 200 0 400 Feet

PSOMAS

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Data Source: U.S. Fish & Wildlife Service; National Wetlands Inventory December 2016
Digital Quad Source: USGS 7.5 Minute Quadrangle Point Dume

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National Wetlands Inventory

Exhibit 4

Malibu Middle and High School Specific Plan and LCP Amendment Project

N W E S

500 250 0 500 Feet

PSOMAS

(Rev: 8-24-2021 MMD) R:\Projects\1SAN\082308\Graphics\JD\ex_NWI.pdf

Plan also establishes water quality standards for surface and groundwater resources and includes beneficial uses and levels of water quality that must be met and maintained to protect these uses. These water quality standards are implemented through various regulatory permits pursuant to the CWA, specifically Section 401 for Water Quality Certifications and Section 402 for Report of Waste Discharge (ROWD) permits.

Previous Documentation. The *Santa Monica-Malibu Unified School District Malibu Middle and High School Campus Improvement Project Environmental Impact Report* (Atkins 2011) and a biological assessment prepared by Glenn Lukos Associates (GLA 2009) provide historic information on biological and jurisdictional resources in the Study Area.

2.2 JURISDICTIONAL DELINEATION

The analysis contained in this report uses the results of (1) a topographic survey effort mapping CCC ESHA boundaries conducted on May 21 and May 23, 2019 by Psomas Senior Biologist Irena Mendez, and Land Surveyors Juan Jimenez and Philip Berredo; (2) a jurisdictional assessment conducted on November 12, 2019, by Psomas Senior Regulatory Specialist Allison Rudalevige and Psomas Senior Biologist Jonathan Aguayo; (3) a jurisdictional delineation to further refine USACE, RWQCB, CDFW, and CCC extent on January 16, 2020, by Ms. Rudalevige and Ms. Irena Mendez; and (4) a jurisdictional delineation of an expanded Study Area on April 15, 2021, by Ms. Rudalevige and Psomas Biologist Sarah Thomas. The topographic relief of the ESHA was established with a Leica Nova MS60 Multi-station with a Leica Allegro Controller for data collection. The data was processed using Computer Assisted Design (CAD) and a 1 inch equals 20 feet (1″ = 20′) map was generated. Areas under USACE, RWQCB, and CDFW authority were delineated using a 1 inch equals 100 feet (1″ = 100′) scale aerial photograph loaded onto Avenza Maps application on an Apple iPad. Drainage features were delineated as a centerline with corresponding width measurements and waterbodies were delineated as polygons. Soil test pits were dug in areas that exhibited potential hydrophytic vegetation and wetland hydrology. It should be noted that private property was observed from the campus and was not directly accessed; mapping of jurisdictional extent was truncated at the property line. Representative photographs of the Study Area are included in Attachment B.

2.2.1 USACE Waters of the United States

Psomas assessed the presence of WOTUS by determining connectivity or adjacency of on-site features to points of discharge at a TNW. Non-wetland WOTUS are delineated based on the limits of the OHWM, which can be determined by a number of factors, including (1) the presence of a clear, natural line impressed on the bank; (2) shelving along the bank; (3) changes in the character of the soil; (4) destruction of terrestrial vegetation; and (5) the presence of litter and debris. The OHWM limits (i.e., active floodplain) occurring in the Study Area were further verified using methods contained in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*, *A Delineation Manual* (Lichvar and McColley 2008) and the *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Curtis and Lichvar 2010).

In September 2008, the USACE issued the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008). This regional supplement is designed for use with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). Both the 1987 Wetlands Manual and the Arid West Supplement to the manual provide technical methods and guidelines for determining the presence of wetland WOTUS. Both documents prescribe using a three-parameter approach to identify wetlands. The three parameters needed to assign a site as a wetland include evidence of wetland hydrology, hydrophytic vegetation, and hydric soils. However, problem areas may periodically or permanently

lack certain indicators due to seasonal or annual variability or the nature of the soils or plant species on site. Atypical wetlands lack certain indicators due to recent human activities or natural events. Guidance for determining the presence of wetlands in these situations is presented in the regional supplement.

2.2.2 RWQCB Waters of the State

Psomas determined the limits of RWQCB jurisdiction in the field following the methods described for USACE jurisdiction, above. The RWQCB shares USACE jurisdiction unless isolated conditions are present. If isolated waters are present, the RWQCB takes jurisdiction using the USACE's definition of the OHWM and/or the three-parameter wetlands method pursuant to the 1987 Wetlands Manual (Environmental Laboratory 1987).

2.2.3 CDFW Waters

CDFW's jurisdiction was determined measuring the distance between the top of the bank to the top of the bank of the water features on site, or if present, to the outer limit of riparian vegetation located within or immediately adjacent to feature.

2.2.4 CCC Waters

The CCC waters boundaries were delineated based on the outer extent of predominantly hydrophytic vegetation, hydric soil, or land that is flooded or saturated at some time during years of normal rainfall. The CCC uses a single-parameter approach to determine the presence of wetlands, so any feature showing evidence of hydrology, hydric soils, or hydrophytic vegetation was classified as a wetland. These areas are also considered to be ESHAs.

3.0 RESULTS

A total of five potential jurisdictional features were mapped in the Study Area: Drainage 1, Drainage 2, Drainage 3, Drainage 4, and Basin (Exhibits 5 and 6). Results of the literature review are provided in Section 3.1 and a detailed analysis of each regulatory agency's jurisdiction is provided in Section 3.2. Attachment C provides datasheets that summarize the overall condition of the individual wetlands, drainages, and indicators of OHWM.

3.1 LITERATURE REVIEW

USGS Topographic Quadrangle. Two unnamed blueline streams are depicted on the USGS Point Dume quadrangle (Exhibit 2). One runs along the western edge of the Study Area and continues off site to PCH. The other runs along the eastern half of the Study Area and continues off site to PCH. The topography in the Study Area gently slopes from the northeast to the southwest. Elevations range from approximately 100 to 200 feet above mean sea level (msl).

Color Aerial Photography. Drainage 1 is clearly shown on aerial imagery. Riparian vegetation is visible along the drainage but appears to have been denser prior to the 2018 Woolsey fire. The upstream end of Drainage 2 is visible on aerial imagery; however, its alignment is obscured as it crosses the field north of the campus baseball field. The concrete-lined portion of the channel is partially visible. Drainage 3 is faintly visible and goes underground just north of the equestrian center. Drainage 4 is obscured by vegetation. The Basin is shown on recent aerial imagery. Historic aerial imagery shows that vegetation in the basin has increased over time; surface water was present in some historic aerials. Prior to creation of the basin, the area it occupies appears to be a graded, undeveloped, upland lot adjacent to the parking lot.

U.S. Department of Agriculture, Natural Resources Conservation Service. The Study Area occurs in the following soil survey area: Santa Monica Mountains National Recreation Area. Within this soil survey area, the USDA NRCS has delineated the boundaries of 'soil map units', which often contain components of multiple soil types that may be classified as hydric or non-hydric. The National Hydric Soils List (USDA NRCS 2019) identifies a soil map unit as "hydric" if it contains either a major or minor component that is at least in part hydric.

The following soil types have been mapped in the Study Area: Cropley, coastal – Urban land – Haploxererts complex, 0 to 30 percent slopes and Cropley, coastal – Xerorthents, landscaped – Urban land complex, 0 to 9 percent slopes (Exhibit 3). These soils are not listed as hydric on the National List for the soil survey area in which they occur (USDA NRCS 2019). A description of the soils mapped in the Study Area is provided in Attachment D of this report.

U.S. Fish and Wildlife Service, National Wetlands Inventory. Drainages 1 and 3 are mapped as wetlands by the NWI (Exhibit 4). Drainage 1 is considered to be a Palustrine wetland with scrub-shrub vegetation that is temporarily flooded (PSSA). Drainage 3 is considered to be a Riverine wetland that is intermittent and temporarily flooded (R4SBA) with the downstream end a Palustrine wetland with scrub-shrub vegetation that is seasonally flooded and diked/impounded (PSSCh). The NWI also maps a Riverine feature crossing Via Cabrillo on the western side of the Study Area (labeled R4SBA on Exhibit 4). The description for NWI mapped wetland resources is provided in Attachment D of this report. Drainage 2 and the Basin were not mapped by the NWI.

The NWI data was used to provide additional guidance on planning the field surveys. Given that wetland features mapped for the NWI may or may not exist at present because of changing conditions and development, this resource provides preliminary data and historic data but must be ground-truthed for each wetland feature.

Study Area

Sampling Points

Ordinary High Water Mark

Non-wetland

Wetland*

* Based on USACE three-parameter approach.

Match Line - Exhibit 5b

Drainage 1

2

Basin

Map Extent

5a

5b

5c

5d

5e

5f

Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Ordinary High Water Mark

Exhibit 5a

Malibu Middle and High School Specific Plan and LCP Amendment Project

N W E S

50 25 0 50

Feet

PSOMAS

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Study Area

Sampling Points

Ordinary High Water Mark

Non-wetland

Wetland*

* Based on USACE three-parameter approach.

1A

1B

Drainage 1

Drainage 2

Match Line - Exhibit 5c

Match Line - Exhibit 5a

Map Extent

5a

5b

5c

5d

5e

5f

Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Ordinary High Water Mark

Exhibit 5b

Malibu Middle and High School Specific Plan and LCP Amendment Project

N W E S

50 25 0 50 Feet

PSOMAS

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Study Area

Sampling Points

Ordinary High Water Mark

Non-wetland

Wetland*

* Based on USACE three-parameter approach.

Drainage 2

Match Line - Exhibit 5b

Map Extent

5a 5b 5c 5d 5e 5f

Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Ordinary High Water Mark

Malibu Middle and High School Specific Plan and LCP Amendment Project

Exhibit 5c

N W E S

50 25 0 50

Feet

PSOMAS

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Study Area

Sampling Points

Ordinary High Water Mark

Non-wetland

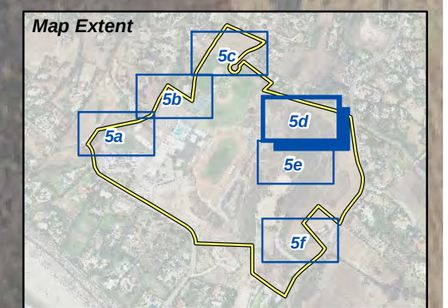
Wetland*

* Based on USACE three-parameter approach.

Drainage 3

Match Line - Exhibit 5e

Map Extent



Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Ordinary High Water Mark

Malibu Middle and High School Specific Plan and LCP Amendment Project

Exhibit 5d

N W E S

50 25 0 50

Feet

PSOMAS

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Study Area

Sampling Points

Ordinary High Water Mark

Non-wetland

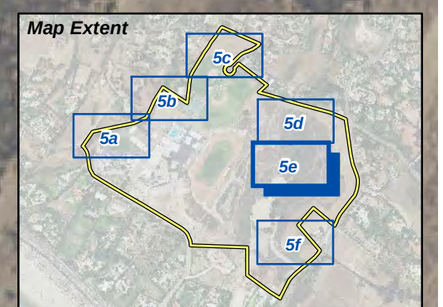
Wetland*

* Based on USACE three-parameter approach.

Match Line - Exhibit 5d

Drainage 3

Map Extent



Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Ordinary High Water Mark

Malibu Middle and High School Specific Plan and LCP Amendment Project

Exhibit 5e

N W E S

50 25 0 50 Feet

PSOMAS

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Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Ordinary High Water Mark

Exhibit 5f

Malibu Middle and High School Specific Plan and LCP Amendment Project

N
W E
S

50 25 0 50

Feet

PSOMAS

(Rev: 08/24/2021 MMD) R:\Projects\1SAN\082308\Graphics\JD\ex_JD_OHWM.pdf

Study Area
Sampling Points
Top of Bank/Riparian Canopy

Match Line - Exhibit 6b

2
Basin

Drainage 1

6a
6b
6c
6d
6e
6f

Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Top of Bank/Riparian Canopy

Malibu Middle and High School Specific Plan and LCP Amendment Project

Exhibit 6a

N
W E
S

60 30 0 60
Feet

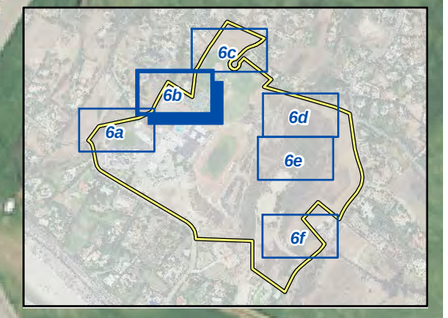
PSOMAS

(Rev: 09/01/2021 MMD) R:\Projects\1SAN\082308\Graphics\JD\ex_JD_TOB_.pdf

Study Area
Sampling Points
Top of Bank/Riparian Canopy

1A
1B
2
Drainage 1
Drainage 2

Match Line - Exhibit 6c
Match Line - Exhibit 6a



Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Top of Bank/Riparian Canopy

Exhibit 6b

Malibu Middle and High School Specific Plan and LCP Amendment Project

N W E S

60 30 0 60

Feet

PSOMAS

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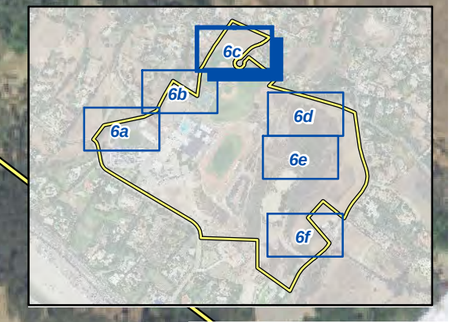
Study Area

Top of Bank/Riparian Canopy

Drainage 2

Match Line - Exhibit 6b



Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Top of Bank/Riparian Canopy

Exhibit 6c

Malibu Middle and High School Specific Plan and LCP Amendment Project

N W E S

60 30 0 60

Feet

PSOMAS

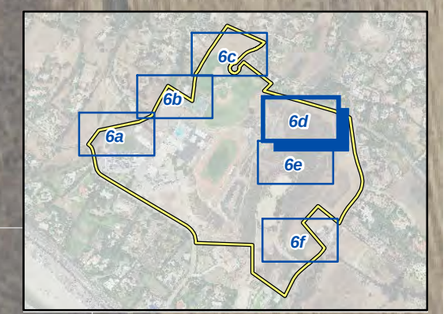
(Rev: 09/01/2021 MMD) R:\Projects\1SAN\082308\Graphics\JD\ex_JD_TOB_.pdf

Study Area

Top of Bank/Riparian Canopy

Drainage 3

Match Line - Exhibit 6e



Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Top of Bank/Riparian Canopy

Exhibit 6d

Malibu Middle and High School Specific Plan and LCP Amendment Project

N W E S

60 30 0 60

Feet

PSOMAS

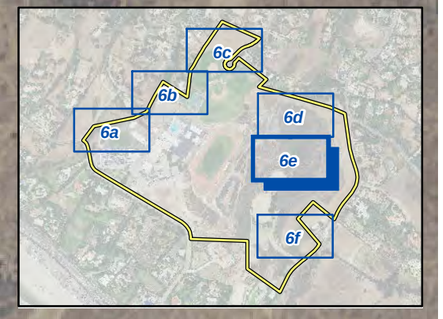
(Rev: 09/01/2021 MMD) R:\Projects\1SAN\082308\Graphics\JD\ex_JD_TOB_.pdf

Study Area

Top of Bank/Riparian Canopy

Match Line - Exhibit 6d

Drainage 3



Aerial Source: Hexagon Geosystems 2018

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Jurisdictional Resources – Top of Bank/Riparian Canopy

Exhibit 6e

Malibu Middle and High School Specific Plan and LCP Amendment Project

N W E S

60 30 0 60 Feet

PSOMAS

(Rev: 09/01/2021 MMD) R:\Projects\1SAN\082308\Graphics\JD\ex_JD_TOB_.pdf

Aerial Source: Hexagon Geosystems 2018

Jurisdictional Resources – Top of Bank/Riparian Canopy

Exhibit 6f

Malibu Middle and High School Specific Plan and LCP Amendment Project

N W E S

60 30 0 60 Feet

PSOMAS

(Rev: 09/01/2021 MMD) R:\Projects\1SAN\082308\Graphics\JD\ex_JD_TOB_.pdf

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Regional Water Quality Control Plans. The drainages in the Study Area are not named in the Los Angeles Basin Plan; they are located between the Trancas Canyon and Zuma Canyon drainages, shown as miscellaneous streams and coastal features on Figure 2-10 of the Basin Plan (Los Angeles RWQCB 2013). The Basin Plan does not provide water quality objectives for miscellaneous Los Angeles County coastal streams. These areas are often impaired (by high levels of minerals) and there is not sufficient historic data to designate objectives based on natural background conditions.

Beneficial uses are defined in the Porter-Cologne Act as those uses of water that are necessary for tangible and intangible economic, social, and environmental benefits. While beneficial uses are not listed for the drainages in the Study Area, they are expected to be similar to those listed for Trancas and Zuma canyons. These expected and potential beneficial uses include Municipal and Domestic Water Supply (MUN) waters; Warm Fresh Water Habitat (WARM) waters; Cold Freshwater Habitat (COLD) waters; Wildlife Habitat (WILD) waters; Rare, Threatened or Endangered Species (RARE) waters; Spawning, Reproduction and Development (SPWN) waters; Migration Habitat (MIGR) waters; Water Contact Recreation (REC-1) waters; and Non-contact Water Recreation (REC-2) waters. Descriptions of the beneficial uses applicable to waters in the Study Area are provided in Attachment D of this report.

Previous Documentation. The City of Malibu's LCP ESHA Overlay Map 2: Zuma Beach to Escondido Beach depicts a stream adjacent to the MMHS campus that flows from the undeveloped foothills to the north (which are mapped as ESHAs) to PCH. This stream alignment, as depicted on the overlay map, varies slightly from current conditions. The upstream portion in the Study Area corresponds to Drainage 2 while the downstream portion corresponds to Drainage 1. Drainages 3 and 4 are not depicted on the overlay map. It should be noted that this map is not intended to depict fixed boundaries of ESHAs and may not include all areas that are ESHAs.

As part of their biological assessment, Glenn Lukos Associates reviewed the City of Malibu's LCP and ESHA Overlay Map (GLA 2009). They concluded that the actual extent of the ESHA did not encompass the entire stream depicted on the ESHA Overlay Map due to inaccuracies in the USGS quadrangle. Specifically, the stream on the ESHA Overlay Map veers eastward across campus facilities including a parking lot, tennis court, and baseball field. The area GLA mapped as an ESHA corresponds to Drainage 1. No other on-site drainages were mapped as ESHAs by GLA.

3.2 JURISDICTIONAL ANALYSIS

Table 1 summarizes the type and extent of the jurisdictional features in the Study Area. Drainage 1 runs along the western boundary of the Study Area. It is an unlined drainage with bed and bank. It receives flow from an undeveloped lot north of the study area, including road runoff. A culvert at the cul-de-sac of Clover Heights Avenue also carries flow into this drainage. Drainage 2 runs from the northern edge of the Study Area along the baseball fields and discharges into Drainage 1. It is unlined with bed and bank at its upstream end and is lined with concrete where it runs adjacent to the tennis courts and discharges into Drainage 1. Drainage 3 starts near the northern edge of the Study Area east of the main campus and goes underground just north of the equestrian center. It is unlined with bed and bank. Drainage 4 begins at a residential property at Merritt Drive on the eastern edge of the Study Area and goes through a culvert at the access road to the equestrian center. The Basin is an artificial basin created east of Drainage 1. It receives runoff directly from the adjacent parking lot and from fields via a pipe culvert. The feature labeled R4SBA on Exhibit 4 was not observed during the site visits.

TABLE 1
SUMMARY OF JURISDICTIONAL RESOURCES IN THE STUDY AREA

Jurisdictional Features	Existing Resources (Acres)					
	Drainage				Basin	Total
	1	2	3	4		
USACE Waters of the United States						
Wetlands	0.007	n/a	n/a	n/a	n/a	0.007
Non-wetland Waters	0.063	n/a	n/a	n/a	n/a	0.063
Total USACE Waters of the United States	0.070	n/a	n/a	n/a	n/a	0.070
RWCQB Waters of the State						
Wetlands	0.007	n/a	n/a	n/a	n/a	0.007
Non-wetland Waters	0.063	0.076	0.030	0.023	0.033	0.225
Total RWQCB Waters of the State	**0.070**	**0.076**	**0.030**	**0.023**	**0.033**	**0.232**
Total CDFW Jurisdictional Resources	**0.681**	**0.127**	**0.030**	**0.331**	**0.033**	**1.202**
Total CCC Jurisdictional Resources	**0.681**	**0.127**	**0.030**	**0.331**	**0.033**	**1.202**

USACE: U.S. Army Corps of Engineers; RWQCB: Regional Water Quality Control Board; CDFW: California Department of Fish and Wildlife; CCC: California Coastal Commission

3.2.1 Waters of the United States Determination

Proviso: Due to a recent federal district court decision (August 30, 2021), the current definition of WOTUS (as determined by the 2020 Navigable Waters Protection Rule) has been remanded and vacated. The U.S. Environmental Protection Agency (USEPA) and the USACE are currently in the process of providing guidance on WOTUS. The determination of the extent of WOTUS in the Study Area is subject to the new guidance from the USEPA and the USACE. The discussion below is based on the 2020 Navigable Waters Protection Rule.

Connectivity to a Traditional Navigable Water

The linear extent of Drainage 1 was delineated from the northern edge of the Study Area downstream to a corrugated pipe culvert passing under Morning View Drive. Based on aerial imagery and USGS topographic contours, this drainage continues primarily above ground until it is undergrounded at PCH and discharges onto Zuma Beach to the Pacific Ocean, a TNW. Under the current definition of WOTUS, relatively permanent waters connected to a TNW are considered WOTUS, while ephemeral waters are not considered jurisdictional. Surface water and soil saturation were observed at the upstream end of Drainage 1 during the November 12, 2019 and January 16, 2020, site visits. Given that the initial site visit was not preceded by a rainfall event (the only rainfall noted in the region was 0.01 inch on November 2, 2019; CIMIS 2019), the drainage is considered to exhibit surface flow more than just ephemerally (i.e., for extended periods and not only following a rainfall event). Therefore, Drainage 1 is considered to be a relatively permanent water. As such, it is a WOTUS.

Drainage 2 crosses an undeveloped lot north of the campus athletic fields and discharges into Drainage 1. Surface water or soil saturation were not observed during either survey visit and the drainage was unvegetated and so did not support plant species that rely on consistent water. This drainage appears to carry only ephemeral flow. Given the repeal of the 2015 Clean Water Rule, ephemeral waters are not considered jurisdictional. Therefore, Drainage 2 is not considered to be a WOTUS.

Drainage 3 crosses the undeveloped area east of the main campus and is undergrounded north of the equestrian center. Aerial imagery does not show if it resurfaces, but the USGS topographic map shows it continuing to PCH. It is likely that this drainage eventually discharges in the Pacific Ocean. Surface water or soil saturation were not observed during the survey visit and this drainage does not support plant species that rely on consistent water. This drainage appears to carry only ephemeral flow. Therefore, Drainage 3 is not considered to be a WOTUS.

Drainage 4 begins at a residential property at Merritt Drive on the eastern edge of the Study Area and goes under a culvert at the access road to the equestrian center; it appears to dissipate on the other side of the access road. As such, it does not have a connection to a TNW and would be considered an isolated water. Therefore, Drainage 4 is not considered to be a WOTUS.

The Basin drains into Drainage 1 via a pipe culvert. Artificial, constructed settling basins created in dry land are not considered WOTUS. Given that the Basin was artificially created in uplands and receives ephemeral surface flow only following rainfall events, it is not considered to be a WOTUS.

Limits of Waters of the United States

Drainage 1 was determined to be a WOTUS. An Arid West Ephemeral and Intermittent Streams OHWM Datasheet was completed for a representative area showing evidence of an OHWM to determine extent of WOTUS (see Attachment C). Evidence of an OHWM for Drainage 1 consists of a change in sediment texture, a change in vegetation species (from obligate, facultative wetland, or facultative species within the OHWM to upland species on and above the banks; most noticeable at the upstream end of the drainage), a change in vegetation cover (high density within the OHWM; most noticeable at the upstream end of the drainage), and a break in bank slope (most noticeable at the downstream end of the drainage where the banks are steeper).

Approximately 0.007 acre of WOTUS under the regulatory authority of the USACE occurs in the Study Area (Table 1). This is shown on Exhibit 5 as the areas within the OHWM for Drainage 1.

Wetlands Determination

Paired sampling points (i.e., one placed within the OHWM in a vegetated area and one placed adjacent, but outside the OHWM) were assessed at the upstream end of Drainage 1 where hydrophytic vegetation was most abundant. A formal sampling point was not assessed in downstream portions of Drainage 1, but an exploratory test pit was dug under the willow riparian canopy and no indicators of hydric soils were observed there. Therefore, areas lacking herbaceous hydrophytic vegetation were considered non-wetland WOTUS. One sampling point was assessed adjacent to vegetation in the Basin in order to determine whether it would be considered wetland waters of the State, discussed below. Table 2 provides a summary of data collected at each sampling point.

TABLE 2
SUMMARY OF SAMPLING POINT DATA

Sampling Point	Vegetated	Dominance Test Result[a]	Prevalence Index Result	Hydric Soil Indicators	Wetlands Hydrology Indicators	Wetland?
1A	Yes	Pass	N/A	F6	A1, A3	Yes
1B	No	N/A	N/A	F6	A3	No
2	Yes	Pass	N/A	N/A	B3, B10	No

N/A: not applicable

[a] Greater than 50 percent of dominant species are classified as obligate wetland, facultative wetland, or facultative.

Hydric Soil Indicators
F6 Redox Dark Surface

Wetland Hydrology Indicators
A1 Surface Water
A3 Saturation
B3 Drift Deposits
B10 Drainage Patterns

Vegetation

Sampling points 1A and 3 were vegetated and passed the dominance test. Therefore, they met the hydrophytic vegetation criterion for wetlands. Sampling point 1B was on an upland slope above the OHWM that was unvegetated and did not meet the hydrophytic vegetation criterion for wetlands.

Soils

Sampling points 1A and 1B contained indicators of hydric soil. Therefore, these areas met the hydric soil criterion for wetlands.

Hydrology

Sampling points 1A, 1B, and 3 contained indicators of wetland hydrology. Therefore, these areas met the hydrology criterion for wetlands.

Results

Sampling point 1A in Drainage 1 met all three parameters for wetlands. Similar vegetation (specifically areas containing obligate wetland plant species) and hydrology indicators were observed downstream from this sampling point. Areas with these similar conditions were considered wetland WOTUS. The upstream portion of Drainage 1 was, therefore, mapped as wetland WOTUS while the downstream portion was mapped as non-wetland waters. Therefore, of the 0.070 acre of WOTUS mapped in the Study Area, 0.007 acre would be considered wetlands.

3.2.2 Regional Water Quality Control Board Jurisdiction

All features with USACE jurisdiction, i.e., Drainage 1, are also subject to the jurisdiction of the RWQCB. In addition, the Porter-Cologne Act provides the State with authority to regulate waters of the State that are not under USACE jurisdiction. Areas within the OHWM of Drainages 2, 3, and 4 and the Basin would be subject to the jurisdiction of the RWQCB. Therefore, approximately 0.232 acre of waters of the State under the regulatory authority of the RWQCB occurs in the Study Area (Table 1). Of this 0.232 acre, 0.007 acre would be considered wetland waters of the State in Drainage 1. This is shown on Exhibit 5 as the areas within the OHWM for Drainages 1, 2, 3, 4, and the Basin.

3.2.3 California Department of Fish and Wildlife Jurisdiction

Drainages 1, 2, 3, and 4 and the Basin have defined beds and banks; Drainages 1 and 4 also have a riparian canopy. These features would be under the regulatory authority of the CDFW. Approximately 1.202 acres of waters under the regulatory authority of the CDFW occurs in the Study Area (Table 1). This is shown on Exhibit 6 as all areas within the top of bank/riparian canopy boundaries.

3.2.4 California Coastal Commission Jurisdiction

Because the CCC uses a one parameter approach to identify the limits of jurisdictional wetlands, all features found within the Study Area are subject to CCC jurisdiction based on all of them having either wetland hydrology and/or hydrophytic vegetation. Approximately 1.202 acres of wetlands under the regulatory authority of the CCC occurs in the Study Area. (Table 1). This is shown on Exhibit 6 as all areas within the top of bank/riparian canopy boundaries.

Drainage 1 would be considered an ESHA in the City of Malibu's LCP because it encompasses both wetland and riparian habitat. Drainage 4, which also contains riparian habitat, would also be considered an ESHA. While the Basin contains hydrophytic vegetation, it is artificially created and located adjacent to parking areas and buildings. As such, it would not provide the functions of habitat required to meet the definitions of an ESHA. In addition, to function as designed (i.e., to accept storm water runoff from the campus), it must be periodically cleaned out to retain the capacity to prevent flooding. To create an ESHA boundary around the Basin, and its associated buffer, would prevent such maintenance. Drainages 2 and 3 are ephemeral and flow primarily through upland areas dominated by weedy, non-native vegetation. Given the low habitat value of these areas, Drainages 2 and 3 would not be considered ESHAs. Therefore, 1.012 acres of ESHAs (i.e., the area within top of bank/riparian canopy of Drainages 1 and 4) occur within the Study Area.

4.0 REGULATORY APPROVAL PROCESS

4.1 REGULATORY PERMIT REQUIREMENTS

This section summarizes the various permits, agreements, and certifications that may be required prior to initiation of project activities that involve impacts to jurisdictional waters. The final determination of permitting needs would require an analysis of temporary and permanent impacts.

- USACE Section 404 Permit
- RWQCB Section 401 Water Quality Certification or Report of Waste Discharge
- CDFW Section 1602 Lake or Streambed Alteration Agreement
- CCC Coastal Development Permit

It should be noted that all regulatory permit applications can be processed concurrently. The USACE permit would be issued subject to the receipt of the RWQCB's Section 401 Water Quality Certification.

4.1.1 U.S. Army Corps of Engineers

Prior to construction in WOTUS, a Section 404 permit from the USACE is required. Regulatory authorization in the form of a Nationwide Permit (NWP) or regional permit is provided for certain categories of activities. If the NWP conditions cannot be met, an Individual Permit (IP) will be required.

Issuance of the USACE Section 404 permit would be contingent upon the approval of a Section 401 Water Quality Certification from the Los Angeles RWQCB. The RWQCB requires certification of the project's California Environmental Quality Act (CEQA) documentation before it will approve the Section 401 Water Quality Certification or ROWD. The RWQCB, as a responsible agency, will use the project's CEQA document to satisfy its own CEQA compliance requirements.

4.1.2 Regional Water Quality Control Board

The RWQCB has regulatory jurisdiction over WOTUS equal to the jurisdiction of the USACE under the federal CWA and jurisdiction over isolated waters under the Porter-Cologne Act; in these cases, the RWQCB issues a Water Quality Certification under Section 401 of the federal CWA. Prior to construction, a Section 401 Water Quality Certification would be required from the Los Angeles RWQCB for the discharge of dredge or fill materials into waters of the State. If no federal waters are impacted, then RWQCB authorization would be in the form of a ROWD.

The RWQCB requires the Applicant to address urban storm water runoff during and after construction in the form of Best Management Practices (BMPs). These BMPs are intended to address the treatment of pollutants carried by storm water runoff and are required in all complete applications. The notification/application for a CWA Section 401 Water Quality Certification must also address compliance with the Basin Plan. Please note that the application would also require the payment of an application fee, which would be based on project impacts.

4.1.3 California Department of Fish and Wildlife

Prior to construction, a Notification of Lake or Streambed Alteration (LSA) must be submitted to the CDFW that describes any proposed streambed alteration contemplated by a project. If an LSA Agreement is required, the CDFW may want to conduct an on-site inspection.

In addition to the formal application materials and the fee, a copy of the appropriate environmental document (e.g., Environmental Impact Report) should be included in the submittal, consistent with CEQA requirements. The CDFW will not deem the application to be complete until the application fees have been paid and the agency is provided with a certified CEQA document and a signed copy of the receipt of County Clerk filing fees for the Notice of Determination (NOD).

4.1.4 California Coastal Commission

Development within the coastal zone may not commence until a CDP has been issued by the City of Malibu, which has a CCC-certified LCP. After certification of an LCP, CDP authority is delegated to the appropriate local government, but the CCC retains original permit jurisdiction over certain specified lands (e.g., tidelands and public trust lands). The CCC also has appellate authority over development approved by local governments in specified geographic areas and certain other developments.

According to the City of Malibu's LCP, buffer areas (at least 100 feet in width) shall be provided around wetlands to ensure the biological integrity and preservation of the wetland they are designed to protect.

5.0 RECOMMENDATIONS

Based on the conclusions of this Jurisdictional Delineation Report, the following recommendations are identified if jurisdictional waters will be impacted by a project:

1. An on-site meeting should be scheduled with USACE, CDFW, RWQCB, and CCC staff to discuss site conditions; proposed project activities; biological and jurisdictional resources and impacts to these resources resulting from a proposed project; proposed minimization measures and the mitigation program to offset these impacts; and the regulatory permit process.
2. The appropriate permits, agreements, and certifications, as discussed in Section 4, should be prepared and submitted for projects impacting jurisdictional waters.
3. According to the City of Malibu's LCP, buffer areas shall be provided around wetlands to ensure the biological integrity and preservation of the wetland they are designed to protect. While the LCP ESHA overlay zone specifies a buffer to "ensure continued protection of the habitat areas" and for new development specifically references a 100-foot buffer "from the outer edge of the bank of the subject stream as the area within the top of bank and outer riparian canopy boundaries", it was noted that over 85% of the ESHA's 100-foot buffer had been developed in the years prior to the enactment of the California Coastal Act of 1972.

   During the early stages of the specific planning process, among other project objectives, the District recognized that the ESHA offered opportunities to enhance their educational goals of providing for outdoor learning spaces and interpretive opportunities; as well as providing an opportunity to restore the natural environment and improve campus connectivity through the development of the proposed pedestrian pathways. The District recognized that the existing conditions included incompatible development into the edge of the ESHA bank as well as the degraded nature of the ESHA itself. In discussions with the CCC, the District decided that it could restore the degraded drainage comprised of approximately 0.7 acre as well as 1.35 acres of upland areas within the ESHA's 50-foot buffer and still meet the educational and design goals for the campus. In addition, within the remaining 50 feet beyond the 50-foot ESHA buffer, the project would include land uses compatible with the natural habitat that would not incur significant disruption of the natural habitat, including a looping trail, interpretive stations overlooking the ESHA, and largely native landscaping within the campus itself contributing to the high scenic quality of the area.

6.0 REFERENCES

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ATTACHMENT A

SUMMARY OF REGULATORY AUTHORITY

REGULATORY AUTHORITY

This attachment summarizes the regulatory authority of the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), the California Department of Fish and Wildlife (CDFW), and the California Coastal Commission (CCC) over activities that have potential to impact jurisdictional resources.

U.S. Army Corps of Engineers

The USACE Regulatory Branch regulates activities that discharge dredged or fill materials into waters of the United States (WOTUS) under Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. This permitting authority applies to all WOTUS where the material (1) replaces any portion of WOTUS with dry land or (2) changes the bottom elevation of any portion of any WOTUS. These fill materials would include sand, rock, clay, construction debris, wood chips, and materials used to create any structure or infrastructure in these waters.

Waters of the United States

WOTUS can be divided into three categories: territorial seas, tidal waters, or non-tidal waters. The term WOTUS is defined by the *Code of Federal Regulations*[1] (CFR) and includes:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide.
2. All interstate waters including interstate wetlands.
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:
    - Which are or could be used by interstate or foreign travelers for recreational purposes; or
    - From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    - Which are used or could be used for industrial purpose by industries in interstate commerce.
4. All impoundments of waters otherwise defined as WOTUS under the definition.
5. Tributaries of waters identified [above].
6. The territorial seas.
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified [above].

The U.S. Supreme Court has issued three decisions that provide context and guidance in determining the appropriate scope of WOTUS. In *United States v. Riverside Bayview Homes*,[2] the Court upheld the inclusion of adjacent wetlands in the regulatory definition of WOTUS. In *Solid*

[1] Specifically, Title 33, Navigation and Navigable Waters; Part 328, Definition of waters of the United States; §328.3, Definitions.

[2] *United States v. Riverside Bayview Homes, Inc*., 474 U.S. 121 (1985)

Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC),[3] the Court held that the use of "isolated" non-navigable intrastate ponds by migratory birds was not, by itself, sufficient basis for the exercise of federal regulatory authority under the CWA. In *Rapanos v. United States* (Rapanos),[4] a majority of the U.S. Supreme Court overturned two Sixth Circuit Court of Appeals decisions, finding that certain wetlands constituted WOTUS under the CWA. In his plurality opinion, Justice Scalia argued that WOTUS should not include channels through which water flows intermittently or ephemerally or channels that periodically provide drainage for rainfall. He also stated that a wetland may not be considered "adjacent to" remote WOTUS based on a mere hydrologic connection. Justice Kennedy authored a separate concurring opinion concluding that wetlands are WOTUS if they, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as "navigable". Lacking a majority opinion, regulatory jurisdiction under the CWA exists over a water body if either the plurality's or Justice Kennedy's "significant nexus" standard is satisfied.

In 2015, the USACE and the U.S. Environmental Protection Agency (USEPA) published a final rule (2015 Rule) clarifying the scope of WOTUS protected under the CWA. One of the major changes was to make all tributaries and adjacent waters jurisdictional, by rule.

In December 2018, the USEPA and the Department of the Army (DOA) proposed a new definition of WOTUS that clarifies federal authority under the federal CWA consistent with the February 2017 Presidential Executive Order entitled "Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the 'Waters of the United States' Rule". On September 12, 2019, the USEPA and DOA signed a final "Step One Rule" to repeal the 2015 Rule and re-codify the regulatory text defining WOTUS that existed prior to the 2015 Rule. The new regulations went into effect on December 23, 2019.[5] With this new final rule, the regulations defining the scope of federal CWA jurisdiction are those portions of the CFR as they existed before the amendments promulgated in the 2015 rule.

The Step One Rule was replaced by the Navigable Waters Protection Rule (Step Two Rule). On January 23, 2020, the USEPA and DOA finalized the Step Two Rule defining WOTUS. This rule was published in the *Federal Register* on April 21, 2020, and went into effect 60 days following publication (i.e., on June 22, 2020). The Step Two Rule changed the definition of WOTUS. Under this new definition, WOTUS encompasses territorial seas and TNWs; perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters. Under this new definition, the following notable changes were implemented:

- Rivers and streams that contribute perennial or intermittent flow to downstream TNWs are jurisdictional but ephemeral features are not considered jurisdictional.
- The process of determining whether a "significant nexus" exists between a water and a downstream TNW as directed under the agencies' 2008 *Rapanos* guidance or whether a water has a significant nexus to a TNW, interstate water or territorial sea has been eliminated.
- No ditches constructed in upland and no ditches with ephemeral flow would be considered jurisdictional.
- Wetlands must either abut jurisdictional waters or have a direct hydrological surface connection to jurisdictional waters in a typical year to be jurisdictional themselves;

[3] *Solid Waste Agency of Northern Cook Cty. v. Army Corps of Engineers,* 531 U.S. 159 (2001)

[4] Consolidated cases: *Rapanos v. United States* and *Carabell v. United States* (126 S. Ct. 2208 2006) refer to the U.S. Supreme Court's decision concerning USACE jurisdiction over waters of the United States under the CWA.

[5] 40 CFR 230.3(s).

> wetlands physically separated from jurisdictional waters by a berm, dike, or other barrier are not adjacent if they lack a direct hydrologic surface connection to a jurisdictional water in a typical year.

On June 9, 2021, the USEPA and DOA announced their intent to revise the definition of WOTUS to better protect our nation's vital water resources that support public health, environmental protection, agricultural activity, and economic growth. Until a new rule is in effect, WOTUS will be defined by the Navigable Waters Protection Rule.

Ordinary High Water Mark

The landward limit of tidal WOTUS is the high-tide line. In non-tidal waters where adjacent wetlands are absent, the lateral limits of USACE jurisdiction extend to the ordinary high water mark (OHWM).[6] The OHWM is defined as "that line on the shore established by the 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, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas".[7] When wetlands are present, the lateral limits of USACE jurisdiction extend beyond the OHWM to the limits of the adjacent wetlands.[8]

Wetlands

A wetland is a subset of jurisdictional waters and is defined by the USACE and the USEPA as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions".[9] Wetlands generally include swamps, marshes, bogs, and areas containing similar features.

The definition and methods for identifying wetland resources can be found in the USACE's *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*,[10] a supplement to the 1987 *Corps of Engineers Wetlands Delineation Manual*.[11] Both the 1987 Wetlands Manual and the 2008 Arid West Supplement to the manual provide technical methods and guidelines for determining the presence of wetland WOTUS. Pursuant to these manuals, a three-parameter approach is used to identify wetlands and requires evidence of wetland hydrology, hydrophytic vegetation, and hydric soils. In order to be considered a wetland, an area must figure one or more indicators of all three of these parameters. However, problem areas may periodically or permanently lack certain indicators for reasons such as seasonal or annual variability of rainfall, vegetation, and other factors. Atypical wetlands lack certain indicators due to recent human activities or natural events. Guidance for determining the presence of wetlands in these situations is presented in the regional supplement.

Section 404 Permit

Except as specified in Section 323.4 of the CFR, impacts to WOTUS require a Section 404 Permit. Permit authorization may be in the form of (1) a "general permit" authorizing a category of activities

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6 U.S. Army Corps of Engineers (USACE). 2005 (December 7). Regulatory Guidance Letter. Ordinary High Water Mark Identification. Washington, D.C.: USACE.

7 *Code of Federal Regulations* (CFR), Title 33, §328.3(e)

8 USACE 2005

9 33 CFR §328.3(b)

10 USACE. 2008a. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. (J.S. Wakeley, R.W. Lichvar, and C.V. Noble, Eds.). Vicksburg, MS: U.S. Army Engineer Research and Development Center.

11 Environmental Laboratory. 1987. Cor*ps of Engineers Wetlands Delineation Manual (Technical Report Y-87-1)*. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station.

in a specific geographical region or nationwide or (2) an "individual permit" (IP) following a review of an individual application form (to be obtained from the district office having jurisdiction over the waters in which the activity is proposed to be located).

Regulatory authorization in the form of a Nationwide Permit (NWP) is provided for certain categories of activities such as repair, rehabilitation, or replacement of a structure or fill which was previously authorized; utility line placement; or bank stabilization. The current set of NWPs became effective on March 19, 2017, and will expire in on March 18, 2022. On January 13, 2021, the USACE reissued 12 NWPs and published 4 new NWPs; these 16 NWPs went into effect on March 15, 2021 and will expire on March 14, 2026. The 40 existing NWPs that were not reissued or modified by the January 13, 2021, final rule remain in effect. NWPs authorize only those activities with minimal adverse effects on the aquatic environment and are valid only if the conditions applicable to the permits are met or waivers to these conditions are provided in writing from the USACE. Please note that waivers may require consultation with affected federal and State agencies, which can be a lengthy process with no mandated processing time frames. Certain activities do not require submission of an application form, but may require a separate notification. If the NWP conditions cannot be met, an IP will be required. WOTUS temporarily filled, flooded, excavated, or drained but restored to pre-construction contours and elevations after construction are not included in the measurement of loss of WOTUS. The appropriate permit authorization will be based on the amount of impacts to WOTUS, as determined by the USACE. There is no filing fee for the Section 404 Permit.

Approximately three or four months are typically required to process a routine permit application; large or complex activities may take longer to process. When a permit application is received, it will be assigned an identification number and reviewed for completeness by the District Engineer. If an application is incomplete, additional information will be requested within 15 days of receipt of the application. If an application is complete, the District Engineer will issue a public notice within 15 days unless specifically exempted by provisions of the CFR. Public comments will be accepted no more than 30 days but not less than 15 days from the date of public notice; these will become part of the administrative record of the application. Generally, the District Engineer will decide on the application no later than 60 days after receipt of the completed application. Additional permit situations may increase the permit processing time (e.g., projects involving a Section 401 Water Quality Certification, a coastal zone management consistency analysis, historic properties, a federal agency, and/or Endangered species). The Project Applicant will be given time, not to exceed 30 days, to respond to requests of the District Engineer.

On January 31, 2007, the USACE published a memorandum clarifying the Interim Guidance for Amendments to the National Historic Preservation Act and the Advisory Council on Historic Preservation (ACHP) implementing regulations.[12] The Interim Guidance applies to all Department of the Army requests for authorization/verification, including Individual Permits (IPs, i.e., standard permits and letters of permission) and all Regional General Permits (RGPs) and Nationwide Permits (NWPs). The State or Tribal Historic Preservation Officer (SHPO/THPO) has 30 days to respond to a determination that a proposed activity, which otherwise qualifies for an NWP or an RGP, has no effect or no adverse effect on a historic property. If the SHPO/THPO does not respond within 30 days of notification, the Los Angeles District may proceed with verification. If the SHPO/THPO disagrees with the District's determination, the District may work with the SHPO/THPO to resolve the disagreement or request an opinion from the ACHP. The USACE will submit the Draft Jurisdictional Delineation Report to the SHPO/THPO for review prior to initiating the actual regulatory process.

[12] USACE. 2007 (January 31). Memorandum: Interim Guidance for Amendments to the National Historic Preservation Act and the Advisory Council on Historic Preservation (ACHP) Implementing Regulations. Washington, D.C.: USACE.

Please note that, if the USACE determines that the drainages/waterbodies are jurisdictional and would be impacted by project implementation, the Applicant will be required to obtain a CWA Section 401 Water Quality Certification from the RWQCB before the USACE will issue the Section 404 Permit. If the USACE determines that the impacted drainage/waterbody is not jurisdictional, the Applicant will be required to obtain RWQCB authorization under the provisions of a Report of Waste Discharge (ROWD).

On June 1, 2020, the USEPA finalized the "Clean Water Act Section 401 Certification Rule". The new regulation requires the USACE to play an active role in the 401 Certification Process. This active role includes reviews and approvals by the USACE prior to the RWQCB issuing a 401 Certification. The new regulations also include reviews and approvals by the USEPA prior to the USACE issuing a Section 404 Permit. The new 401 Certification rule went into effect on September 11, 2020.

Under the new 401 Certification Rule, a 401 Certification Request must be filed with the USACE and the RWQCB concurrently. The USACE has 15 days to review the Certification Request for compliance with the nine required components. The USACE then notifies RWQCB and project proponent that the Certification request is complete. The USACE concurrently notifies the RWQCB of the reasonable time period to act on the Certification Request. That time period is not to exceed 1 year.

Once the RWQCB issues the 401 Certification, the USACE has 5 days to notify the USEPA that the 401 Certification has been issued. The USEPA then has 30 days to notify neighboring jurisdictions of the 401 Certification. Neighboring jurisdictions have 60 days to respond. If there are no objections to the 401 Certification, the USACE issues the 404 permit.

On June 2, 2021, the USEPA published a notice of intention to reconsider and revise the Clean Water Act Section 401 Certification Rule. At this time, they are currently accepting public comment. Until a new rule goes into effect, the current 401 Certification Rule stands.

Jurisdictional Determinations

Pursuant to USACE Regulatory Guidance Letter (RGL) 08-02 (dated June 26, 2008), the USACE can issue two types of jurisdictional determinations to implement Section 404 of the CWA: Approved Jurisdictional Determinations and Preliminary Jurisdictional Determinations.[13] An Approved Jurisdictional Determination is an official USACE determination that jurisdictional WOTUS, Navigable WOTUS, or both are either present or absent on a site. An Approved Jurisdictional Determination also identifies the precise limits of jurisdictional waters on a project site.

The USACE will provide an Approved Jurisdictional Determination when (1) an Applicant requests an official jurisdictional determination; (2) an Applicant contests jurisdiction over a particular water body or wetland; or (3) when the USACE determines that jurisdiction does not exist over a particular water body or wetland. The Approved Jurisdictional Determination then becomes the USACE's official determination that can then be relied upon over a five-year period to request regulatory authorization as part of the permit application.

In addition, an Applicant may decline to request an Approved Jurisdictional Determination and instead obtain a USACE IP or General Permit Authorization based on a Preliminary Jurisdictional Determination or, in certain circumstances (e.g., authorizations by non-reporting nationwide general permits), with no Jurisdictional Determination.

[13] USACE. 2008b (June 26). Regulatory Guidance Letter. Jurisdictional Determinations. Washington, D.C.: USACE.

Preliminary Jurisdictional Determinations are non-binding, advisory in nature, and may not be appealed. They indicate that WOTUS may occur on a project site. An Applicant may elect to use a Preliminary Jurisdictional Determination to voluntarily waive or set aside questions regarding CWA jurisdiction over a site, usually in the interest of expediting the permitting process. The USACE will determine what form of Jurisdictional Determination is appropriate for a particular project site.

The USACE Regulatory Branch Offices will coordinate with the USEPA Regional Office and USACE Headquarters (HQ), as outlined in its January 28, 2008, memorandum entitled "Process for Coordinating Jurisdictional Determinations Conducted Pursuant to Section 404 of the CWA in Light of the Rapanos and SWANCC Supreme Court Decisions".[14] The guidance provided in this memorandum is quoted as follows:

1. Effective immediately, unless and until paragraph 5(b) of the June 5, 2007, Rapanos guidance coordination memorandum is modified by a joint memorandum from Army and USEPA, we will follow these procedures:
    a. For jurisdictional determinations involving significant nexus determinations, USACE districts will send copies of draft jurisdictional delineations via e-mail to appropriate EPA regional offices. The USEPA regional office will have 15 calendar days to decide whether to take the draft jurisdictional delineation as a special case under the January 19, 1989, "Memorandum of Agreement Between the Department of the Army and the USEPA Concerning the Determination of the Section 404 Program and the Application of the Exceptions under Section 404(f) of the Clean Water Act". If the USEPA regional office does not respond to the district within 15 days, the district will finalize the jurisdictional determination.
    b. For jurisdictional determinations involving isolated waters determinations, the agencies will continue to follow the procedure in paragraph 5(b) of June 5, 2007, coordination memorandum, until a new coordination memorandum is signed by USACE and USEPA. (In accordance with paragraph 6 of the June 5, 2007, coordination memorandum, this is a 21-day timeline that can only be changed through a joint memorandum between agencies).
2. Approved JDs are not required for non-reporting NWPs, unless the project proponent specifically requests an approved JD. For proposed activities that may qualify for authorization under a State Programmatic General Permit (SPGP) or RGP, an approved JD is not required unless requested by the project proponent.
3. The USACE will continue to work with USEPA to resolve the JDs involving significant nexus and isolated waters determinations that are currently in the elevation process.
4. USACE districts will continue posting completed Approved JD Forms on their web pages.

Regional Water Quality Control Board

The RWQCB is the primary agency responsible for protecting water quality in California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne

[14] USACE. 2008c (January 28). *Memorandum for Commander, Major Subordinate Commands and District Commands. Process for Coordinating Jurisdictional Determinations Conducted Pursuant to Section 404 of the Clean Water Act in Light of the Rapanos and SWANCC Supreme Court Decisions.* Washington, D.C.: USACE.

Water Quality Control Act (Porter-Cologne Act). The RWQCB's jurisdiction extends to all waters of the State and to all WOTUS, including wetlands (isolated and non-isolated).

Section 401 of the CWA provides the RWQCB with the authority to regulate, through a Water Quality Certification, any proposed, federally permitted activity that may affect water quality. Among such activities are discharges of dredged or fill material permitted by the USACE pursuant to Section 404 of the CWA. Section 401 requires the RWQCB to provide certification that there is reasonable assurance that an activity which may result in discharge to navigable waters will not violate water quality standards. Water Quality Certification must be based on a finding that the proposed discharge will comply with water quality standards, which contain numeric and narrative objectives that can be found in each of the nine RWQCBs' Basin Plans.

The Porter-Cologne Act provides the State with very broad authority to regulate waters of the State (which are defined as any surface water or groundwater, including saline waters). The Porter-Cologne Act has become an important tool in the post-SWANCC (*Solid Waste Agency of Northern Cook Counties vs. United States Army Corps of Engineers*) and Rapanos era with respect to the State's authority over isolated waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file an ROWD when there is no federal nexus, such as under Section 404(b)(1) of the CWA. Although "waste" is partially defined as any waste substance associated with human habitation, the RWQCB interprets this to include fill discharge into water bodies.

On August 28, 2019, the Office of Administrative Law (OAL) approved the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to "waters of the State". The procedures will go into effect on May 28, 2020. Under these new regulations, the SWRCB and its nine RWQCBs will assert jurisdiction over all existing WOTUS, and all waters that would have been considered WOTUS under the 2015 Rule. Thus, the WOTUS that would no longer be under USACE jurisdiction would be under SWRCB jurisdiction.

Wetlands

In 2019, the SWRCB adopted rules to provide a common, statewide definition of what constitutes a wetland and to provide consistency in the way they and the RWQCBs regulate activities to protect wetlands and other waterways. The SWRCB defines an area as wetlands "if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation".[15] The following wetlands are waters of the State:

1. Natural wetlands,
2. Wetlands created by modification of a surface water of the State, and
3. Artificial wetlands that meet any of the following criteria:
    a. Approved by an agency as compensatory mitigation for impacts to other waters of the State, except where the approving agency explicitly identifies the mitigation as being of limited duration;
    b. Specifically identified in a water quality control plan as a wetland or other water of the State;

[15] State Water Resources Control Board (SWRCB). 2019 (March 22). State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State.

c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or

d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (e.g., the following artificial wetlands are not waters of the State unless they also satisfy the criteria set forth in 2, 3a, or 3b):

    i. Industrial or municipal wastewater treatment or disposal,

    ii. Settling of sediment,

    iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,

    iv. Treatment of surface waters,

    v. Agricultural crop irrigation or stock watering,

    vi. Fire suppression,

    vii. Industrial processing or cooling,

    viii. Active surface mining – even if the site is managed for interim wetlands functions and values,

    ix. Log storage,

    x. Treatment, storage, or distribution of recycled water, or

    xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or

    xii. Fields flooded for rice growing.

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not waters of the State.

Section 401 Water Quality Certification

Issuance of the USACE Section 404 Permit would be contingent upon the approval of a Section 401 Water Quality Certification from the RWQCB. Also, the RWQCB requires certification of the project's California Environmental Quality Act (CEQA) documentation before it will approve the Section 401 Water Quality Certification or ROWD. The RWQCB, as a responsible agency, will use the project's CEQA document to satisfy its own CEQA-compliance requirements.

On June 1, 2020, the USEPA finalized the "Clean Water Act Section 401 Certification Rule" to implement the water quality certification process consistent with the text and structure of the Clean Water Act (CWA). The final rule establishes procedures that promote consistent implementation of CWA section 401 and regulatory certainty in the federal licensing and permitting process. The new regulation includes reviews and approvals by the USACE prior to the RWQCB issuing a 401 Certification and reviews and approvals by the EPA prior to the USACE issuing a 404. The new 401 rule went into effect on September 11, 2020.

The new certification rule defines a discharge subject to 401 Certification as a discharge from a point source into a water of the United States. The new rule also states that States with additional water quality regulations cannot use these to expand the certification request.

The new rule requires all project proponents to request a pre-filing meeting with the RWQCB at least 30 days prior to filing a 401 "Certification Request". The filing procedure has been simplified to require the filing of a "Certification Request", rather than the acceptance of a "complete application". The certification request has nine mandatory components:

1. identify the project proponent(s) and a point of contact;
2. identify the proposed project;
3. identify the applicable federal license or permit;
4. identify the location and nature of any potential discharge that may result from the proposed project and the location of receiving waters;
5. include a description of any methods and means proposed to monitor the discharge and the equipment or measures planned to treat, control, or manage the discharge;
6. include a list of all other federal, interstate, tribal, state, territorial, or local agency authorizations required for the proposed project, including all approvals or denials already received;
7. include documentation that a pre-filing meeting request was submitted to the certifying authority at least 30 days prior to submitting the certification request;
8. contain the following statement: 'The project proponent hereby certifies that all information contained herein is true, accurate, and complete, to the best of my knowledge and belief; and
9. contain the following statement: 'The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.'

There is a mandatory 30 day wait period between a pre-filing meeting request and the filing of a Certification Request. A Certification Request must be filed with the RWQCB and the USACE concurrently. USACE reviews the Certification Request for the nine required components. The USACE has 15 days to review the Certification Request. The USACE then notifies the RWQCB that request is complete. And concurrently notifies the RWQCB of the reasonable time period to act on the Certification Request. The reasonable time period is not to exceed 1 year. Within 15 days of receipt of the Certification Request, the RWQCB must provide the applicant with the following: 1) date of receipt; 2) applicable reasonable period of time to act on the Certification Request; and 3) date upon which waiver will occur if the certifying authority fails or refuses to act on the Certification Request.

Once the RWQCB issues the 401 Certification, the USACE has 5 days to notify the USEPA that the 401 Certification has been issued. The USEPA then has 30 days to notify neighboring jurisdictions of the 401 Certification. Neighboring jurisdictions have 60 days to respond. If there are no objections to the 401 Certification, then the USACE issues the 404 permit.

On June 2, 2021, the USEPA published a notice of intention to reconsider and revise the Clean Water Act Section 401 Certification Rule. At this time, they are currently accepting public comment. Until a new rule goes into effect, the current 401 Certification Rule stands.

The RWQCB is required under the *California Code of Regulations* (CCR) to have a "minimum 21 day public comment period" before any action can be taken on the Section 401 application.[16] This period closes when the RWQCB acts on the application. Since projects often change or are revised during the Section 401 permit process, the comment period can remain open. The public

[16] 23 CCR §3858(a)

comment period starts as soon as an application has been received. Generally, the RWQCB Section 401, USACE Section 404, and CDFW Section 1602 permit applications are submitted at the same time.

The RWQCB requires the Applicant to address urban storm water runoff during and after construction in the form of Best Management Practices (BMPs). These BMPs are intended to address the treatment of pollutants carried by storm water runoff and are required in all complete applications. The notification/application for a CWA Section 401 Water Quality Certification must also address compliance with the Basin Plan. Please note that filing an application would also require the payment of an application fee which would be based on project impacts. The fee schedule calculator is available at http://www.waterboards.ca.gov/santaana/water_issues/programs/401_certification/index.shtml.

California Department of Fish and Wildlife

The CDFW has jurisdictional authority over wetland resources associated with rivers, streams, and lakes pursuant to the *California Fish and Game Code*.[17] Activities of any person, State or local governmental agency, or public utility that are project proponents are regulated by the CDFW under Section 1602 of the *California Fish and Game Code.* This section regulates any work that will (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. Section 1602 of the *California Fish and Game Code* applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State.

The CDFW jurisdictional limits are not as clearly defined by regulation as those of the USACE. While they closely resemble the limits described by USACE regulations, they include riparian habitat supported by a river, stream, or lake regardless of the presence or absence of hydric and saturated soils conditions. In general, the CDFW takes jurisdiction from the top of a stream bank or to the outer limits of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place within or in the vicinity of a river, stream, lake or within or in the vicinity of tributaries to a river, stream, or lake. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish and other aquatic plant and/or wildlife species. It also includes watercourses that have a surface or subsurface flow that support or have supported riparian vegetation.

Section 1602 Lake or Streambed Alteration Agreement

The CDFW enters into a Lake or Streambed Alteration (LSA) Agreement with a project proponent in order to ensure protection of wildlife and habitat values and acreages.

Prior to construction, a Notification of an LSA must be submitted to the CDFW that describes any proposed lake or streambed alteration that would occur with implementation of a project. The Notification of an LSA must address the initial construction and long-term operation and maintenance of any structures (such as a culvert or a desilting basin) included in the project design that are located within any river, stream, or lake and that may require periodic maintenance. In addition to the formal application materials and the fee, a copy of the appropriate environmental document (e.g., a Mitigated Negative Declaration) should be included in the submittal, consistent with CEQA requirements. The complete notification package must be submitted to the CDFW regional office that services the county where the activity will take place.

[17] See §§1600–1616.

This notification will serve as the basis for the CDFW's issuance of a Section 1602 LSA Agreement. Note that notification is not required before beginning emergency work, but the CDFW must be notified in writing within 14 days after beginning the work.

After receiving Notification of an LSA Agreement, the CDFW will determine whether an LSA Agreement will be required for the proposed activity. An LSA Agreement will be required if the activity could substantially adversely affect an existing fish and wildlife resource. If an LSA Agreement is required, the CDFW may want to conduct an on-site inspection.

If the CDFW does not respond in writing concerning the completeness of the Notification within 30 days of its submittal, the Notification automatically becomes complete. If the CDFW does not submit a draft LSA Agreement to the Applicant within 60 days of the determination of a completed Notification package, the CDFW will issue a letter that either (1) identifies the final date to transmit a draft LSA Agreement or (2) indicates that an LSA Agreement was not required. The CDFW will also indicate that it was unable to meet this mandated compliance date and that, by law, the Applicant is authorized to complete the project without an LSA Agreement as long as the Applicant constructs the project as proposed and complies with all avoidance, minimization, and mitigation measures described in the submitted Notification package. Please note that, if the project requires revisions to the design or project construction, the CDFW may require submittal of a new Notification/application with an additional 90-day permit process.

If determined to be necessary, the CDFW will prepare a draft LSA Agreement, which will include standard measures to protect fish and wildlife resources during project construction and during ongoing operation and maintenance of any project element that occurs within a CDFW jurisdictional area. The draft Agreement must be transmitted to the Applicant within 60 calendar days of the CDFW's determination that the notification is complete. It should be noted that the 60-day timeframe might not apply to long-range agreements.

Following receipt of a draft LSA Agreement from the CDFW, the Applicant has 30 calendar days to notify the CDFW concerning the acceptability of the proposed terms, conditions, and measures. If the Applicant agrees with these terms, conditions and measures, the Agreement must be signed and returned to the CDFW. The Agreement becomes final once the CDFW executes it and an LSA Agreement is issued. Please note that all application fees must be paid and the final certified CEQA documentation must be provided prior to the CDFW's execution of the Agreement.

California Coastal Commission

The CCC was established by voter initiative in 1972 (Proposition 20) and made permanent by the Legislature through adoption of the California Coastal Act of 1976. This act was established to protect, maintain, enhance, and restore the overall quality of the coastal zone environment; assure utilization and conservation of coastal zone resources; maximize public access to the coast; assure priority for coastal-dependent and coastal-related development over other development on the coast; and encourage state and local initiatives and corporation for mutually beneficial uses in the coastal zone.[18] It plans and regulates the use of land and water in the coastal zone. The "coastal zone" is mapped by the Legislature and covers a three-mile-wide band of ocean, extending inland generally 1,000 yards from the mean high tide line. In significant coastal estuarine, habitat, and recreational areas, it extends inland to the first major ridgeline paralleling the sea or five miles from the mean high tide line of the sea, whichever is less. In developed urban areas, the coastal zone generally extends inland less than 1,000 yards.

The California Coastal Act of 1976 includes specific policies that address issues such as shoreline public access and recreation; lower cost visitor accommodations; terrestrial and marine habitat

[18] Public Resources Code, Division 20, §30001.5

protection; visual resources; landform alteration; agricultural lands; commercial fisheries; industrial uses; water quality; offshore oil and gas development; transportation; development design; power plants; ports; and public works. The policies of the Coastal Act constitute the statutory standards applied to planning and regulatory decisions made by the Coastal Commission and by local governments, pursuant to the Coastal Act.

Section 30106 of the Coastal Act defines development as follows:

> "Development" means, on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, and . . . the removal or harvesting of major vegetation other than for agricultural purposes . . .

Section 30600 of the Coastal Act provides, in relevant part, the following permit requirement for development:

> (a) Except as provided in subdivision (e), and in addition to obtaining any other permit required by law from any local government or from any state, regional, or local agency, any person, as defined in Section 21066, wishing to perform or undertake any development in the coastal zone, other than a facility subject to Section 25500, shall obtain a coastal development permit (CDP).

Implementation of Coastal Act policies is accomplished primarily through the preparation of local coastal programs (LCPs) that are required to be completed by each of the 15 counties and 60 cities located in whole or in part in the coastal zone. Completed LCPs must be submitted to the Coastal Commission for review and approval. An LCP includes a land use plan (LUP) which may be the relevant portion of the local general plan, including any maps necessary to administer it, and the zoning ordinances, zoning district maps, and other legal instruments necessary to implement the land use plan. Coastal Act policies are the standards by which the CCC evaluates the adequacy of LCPs. Amendments to certified LUPs and LCPs only become effective after approval by the CCC. To ensure that coastal resources are effectively protected in light of changing circumstances (such as new information and changing development pressures and impacts), the CCC is required to review each certified LCP at least once every five years.

Development within the coastal zone may not commence until a CDP has been issued by either the CCC or a local government that has a Coastal Commission-certified LCP. After certification of an LCP, CDP authority is delegated to the appropriate local government, but the CCC retains original permit jurisdiction over certain specified lands (such as tidelands and public trust lands). The CCC also has appellate authority over development approved by local governments in specified geographic areas as well as certain other developments.

The CCC defines wetlands under Section 30121 of the Coastal Act as follows:

> "Wetland" means lands within the coastal zone which may be covered periodically or permanently with shallow water and includes salt marshes, freshwater marshes, open and closed brackish water marshes, swamps, mudflats, and fens.

The boundaries of a wetland are based on a "one parameter" definition determined by at least one of the following: hydrology, hydric soils, and hydrophytic vegetation. The size and extent of CCC wetland boundaries may also be determined by aerial photographs, national wetland inventory maps, and soil conservation maps.

The Coastal Commission Administrative Regulations (Section 13577b) of Title 14, Division 5.5, Article 18 provides the following criteria for determining jurisdictional boundaries:[19]

> Streams. Measure 100 feet landward from the top of the bank of any stream mapped by USGS on the 7.5-minute quadrangle series, or identified in a local coastal program. The bank of a stream shall be defined as the watershed and relatively permanent elevation or acclivity at the outer line of the stream channel which separates the bed from the adjacent upland, whether valley or hill, and serves to confine the water within the bed and to preserve the course of the stream. In areas where a stream has no discernable bank, the boundary shall be measured from the line closest to the stream where riparian vegetation is permanently established. For purposes of this section, channelized streams not having significant habitat value should not be considered.
>
> Wetlands. Measure 100 feet landward from the upland limit of the wetland. Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats. For purposes of this section, the upland limit of a wetland shall be defined as:
>
> 1. the boundary between land with predominantly hydrophytic cover and land with predominantly mesophytic or xerophytic cover;
> 2. the boundary between soil that is predominantly hydric and soil that is predominantly nonhydric; or
> 3. in the case of wetlands without vegetation or soils, the boundary between land that is flooded or saturated at some time during years of normal precipitation, and land that is not.
>
> For the purposes of this section, the term “wetland” shall not include wetland habitat created by the presence of and associated with agricultural ponds and reservoirs where:
>
> 1. the pond or reservoir was in fact constructed by a farmer or rancher for agricultural purposes; and
> 2. there is no evidence (e.g., aerial photographs, historical survey, etc.) showing that wetland habitat pre-dated the existence of the pond or reservoir. Areas with drained hydric soils that are no longer capable of supporting hydrophytes shall not be considered wetlands.
>
> Estuaries. Measure 300 feet landward from the mean high tide line of the estuary. For purposes of this section, an estuary shall be defined as a coastal water body, usually semi-enclosed by land, having open, partially obstructed, or intermittent exchange with the open ocean, and in which ocean water is at least occasionally diluted by freshwater from the land. The salinity level may be periodically increased to above that of the open ocean due to evaporation. The mean high tide line shall

[19] 14 CCR §13577

be defined as the statistical mean of all the high tides over the cyclical period of 18.6 years and shall be determined by reference to the records and elevations of tidal benchmarks established by the National Ocean Survey. In areas where observations covering a period of 18.6 years are not available, a determination may be made based on observations covering a shorter period, provided they are corrected to a mean value by comparison with observations made at some suitably located control tide station.

Tidelands. Tidelands shall be defined as lands which are located between the lines of mean high tide and mean low tide.

Submerged Lands. Submerged lands shall be defined as lands which lie below the line of mean low tide.

Coastal Development Permit

Since the City of Malibu has a certified LCP, the CCC's coastal permitting authority is transferred to the local government, which applies the requirements of the LCP in reviewing proposed developments. The CCC may act on appeals from certain local government coastal permit decisions.

ATTACHMENT B

REPRESENTATIVE PHOTOGRAPHS

Photo 1: Upstream end of Drainage 1. November 12, 2019.

Photo 2: Middle of Drainage 1. November 12, 2019.

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Representative Photographs

Attachment B-1

Malibu Middle and High School Specific Plan and LCP Amendment Project

PSOMAS

(01/22/2020 RMB) R:\Projects\1SAN\082308\Graphics\JD\AttB_Representative_Photographs.pdf

Photo 3: Downstream end of Drainage 1. November 12, 2019.

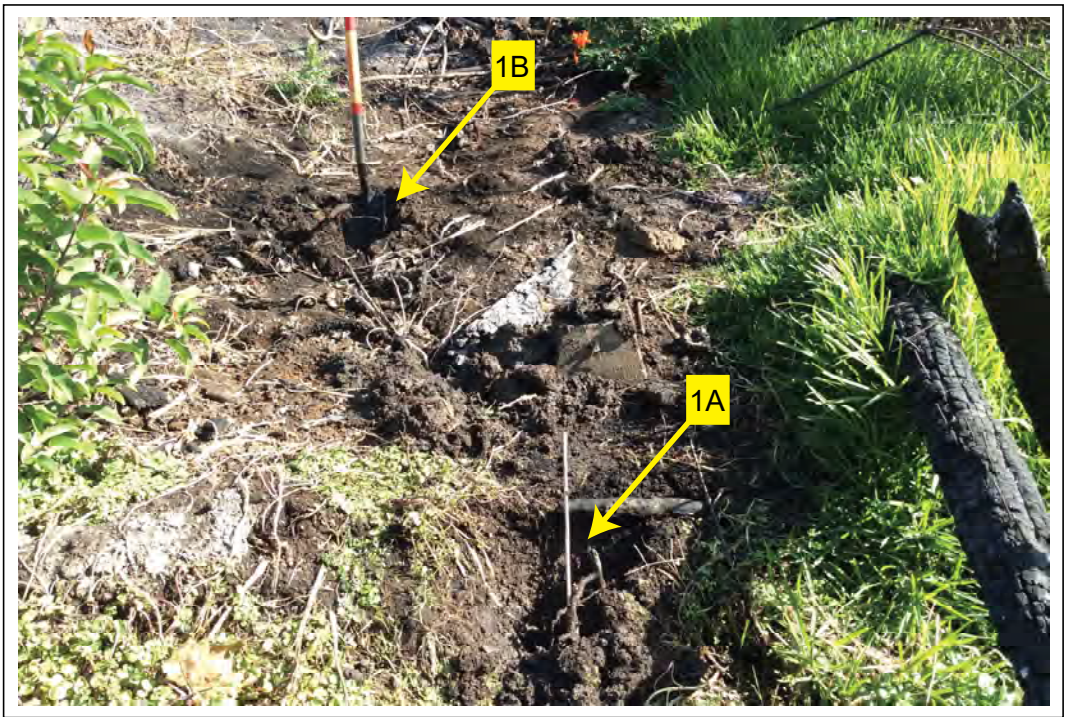

Photo 4: Sampling Points 1A and 1B in Drainage 1. November 12, 2019.

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Representative Photographs

Attachment B-2

Malibu Middle and High School Specific Plan and LCP Amendment Project

PSOMAS

(01/22/2020 RMB) R:\Projects\1SAN\082308\Graphics\JD\AttB_Representative_Photographs.pdf

Photo 7: Upstream end of Drainage 2. November 12, 2019.

Photo 8: Middle of Drainage 2, November 12, 2019.

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Representative Photographs

Attachment B-3

Malibu Middle and High School Specific Plan and LCP Amendment Project

PSOMAS

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Photo 9: Overview of the basin. November 12, 2019.

Photo 10: Sampling Point 2 in the basin. January 16, 2020.

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Representative Photographs

Attachment B-4

Malibu Middle and High School Specific Plan and LCP Amendment Project

PSOMAS

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ATTACHMENT C

DATASHEETS

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Malibu High School Master Plan
Project Number: 1SAN082308
Stream: Drainage 1
Investigator(s): ARudalevige, JAguayo

Date: 11/12/2019
Town: Malibu
Photo begin file#:

Time: 1300
State: CA
Photo end file#:

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: Malibu High School

Projection:
Datum:
Coordinates:

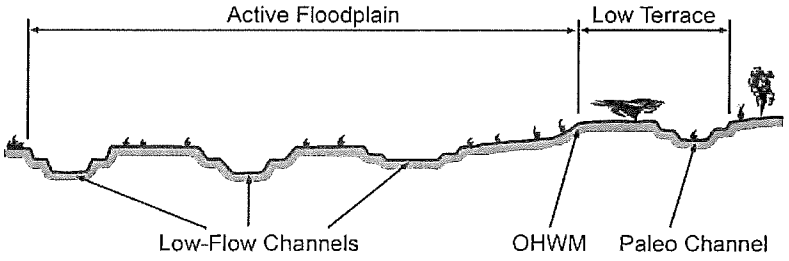
Potential anthropogenic influences on the channel system:
Point-source discharges from adjacent campus

Brief site description:
Drainage travels adjacent to campus, passes through culvert and eventually discharges into Pacific Ocean

Checklist of resources (if available):

- [X] Aerial photography
  Dates: 2018
- [X] Topographic maps
- [ ] Geologic maps
- [ ] Vegetation maps
- [X] Soils maps
- [ ] Rainfall/precipitation maps
- [X] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

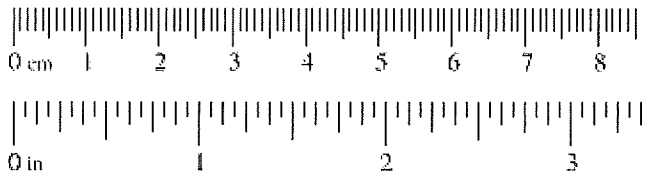


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [ ] Mapping on aerial photograph
   - [X] GPS
   - [ ] Digitized on computer
   - [ ] Other:

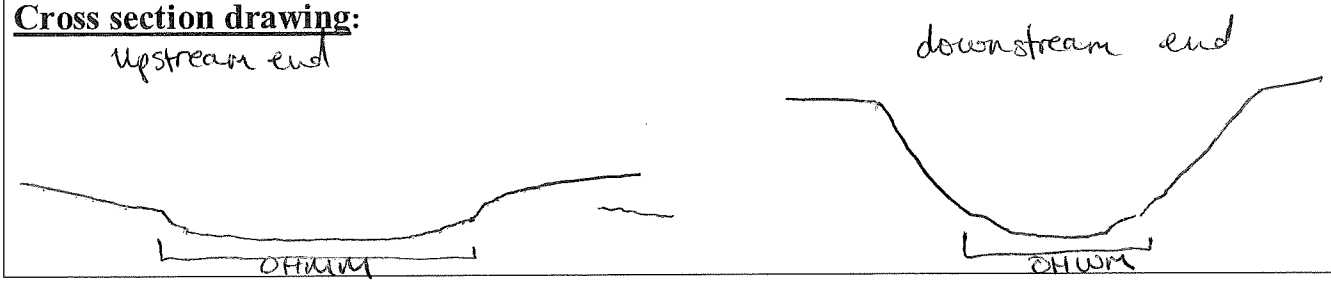
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		
1/2 0.0098	0.25	Medium sand	Sand
		Fine sand	
1/4 0.005	0.125		
1/8 0.0025	0.0625	Very fine sand	
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	Silt
1/32 0.00061	0.0156		
		Fine silt	
1/64 0.00031	0.0078		
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: ISAN082308 **Cross section ID:** Drainage 1 **Date:** 11/12/2019 **Time:** 1300

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [x] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: clay loam

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage: varies

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings) upstream
- [x] Late (herbaceous, shrubs, mature trees) downstream

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Upstream portion broader w/ dense herbaceous vegetation and soil saturation. Downstream portion more incised w/ sparse herbaceous vegetation and riparian canopy (previously burned).

Project ID: ISAN082308 **Cross section ID:** Drainage1 **Date:** 11/12/2019 **Time:** 1300

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: 20 % Tree: 5 % Shrub: 15 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

present in upstream portion.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Not present

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Malibu High School Master Plan
Project Number: ISAN 082308
Stream: Drainage 2
Investigator(s): ARudalevige, JAguayo

Date: 11/12/2019 **Time:** 1230
Town: Malibu **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details: Malibu High School

Projection: **Datum:**
Coordinates:

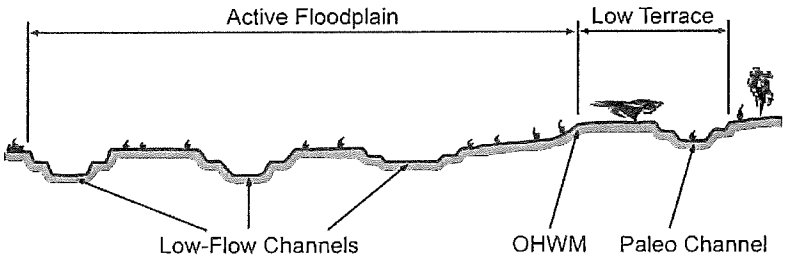
Potential anthropogenic influences on the channel system:
Drainage partially lined. Surrounding field periodically mowed.

Brief site description:
Drainage travels through a ruderal field then adjacent to campus fields and ultimately discharges into Drainage 1.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates: 2018
- ☒ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☒ Soils maps
- ☐ Rainfall/precipitation maps
- ☒ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

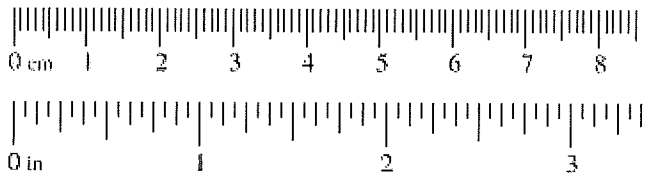


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☒ GPS
   - ☐ Digitized on computer
   - ☐ Other:

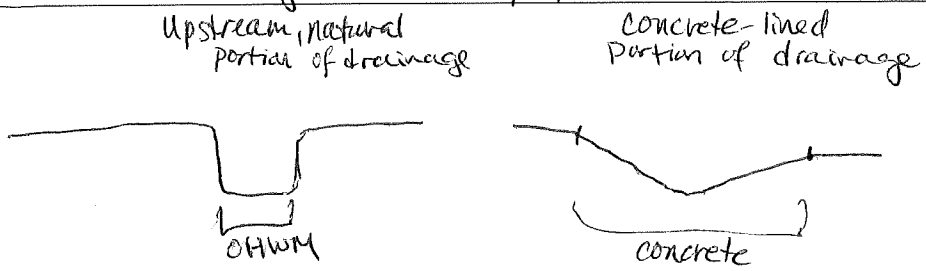
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: ISAN 082308 **Cross section ID:** Drainage 2 **Date:** 11/12/2019 **Time:** 1230

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: loamy clay

Total veg cover: 0 % Tree: ____ % Shrub: ____ % Herb: ____ %

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Vegetation absent from channel bottom & surrounding upland areas contain ruderal vegetation, turf grass, ornamental vegetation

Project ID: ISAN 082308 **Cross section ID:** Drainage 2 **Date:** 11/12/2019 **Time:** 1230

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

No active floodplain present

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments: No low terrace present

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Malibu High School Campus Master Plan City/County: Malibu / Los Angeles Sampling Date: 11/12/2019
Applicant/Owner: Santa Monica-Malibu Unified School District State: CA Sampling Point: 1A
Investigator(s): ARudalevige, JAguayo Section, Township, Range: 01, T 02S, R 19W
Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): concave Slope (%): _____
Subregion (LRR): CA Lat: 34.027170 Long: -118.82703 Datum: NAD83
Soil Map Unit Name: Cropley, coastal-Xerorthents, landscaped-Urban land complex NWI classification: PSSA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes Y No _____	**Is the Sampled Area within a Wetland?** Yes Y No _____
Hydric Soil Present?	Yes Y No _____	
Wetland Hydrology Present?	Yes Y No _____	

Remarks:
Paired sampling point; 1A adjacent to low flow channel & 1B upslope ~10 feet.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	5	Y	FACW
2.			
3.			
4.			
	5	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1. Malosma laurina	12	Y	UPL
2.			
3.			
4.			
5.			
	12	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Nasturtium officinale	30	Y	OBL
2. Stenotaphrum secundatum	35	Y	FAC
3. Malva parviflora	1	N	UPL
4.			
5.			
6.			
7.			
8.			
	66	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 34 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
Y Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes Y No _____

Remarks: Vegetation resprouting post fire. Dead standing snags not counted in vegetation assessment

SOIL

Sampling Point: 1A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/2	95	2.5YR 4/8	5	C	M, PL	clay loam	prominent mottles
4-16	10YR 2/2	100	-	-	-	-	clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 1"

Water Table Present? Yes X No ___ Depth (inches): 14"

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 4"

Wetland Hydrology Present? Yes Y No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Malibu High School Campus Master Plan City/County: Malibu / Los Angeles Sampling Date: 11/12/19

Applicant/Owner: Santa Monica-Malibu Unified School District State: CA Sampling Point: 1B

Investigator(s): ARudalevige, JAguayo Section, Township, Range: 01, T02S, R19W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): CA Lat: 34.027174 Long: -118.82700 Datum: NAD83

Soil Map Unit Name: Cropley, coastal-Xerorthents, landscaped-Urban land complex NWI classification: PSSA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks: Paired sampling point; 1A adjacent to low flow channel and 1B upslope ~10feet

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: Sampling pit dug in unvegetated area on slope.

SOIL

Sampling Point: 1B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/2	80	2.5YR 4/8	20	C	M	clay loam	prominent mottles
4-20	7.5YR 2.5/1	100					clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- Y Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes Y No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- Y Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No Y Depth (inches): _____

Water Table Present? Yes Y No ___ Depth (inches): 20"

Saturation Present? (includes capillary fringe) Yes Y No ___ Depth (inches): 12"

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Malibu High School Campus Master Plan City/County: Malibu / Los Angeles Sampling Date: 1/16/2020

Applicant/Owner: Santa Monica-Malibu Unified School District State: CA Sampling Point: 2A

Investigator(s): ARudalevige, IMendez Section, Township, Range: 01, T02S, R19W

Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): CA Lat: 34.027380 Long: -118.82687 Datum: NAD83

Soil Map Unit Name: Cropley, coastal Urban land-Haploxererts complex NWI classification: PSSA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks: Paired sampling point; 2A is adjacent to low flow channel and 2B upslope ~10 feet

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	5	Y	FACW
2.			
3.			
4.			
	5	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Nasturtium officinale	60	Y	OBL
2. Pel mixthotheca echioides	30	Y	FAC
3. Stenotaphrum secundatum	5	N	FAC
4.			
5.			
6.			
7.			
8.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: 2A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/1	100					silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- Y Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes Y No ___

Remarks:

Faint hydrogen sulfide odor

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Y Surface Water (A1)
- Y High Water Table (A2)
- Y Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- Y Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Y No ___ Depth (inches): 1"

Water Table Present? Yes Y No ___ Depth (inches): 0"

Saturation Present? (includes capillary fringe) Yes Y No ___ Depth (inches): 2"

Wetland Hydrology Present? Yes Y No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Malibu High School Campus Master Plan City/County: Malibu / Los Angeles Sampling Date: 1/16/2020

Applicant/Owner: Santa Monica-Malibu Unified School District State: CA Sampling Point: 2B

Investigator(s): ARudalevige, IMendez Section, Township, Range: 01, T02S, R19W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): CA Lat: 34.027402 Long: -118.82689 Datum: NAD83

Soil Map Unit Name: Cropley, Coastal-Urban land-Haploverents complex NWI classification: PSSA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No _____
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes _____ No _____	

Remarks: Paired sampling point; 2A is adjacent to low flow channel and 2B is upslope ~10 feet

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	_____
FACW species _____	x 2 =	_____
FAC species _____	x 3 =	_____
FACU species _____	x 4 =	_____
UPL species _____	x 5 =	_____
Column Totals: _____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No _____

Remarks: Sampling pit dug in unvegetated area on slope.

SOIL

Sampling Point: 2B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/1	99	5YR 5/8	<1%	C	M	clay	prominent mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Malibu High School Campus Master Plan City/County: Malibu / Los Angeles Sampling Date: 1/16/2020
Applicant/Owner: Santa Monica-Malibu Unified School District State: CA Sampling Point: 3
Investigator(s): ARudalevige, IMendez Section, Township, Range: 01, T02S, R19W
Landform (hillslope, terrace, etc.): basin Local relief (concave, convex, none): concave Slope (%): N/A
Subregion (LRR): CA Lat: 34.026220 Long: -118.82754 Datum: NAD83
Soil Map Unit Name: Cropley, coastal-Xerothents, landscaped-Urban land complex NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes Y No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes X No _____	

Remarks: Artificial basin created in uplands.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1. Nicotiana glauca	5	Y	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Typha	50	Y	OBL
2. Solanum douglasii	5	N	FAC
3. Hirschfeldia incana	2	N	UPL
4. Muhlenbergia rigens	2	N	FAC
5. Ricinus communis	1	N	FACU
6.			
7.			
8.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 40 % % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
Y Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes Y No _____

Remarks:

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 2.5/1	60					loam	
0-4	10YR 3/2	40					loamy clay	
4-10	7.5YR 2.5/1	100					loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: concrete

Depth (inches): 10

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- X Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

ATTACHMENT D

LITERATURE REVIEW DETAILS

This attachment provides detailed results of the literature review.

SOIL SERIES

The below text is the detailed soil information obtained from the Map Unit Description found in the legend of the USDA NRCS website.[21]

433—Cropley, coastal – Urban land – Haploxererts Complex, 0 to 30 percent slopes

Map Unit Setting

- *National map unit symbol:* nmm5
- *Elevation:* 50 to 700 feet
- *Mean annual precipitation:* 14 to 24 inches
- *Mean annual air temperature:* 60 to 64 degrees Fahrenheit (°F)
- *Frost-free period:* 290 to 350 days
- *Farmland classification:* Farmland of statewide importance

Map Unit Composition

- *Cropley, coastal, and similar soils:* 40 percent
- *Urban land:* 25 percent
- *Haploxererts and similar soils:* 20 percent
- *Minor components:* 15 percent

Description of Cropley, Coastal

Setting

- *Landform:* Alluvial fans
- *Landform position (two-dimensional):* Backslope
- *Landform position (three-dimensional):* Tread
- *Down-slope shape:* Convex
- *Across-slope shape:* Convex
- *Parent material:* Alluvium derived from shale

Typical profile

- *A - 0 to 2 inches:* clay
- *Bss - 2 to 22 inches:* clay
- *Bk - 22 to 60 inches:* silty clay loam

Properties and qualities

- *Slope:* 2 to 9 percent
- *Depth to restrictive feature:* More than 80 inches
- *Natural drainage class:* Well drained
- *Runoff class:* High
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)
- *Depth to water table:* More than 80 inches

[21] U.S. Department of Agriculture, Natural Resources Conservation Service (USDA NRCS). 2019. Web Soil Survey. Records for the Study Area, as Area of Interest. Further information about Soil Map Units. Lincoln, NE: USDA NRCS https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Calcium carbonate, maximum in profile:* 10 percent
- *Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- *Available water storage in profile:* High (about 10.1 inches)

Interpretive groups

- *Land capability classification (irrigated):* 2e
- *Land capability classification (nonirrigated):* 3e
- *Hydrologic Soil Group:* C
- *Ecological site:* Coastal Terrace 14-16" p.z. (R020XD047CA)
- *Hydric soil rating:* No

Description of Urban Land

Setting

- *Down-slope shape:* Linear
- *Across-slope shape:* Convex

Interpretive groups

- *Land capability classification (irrigated):* None specified
- *Land capability classification (nonirrigated):* 8
- *Hydric soil rating:* No

Description of Haploxererts

Setting

- *Landform:* Hills
- *Landform position (two-dimensional):* Backslope
- *Landform position (three-dimensional):* Side slope
- *Down-slope shape:* Convex
- *Across-slope shape:* Convex
- *Parent material:* Colluvium and/or residuum derived from sandstone and shale

Typical profile

- *A - 0 to 30 inches:* clay
- *Bss - 30 to 50 inches:* clay
- *Cr - 50 to 60 inches:* weathered bedrock

Properties and qualities

- *Slope:* 9 to 30 percent
- *Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock
- *Natural drainage class:* Well drained
- *Runoff class:* Very high
- *Capacity of the most limiting layer to transmit water (Ksat):* Very low to low (0.00 to 0.01 in/hr)
- *Depth to water table:* More than 80 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Calcium carbonate, maximum in profile:* 5 percent

- *Available water storage in profile:* Moderate (about 7.5 inches)

Interpretive groups

- *Land capability classification (irrigated):* None specified
- *Land capability classification (nonirrigated):* 7e
- *Hydrologic Soil Group:* C
- *Hydric soil rating:* No

Minor Components

Gazos, coastal

- *Percent of map unit:* 10 percent
- *Landform:* Hills
- *Landform position (two-dimensional):* Backslope
- *Down-slope shape:* Convex
- *Across-slope shape:* Convex
- *Ecological site:* Coastal Bluff 14-16" p.z. (R020XD053CA)
- *Hydric soil rating:* No

Danville, coastal

- *Percent of map unit:* 5 percent
- *Landform:* Fluvial terraces, alluvial fans
- *Ecological site:* Coastal Terrace 14-16" p.z. (R020XD047CA)
- *Hydric soil rating:* No

434—Cropley, coastal – Xerorthents, landscaped – Urban Land Complex, 0 to 9 percent slopes

Map Unit Setting

- *National map unit symbol:* nmm6
- *Elevation:* 50 to 700 feet
- *Mean annual precipitation:* 14 to 18 inches
- *Mean annual air temperature:* 60 to 64 degrees F
- *Frost-free period:* 290 to 350 days
- *Farmland classification:* Not prime farmland

Map Unit Composition

- *Cropley, coastal, and similar soils:* 35 percent
- *Xerorthents, landscaped, and similar soils:* 35 percent
- *Urban land:* 25 percent
- *Minor components:* 5 percent
- *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Cropley, Coastal

Setting

- *Landform:* Alluvial fans
- *Landform position (two-dimensional):* Backslope
- *Landform position (three-dimensional):* Tread

- *Down-slope shape:* Convex
- *Across-slope shape:* Convex
- *Parent material:* Alluvium derived from shale

Typical profile

- *A - 0 to 2 inches:* clay
- *Bss - 2 to 22 inches:* clay
- *Bk - 22 to 60 inches:* silty clay loam

Properties and qualities

- *Slope:* 2 to 9 percent
- *Depth to restrictive feature:* More than 80 inches
- *Natural drainage class:* Well drained
- *Runoff class:* High
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)
- *Depth to water table:* More than 80 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Calcium carbonate, maximum in profile:* 10 percent
- *Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- *Available water storage in profile:* High (about 10.1 inches)

Interpretive groups

- *Land capability classification (irrigated):* 2e
- *Land capability classification (nonirrigated):* 3e
- *Hydrologic Soil Group:* C
- *Ecological site:* Coastal Terrace 14-16" p.z. (R020XD047CA)
- *Hydric soil rating:* No

Description of Xerorthents, Landscaped

Setting

- *Down-slope shape:* Linear
- *Across-slope shape:* Linear
- *Parent material:* Colluvium and residuum derived from sedimentary rock and other mixed sources

Typical profile

- *A - 0 to 4 inches:* loam
- *C - 4 to 52 inches:* loam
- *Cr - 52 to 62 inches:* weathered bedrock

Properties and qualities

- *Slope:* 0 to 2 percent
- *Depth to restrictive feature:* 10 to 60 inches to paralithic bedrock
- *Natural drainage class:* Well drained
- *Runoff class:* Low
- *Capacity of the most limiting layer to transmit water (Ksat):* Very low to low (0.00 to 0.01 in/hr)
- *Depth to water table:* More than 80 inches

- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Calcium carbonate, maximum in profile:* 3 percent
- *Available water storage in profile:* Moderate (about 8.3 inches)

Interpretive groups

- *Land capability classification (irrigated):* 2e
- *Land capability classification (nonirrigated):* 2e
- *Hydrologic Soil Group:* C
- *Hydric soil rating:* No

Description of Urban Land

Setting

- *Down-slope shape:* Linear
- *Across-slope shape:* Convex

Interpretive groups

- *Land capability classification (irrigated):* None specified
- *Land capability classification (nonirrigated):* 8
- *Hydric soil rating:* No

Minor Components

Cropley, coastal

- *Percent of map unit:* 2 percent
- *Landform:* Fans
- *Down-slope shape:* Convex
- *Across-slope shape:* Convex
- *Ecological site:* Coastal Terrace 14-16" p.z. (R020XD047CA)
- *Hydric soil rating:* No

Gazos, coastal

- *Percent of map unit:* 2 percent
- *Landform:* Hills
- *Landform position (two-dimensional):* Backslope
- *Down-slope shape:* Convex
- *Across-slope shape:* Convex
- *Ecological site:* Coastal Bluff 14-16" p.z. (R020XD053CA)
- *Hydric soil rating:* No

Badland, cliffs

- *Percent of map unit:* 1 percent
- *Landform:* Cliffs
- *Hydric soil rating:* No

NATIONAL WETLANDS INVENTORY

One wetland resource was mapped by the National Wetlands Inventory in the Study Area (see Exhibit 4). The description for mapped resource is provided below.

- **R: System RIVERINE.** The Riverine System includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.
    - **4: Subsystem INTERMITTENT.** This Subsystem includes channels that contain flowing water only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent.
        - **SB: Class STREAMBED.** Includes all wetlands contained within the Intermittent Subsystem of the Riverine System and all channels of the Estuarine System or of the Tidal Subsystem of the Riverine System that are completely dewatered at low tide.
            - **A: Water Regime TEMPORARY FLOODED.** Surface water is present for brief periods (from a few days to a few weeks) during the growing season, but the water table usually lies well below the ground surface for the most of the season.
- **P: System PALUSTRINE.** The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, emergents, mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 part per trillion (ppt). It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 hectares (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of the basin less than 2.5 meters (8.2 feet) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.
    - **SS: Class SCRUB-SHRUB.** Includes areas dominated by woody vegetation less than 6 meters (20 feet) tall. The species include true shrubs, young trees (saplings), and trees or shrubs that are small or stunted because of environmental conditions.
        - **A: Water Regime TEMPORARY FLOODED.** Surface water is present for brief periods (from a few days to a few weeks) during the growing season, but the water table usually lies well below the ground surface for the most of the season.
        - **C: Water Regime SEASONALLY FLOODED.** Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface.
            - **h: Special Modifier DIKED/IMPOUNDED.** These wetlands have been created or modified by a man-made barrier or dam that obstructs the inflow or outflow of water.

BASIN PLAN BENEFICIAL USES

Beneficial uses are defined in the Porter-Cologne Act as those uses of water that are necessary for tangible and intangible economic, social, and environmental benefits. The *Water Quality Control Plan: Los Angeles Region (4)* (Basin Plan) identifies a number of potential and existing beneficial uses for miscellaneous streams and coastal features on Figure 2-10 of the Basin Plan (Los Angeles RWQCB 2013): Municipal and Domestic Water Supply (MUN) waters; Warm Fresh Water Habitat (WARM) waters; Cold Freshwater Habitat (COLD) waters; Wildlife Habitat (WILD) waters; Rare, Threatened or Endangered Species (RARE) waters; Spawning, Reproduction and Development (SPWN) waters; Migration Habitat (MIGR) waters; Water Contact Recreation (REC-1) waters; and Non-contact Water Recreation (REC-2) waters.

- MUN waters support community, military, or individual water supply systems including, but not limited to, drinking water supply.
- WARM waters support warm water ecosystems that may include, but are not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife (including invertebrates).
- COLD waters support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation fish, or wildlife (including invertebrates).
- WILD waters support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
- RARE waters support the 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.
- SPWN waters support high quality aquatic habitats suitable for reproduction and early development of fish.
- MIGR waters support habitats necessary for migration, acclimatization between fresh and salt water, or other temporary activities by aquatic organisms, such as anadromous fish.
- REC-1 waters are used for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs..
- REC-2 waters are used for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting sightseeing, or aesthetic enjoyment in conjunction with the above activities.

APPENDIX D

TREE REPORT

May 18, 2021

Noemi Avila-Zamudio
Consultant | Deputy Bond Program Manager
Santa Monica—Malibu Unified School District
2828 Fourth Street
Santa Monica, California 90405

VIA EMAIL
navila-zamudio@smmusd.org

Subject: Revised Tree Evaluation Report for the Malibu Middle and High School Specific Plan and Local Coastal Plan Amendment Project, Malibu, California

Dear Ms. Avila-Zamudio:

Psomas is pleased to provide the following revised tree evaluation for the Malibu Middle and High School Specific Plan and Local Coastal Plan (LCP) Amendment Project (proposed project). This evaluation incorporates an expanded area specified by the Santa Monica-Malibu Unified School District (District) as the Specific Plan area. Psomas Certified Arborist Trevor Bristle (International Society of Arboriculture Certificate No. WE-10233A) performed an evaluation on February 1st, 2nd, and April 19th, 2021 to document the type, quantity, and condition of trees present within the Specific Plan area. Each tree was assigned a numeric identifier and the trunk, branches, and foliage were carefully examined. During the evaluation, the following data were recorded: tree species, number of trunks, trunk diameter at breast height (dbh), tree height, and canopy diameter. Each tree was also given a qualitative assessment rating on health and aesthetic.

PROJECT LOCATION

The proposed project is located at 30215 and 30237 Morning View Drive in the City of Malibu, Los Angeles County and also includes an equestrian area at 6225 Merritt Drive to the east (**Exhibit 1,** Project Location). The site is located approximately 0.25 miles northeast of Pacific Coast Highway and lies between Harvester Road to the north, Merritt Drive to the east, Via Cabrillo Street to the west, and Morning View Drive to the south (**Exhibit 1**). The Specific Plan area is owned by the District and comprises the former Juan Cabrillo Elementary School on the western portion of the property, the Malibu Middle and High School facilities in the south central portion of the property, with athletic fields to the north, and an equestrian center on the east. The site is set among rolling hills and its facilities are terraced into a hillside setting.

PROJECT DESCRIPTION

The District is lead agency under the California Environmental Quality Act (CEQA) for the proposed project which consists of the redevelopment of the former Juan Cabrillo Elementary School and Malibu Middle and High School sites to create a middle school and high school campus that will provide separate education spaces for middle and high school students with shared facilities. With implementation of the proposed project, the District seeks to improve vehicle and pedestrian circulation, and secure campus access while respecting the natural

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environment of West Malibu. The proposed project would reorganize the campus into three defined areas: Middle School core, High School core, and shared amenities. The proposed project would not result in an increase in student enrollment or capacity and would require demolishing 18 existing buildings, leaving only the existing athletic fields, Malibu Equestrian Park, and the three recently completed buildings (Buildings A, B, and E) remaining.

REGULATORY FRAMEWORK

Trees within the Specific Plan area are regulated by the City of Malibu (City) Native Tree Protection Ordinance (Chapter 5 of the City of Malibu LCP Local Implementation Plan). The LCP defines trees as plants reaching 15 feet tall with at least one well-defined stem or trunk. Native protected trees are specified as oak (*Quercus* sp.), California walnut (*Juglans californica*), western sycamore (*Platanus racemosa*), alder (*Alnus rhombifolia*), or toyon (*Heteromeles arbutifolia*) with at least one trunk measuring 6 inches or more in diameter at breast height (dbh), or a combination of any two trunks measuring a total of 8 inches dbh or more.

Additional trees not protected by the City were recorded at the request of the District. All trees with one trunk measuring 3 inches dbh or more, or a combination of any two trunks measuring 1.5 inches dbh or more in diameter were documented.

DISCUSSION

The trees within the Specific Plan area are generally in good health with no conspicuous signs of decay (e.g., trunk cavities, bleeding sap, broken limbs, or fungi) (**Exhibit 2** Tree Locations). Trees have been maintained and pruned in a manner consistent with a landscaped campus environment. Some trees near the equestrian area appear to have either been partially burned or affected by heat from the 2018 Woolsey Fire. Evaluation of these trees was based on a visual assessment from the ground.

Trees protected pursuant to City ordinance on the site include eight western sycamores, one Southern California black walnut, and one coast live oak. Their locations are provided on **Exhibit 2** as LCP Protected individuals. Generally, these trees are located on slopes or in drainages over 30 feet from existing structures. The walnut is located next to a residence on the southeast corner of the site.

Other tree species onsite that are not protected pursuant to City ordinance are located mainly within landscaped areas between school structures, within drainage areas, and on slopes near parking lots and athletic fields. Of particular note is a dragon tree (*Dracaena draco*) and Monterey cypress (*Hesperocyparis macrocarpa*) located within the current Cabrillo Elementary School grounds. These are mature specimens with good health and very few defects. As these specimens have taken considerable time to reach their current size, consideration should be given for their protection and/or relocation during construction.

Many of the trees on the proposed project site are planted near pavement, structures, or within basins that likely provide limited root development. Minor damage and disturbance to the subject structures are expected to occur as the roots continue to grow; while the trees themselves will be subject to stress in the form of reflected heat from nearby structures and pavement. Snags located throughout the site are depicted on **Exhibit 2**; these are dead trees that have a potential to fail unexpectedly. Removal of snags located near structures and/or in areas where students would be present should be considered a priority.

RECOMMENDATIONS

Psomas recommends implementing the following measures for tree protection during construction of the proposed project. These measures are specified in Chapter 5.4 E Project Construction Measures of the Local Implementation Plan (City of Malibu, 2002):

1. Protective fencing shall be used around the outermost limits of the tree protected zones (TPZ) of trees to be preserved within or adjacent to the construction area that may be disturbed during construction or grading activities. Before the commencement of any clearing, grading, or other construction activities, protective fencing shall be placed around each applicable tree. Fencing shall be maintained in place for the duration of all construction. No construction, grading, staging, or materials storage shall be allowed within the fenced exclusion areas, or within the protected zones of any on site native trees. Post the fence with a minimum 8.5" x 11" laminated sign stating: "Tree Protection Zone – This Fence Shall Not Be Removed".
2. Any approved development, including grading or excavation, that encroaches into the protected zone of a native tree shall be constructed using only hand-held tools.
3. Unless otherwise stated, mulch the entire area of the TPZ in an effort to improve the growing environment for the roots. During the construction phase maintain a four to six-inch layer of chip mulch over the soil surface to reduce compaction, improve aeration, enhance moisture retention, and reduce temperature extremes. Mulch generally consists of shredded leaves or bark, pine straw, peat moss, untreated and unpainted wood chips, or composted green waste. Mulch shall be removed by the contractor after project completion.
4. During trenching, utility access can be accomplished by careful incremental machine excavation supplemented by hand digging when necessary to preserve significant roots. If necessary, strong water/air pressure can be used to "tunnel" beneath the roots. Several utilities can sometimes use the same pathways to eliminate needless soil disruption. Exact placement of utilities must be marked and coordinated with individual contractors to determine the best routes.

   Should trenching be required within the TPZ, all trenches shall be hand-dug or non-impacting methods shall be used (i.e., air spade, soil boring). No roots larger than two inches (2") in diameter shall be cut unless no alternative is feasible. If roots exceeding two inches in diameter are required to be cut, the contractor shall call the Districts' Consulting Arborist before proceeding.

   Roots small than two inches in diameter that require pruning shall be cut cleanly and flush with the side of the trench at a 90-degree angle to expose the least amount of surface area possible. If at any time twenty-five percent (25%) of the area within the TPZ is being separated from the tree by a trench, then the line shall be either relocated or installed by boring.
5. Removal of hardscape and/or excavation within the TPZ shall be coordinated with the District's Consulting Arborist. Equipment may be used to break up hardscape, but once it is removed only foot traffic is permitted under the TPZ. This process is typically accomplished by placing the equipment on the hardscape and backing up as the hardscape is removed.
6. The minimum distance between an open trench and any tree shall be between six inches (6") to one foot (1') for every inch of trunk diameter, measured at four and one-half feet (4.5') above existing grade, depending on the species of tree. The minimum clearance clearance shall be ten feet (10') from the trunk of the tree.
7. In the event root pruning is required to accommodate grade changes or the installation of hardscape feature, the root pruning procedures shall be directed by the District's Consulting Arborist.

8. At no time shall any equipment, materials, supplies, or fill soil be allowed in the TPZ unless necessary and approved by the District's Consulting Arborist.
9. Prune and fertilize the trees after the completion of all exterior work on the building and at the beginning of the landscape phase as directed by the District's Consulting Arborist. Any tree(s) with impacts to their TPZ's shall be evaluated on a case-by-case basis by the District's Consulting Arborist prior to this activity.
10. The applicants shall retain the services of a qualified independent biological consultant or arborist, approved by the Planning Director to monitor native trees that are within or adjacent to the construction area. Public agencies may utilize their own staff who have the appropriate classification. If any breach in the protective fencing occurs, all work shall be suspended until the fence is repaired or replaced.
11. The permit shall include these requirements as conditions of approval.

The following measures are recommended for tree establishment and maintenance at the proposed project site:

1. The largest possible planting basin that the site can accommodate should be provided for new trees. Larger planting basins are correlated with longer-lived trees, greater tree stability, and less sidewalk damage.
2. Once the new planting basins are constructed, soil samples should be collected from all planting locations and sent to a qualified soil laboratory for analysis. From each sampling location, one sample should be collected that represents the top 12 inches of the soil, along with a second sample that represents the soil from 12 to 24 inches deep. Any recommended soil amendments or treatments from the laboratory report should be implemented.
3. Newly planted trees should be allowed to develop as long as possible without pruning any of the branches (at least two years). Young trees need the energy provided by the leaves to help establish a healthy root system for successful establishment.
4. Once planted, a one- to two-inch layer of mulch should be placed within the planting basin of each new tree. Mulch should not be allowed to be placed in contact with the trunk of the tree as this can lead to rot.

Psomas appreciates the opportunity to assist with this tree evaluation. If you have any questions, please contact Irena Mendez, PhD at 310.488.5645 or Irena.Mendez@Psomas.com.

Sincerely,

PSOMAS

Ann M. Johnston
Vice President/Principal

Irena Mendez, PhD
Senior Biologist

Enclosures: Exhibits 1 and 2
Attachment A – Tree Data Summary

REFERENCES

City of Malibu. 2002 (September). *Local Coastal Program Local Implementation Plan* (Chapter 5: Native Tree Protection Guidance). Malibu, CA.

EXHIBIT 1

PROJECT LOCATION

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Project Location

Exhibit 1

Malibu Middle and High School Specific Plan and LCP Amendment Project

N
W E
S

850 425 0 850

Feet

PSOMAS

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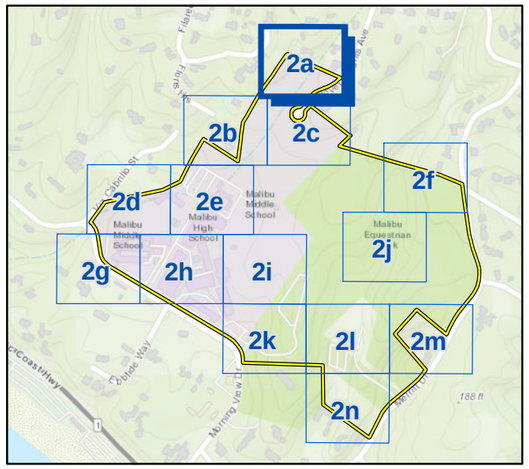
EXHIBIT 2

TREE LOCATIONS



Project Boundary

Tree Types

- Tree
- Snag

N
W E
S

50 25 0 50 Feet

Aerial Source: Hexagon Geosystems, 2018

Tree Locations — Exhibit 2a

Malibu Middle and High School
Specific Plan and LCP Amendment Project

PSOMAS

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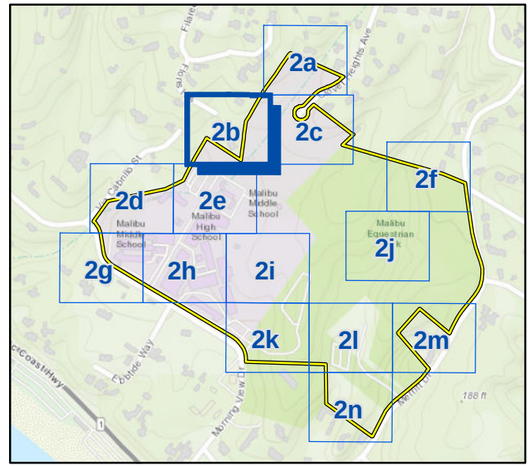

Project Boundary

Tree Types

- Tree
- LCP Protected Trees
- Snag
- Snag

N
W E
S

50 25 0 50
Feet

Aerial Source: Hexagon Geosystems, 2018

Tree Locations — Exhibit 2b

Malibu Middle and High School
Specific Plan and LCP Amendment Project

PSOMAS

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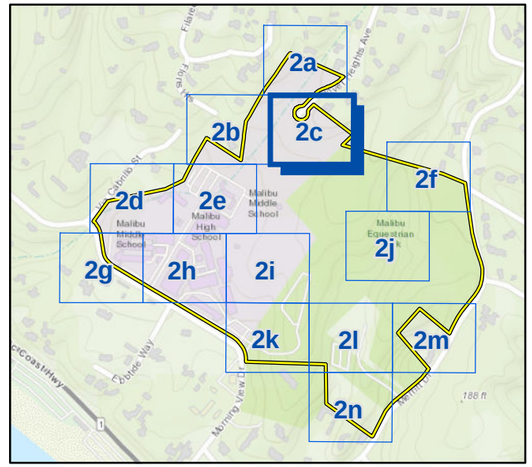

Project Boundary

Tree Types

- Tree
- Snag

N
W E
S

50 25 0 50
Feet

Aerial Source: Hexagon Geosystems, 2018

Tree Locations — Exhibit 2c

Malibu Middle and High School
Specific Plan and LCP Amendment Project

PSOMAS

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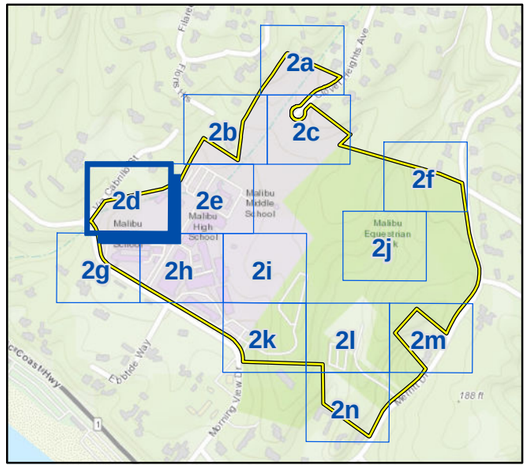

Project Boundary

Tree Types

- Tree
- Snag

N
W E
S

50 25 0 50 Feet

Aerial Source: Hexagon Geosystems, 2018

Tree Locations — Exhibit 2d

Malibu Middle and High School
Specific Plan and LCP Amendment Project

PSOMAS

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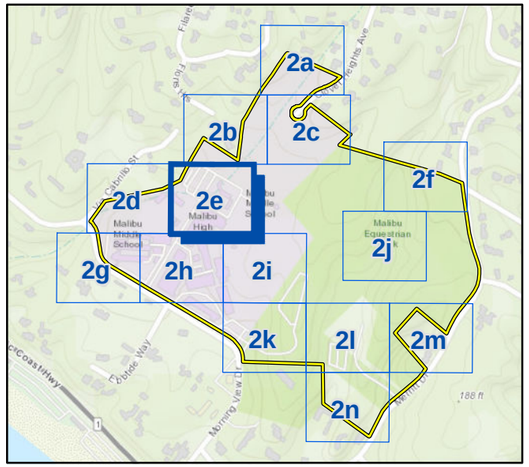

Project Boundary

Tree Types

- Tree
- LCP Protected Trees
- Snag

N
W E
S

50 25 0 50
Feet

Aerial Source: Hexagon Geosystems, 2018

Tree Locations

Exhibit 2e

Malibu Middle and High School
Specific Plan and LCP Amendment Project

PSOMAS

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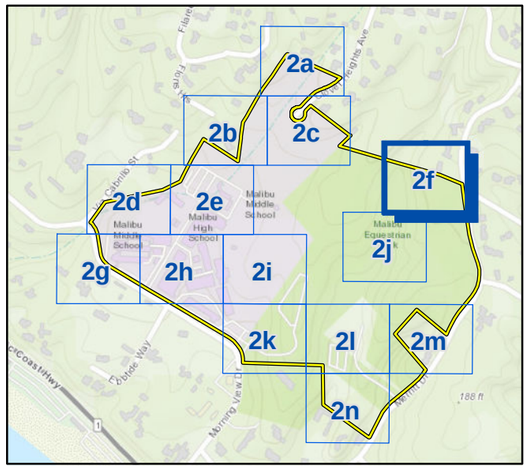

Project Boundary

Tree Types

- Tree
- LCP Protected Trees

N
W E
S

50 25 0 50
Feet

Aerial Source: Hexagon Geosystems, 2018

Tree Locations

Exhibit 2f

Malibu Middle and High School
Specific Plan and LCP Amendment Project

PSOMAS

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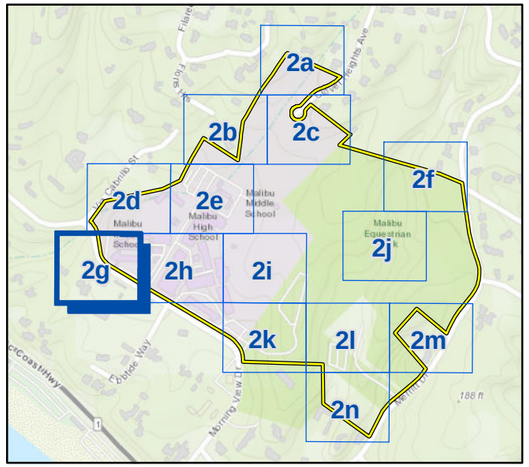

Project Boundary

Tree Types

- Tree
- Snag

N
W E
S

50 25 0 50
Feet

Aerial Source: Hexagon Geosystems, 2018

Tree Locations — Exhibit 2g

Malibu Middle and High School
Specific Plan and LCP Amendment Project

PSOMAS

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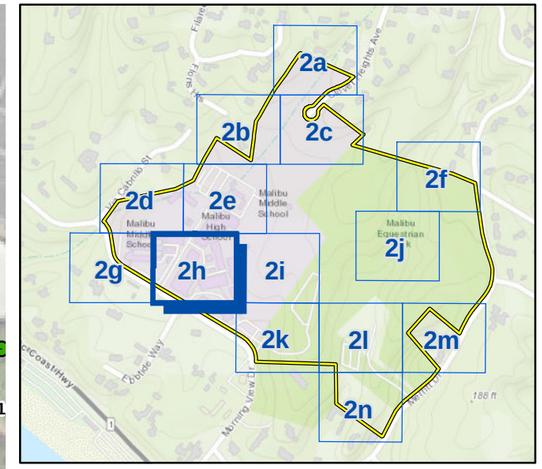

Project Boundary

Tree Types

- Tree
- LCP Protected Trees

N
W E
S

50 25 0 50
Feet

Aerial Source: Hexagon Geosystems, 2018

Tree Locations — Exhibit 2h

Malibu Middle and High School
Specific Plan and LCP Amendment Project

PSOMAS

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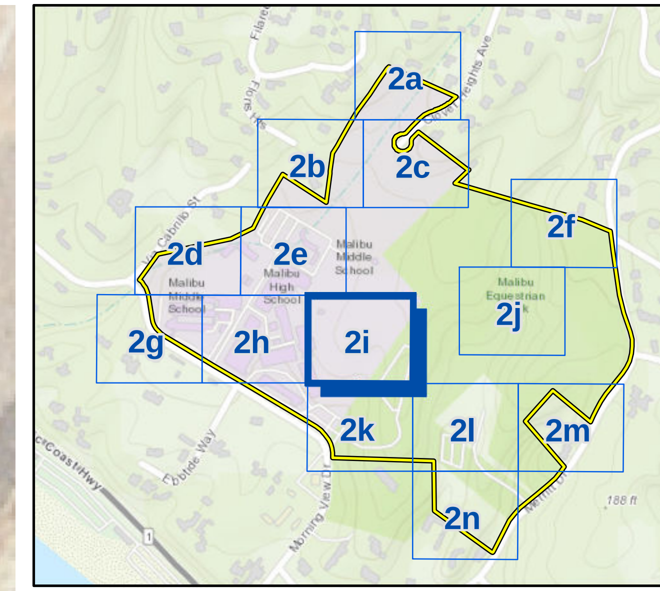

Project Boundary

Tree Types

- Tree
- LCP Protected Trees
- Snag

N
W E
S

50 25 0 50 Feet

Aerial Source: Hexagon Geosystems, 2018

Tree Locations Exhibit 2i

Malibu Middle and High School
Specific Plan and LCP Amendment Project

PSOMAS

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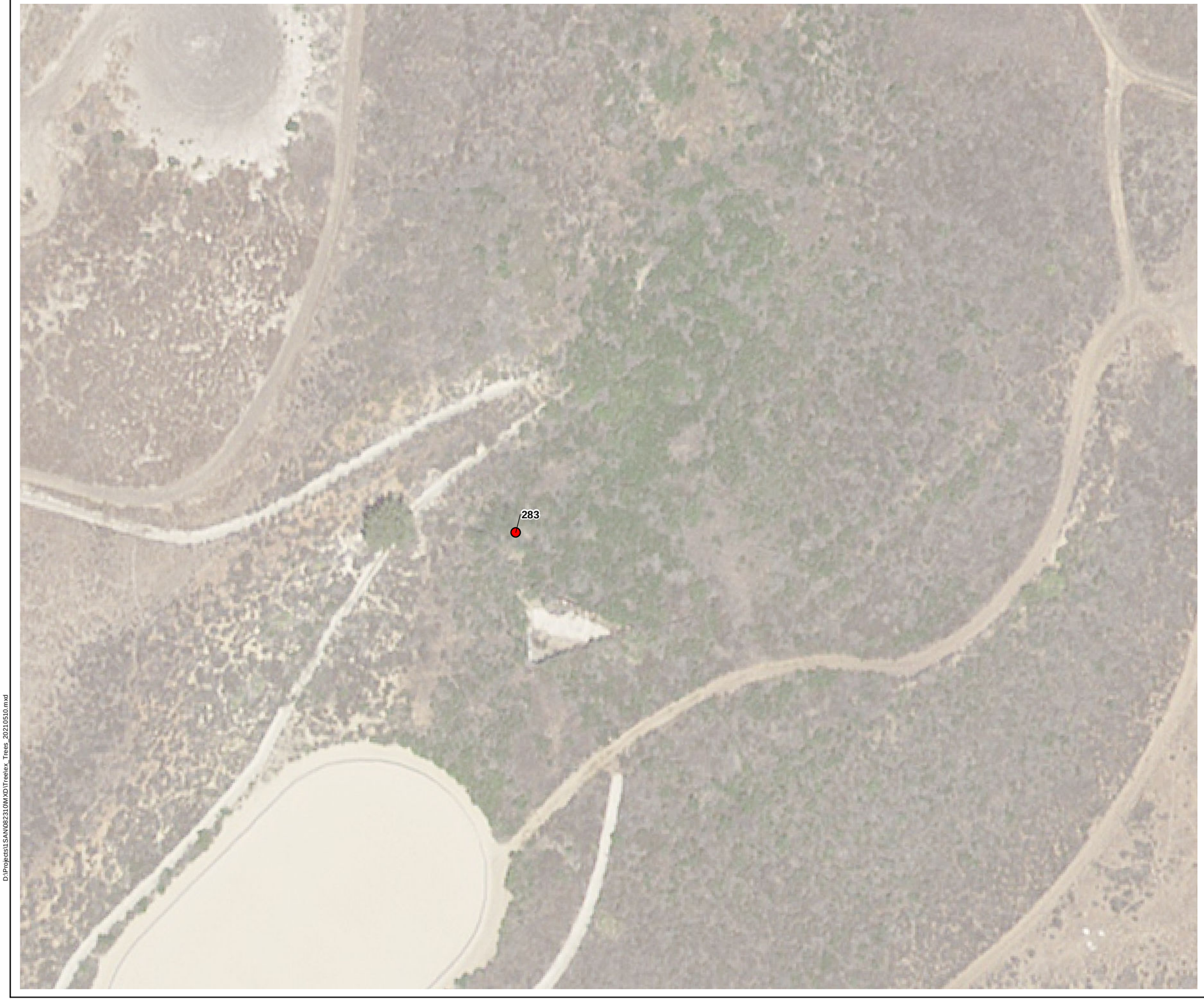

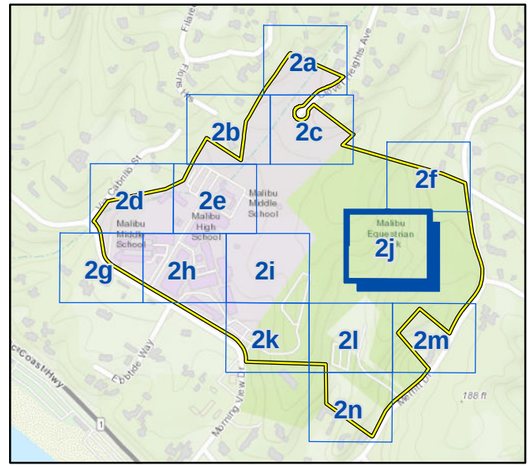

Project Boundary

Snag

N

W E

S

50 25 0 50

Feet

Aerial Source: Hexagon Geosystems, 2018

Tree Locations

Exhibit 2j

Malibu Middle and High School
Specific Plan and LCP Amendment Project

PSOMAS

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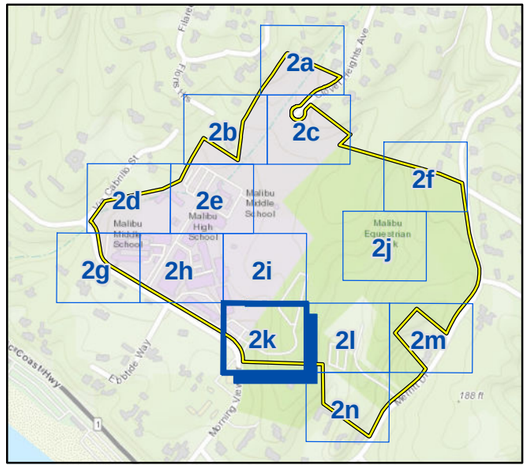

Project Boundary

Tree Types

- Tree
- Snag
- Indian laurel fig

N
W E
S

50 25 0 50
Feet

Aerial Source: Hexagon Geosystems, 2018

Tree Locations — Exhibit 2k

Malibu Middle and High School
Specific Plan and LCP Amendment Project

PSOMAS

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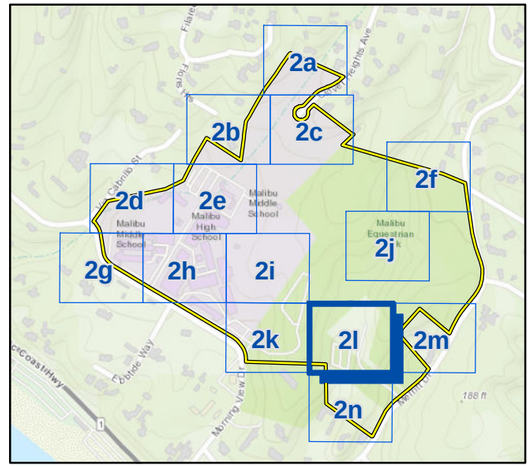

Project Boundary

Tree Types

- Tree
- LCP Protected Trees
- Snag

N
W E
S

50 25 0 50
Feet

Aerial Source: Hexagon Geosystems, 2018

Tree Locations

Exhibit 2l

Malibu Middle and High School
Specific Plan and LCP Amendment Project

PSOMAS

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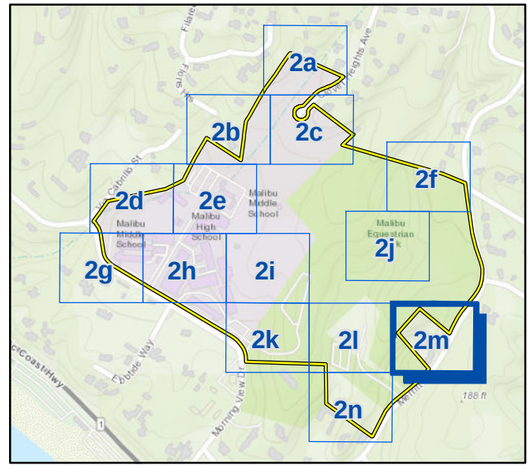

Project Boundary

Tree Types

- Tree
- Snag

N
W E
S

50 25 0 50 Feet

Aerial Source: Hexagon Geosystems, 2018

Tree Locations — Exhibit 2m

Malibu Middle and High School
Specific Plan and LCP Amendment Project

PSOMAS

(Rev: 05/12/2021 MMD) R:\Projects\1SAN\082310\Graphics\Tree\ex_Trees.pdf

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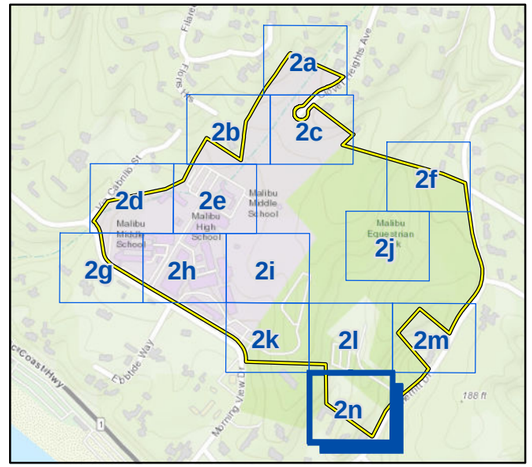

Project Boundary

Tree Types

- Tree
- LCP Protected Trees
- Snag

N
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50 25 0 50
Feet

Aerial Source: Hexagon Geosystems, 2018

Tree Locations — Exhibit 2n

Malibu Middle and High School
Specific Plan and LCP Amendment Project

PSOMAS

(Rev: 05/12/2021 MMD) R:\Projects\1SAN\082310\Graphics\Tree\ex_Trees.pdf

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ATTACHMENT A

TREE DATA SUMMARY

TREE DATA SUMMARY

Tree Tag #	Common Name	Species	# Main Trunks	1st Trunk DBH (in)	2nd Trunk DBH (in)	Height (ft)	Canopy Diameter (ft)	Health Rating	Aesthetic Rating	LCP Protected (Y/N)
1	Canary Island pine	*Pinus canariensis*	1	16.5		30	25	4	4	n
2	Canary Island pine	*Pinus canariensis*	1	25.5		30	25	4	4	n
3	Canary Island pine	*Pinus canariensis*	1	8.5		15	12	4	4	n
4	rusty-leaf fig	*Ficus rubiginosa*	1	63.4		40	35	4	4	n
5	rusty-leaf fig	*Ficus rubiginosa*	1	50.2		40	40	4	4	n
6	New Zealand christmas tree	*Metrosideros excelsa*	6	9.5	9.4	15	15	4	4	n
7	New Zealand christmas tree	*Metrosideros excelsa*	2	9.1	6.9	12	12	4	4	n
8	New Zealand christmas tree	*Metrosideros excelsa*	4	8.2	5.3	12	12	4	4	n
9	New Zealand christmas tree	*Metrosideros excelsa*	1	9.0		12	12	4	4	n
10	New Zealand christmas tree	*Metrosideros excelsa*	2	8.4	7.8	12	12	4	4	n
11	New Zealand christmas tree	*Metrosideros excelsa*	1	14.3		12	15	4	4	n
12	New Zealand christmas tree	*Metrosideros excelsa*	2	13.1	12.2	15	25	4	4	n
13	purple-leaf cherry plum	*Prunus cerasifera*	1	4.0		10	8	4	4	n
14	Mexican fan palm	*Washingtonia robusta*	1	18.3		50	8	3	4	n
15	Mexican fan palm	*Washingtonia robusta*	1	16.6		45	8	3	4	n
16	Mexican fan palm	*Washingtonia robusta*	1	15.4		45	8	3	4	n
17	Mexican fan palm	*Washingtonia robusta*	1	18.5		45	8	3	4	n
18	Mexican fan palm	*Washingtonia robusta*	1	18.0		45	8	3	4	n
19	Peruvian peppertree	*Schinus molle*	1	5.1		10	10	3	3	n
20	Mexican fan palm	*Washingtonia robusta*	1	18.3		50	8	3	4	n
21	Afghan pine	*Pinus eldarica*	2	34.4	15.7	40	45	4	4	n
22	Mexican fan palm	*Washingtonia robusta*	1	17.9		45	8	4	4	n
23	China doll tree	*Radermachera sinica*	1	10.6		15	10	4	3	n
24	China doll tree	*Radermachera sinica*	2	5.5	5.4	12	10	4	3	n
25	lollypop tree	*Myoporum laetum*	8	2.8	2.3	8	15	4	4	n
26	arroyo willow	*Salix lasiolepis*	2	3.5	2.5	12	8	4	4	n
27	arroyo willow	*Salix lasiolepis*	1	7.5		15	5	1	1	n
28	snag		x	4-10		x	x	x	x	n
29	Chinese juniper	*Juniperus chinensis*	1	12.8		15	12	4	4	n

TREE DATA SUMMARY

Tree Tag #	Common Name	Species	# Main Trunks	1st Trunk DBH (in)	2nd Trunk DBH (in)	Height (ft)	Canopy Diameter (ft)	Health Rating	Aesthetic Rating	LCP Protected (Y/N)
30	black poui	*Jacaranda mimosifolia*	1	13.4		25	25	4	4	n
31	yellow bells	*Tecoma stans*	3	10.6	6.9	25	25	4	4	n
32	Mexican fan palm	*Washingtonia robusta*	1	18.1		45	8	4	4	n
33	loquat	*Eriobotrya japonica*	1	3.9		10	8	4	3	n
34	Chinese juniper	*Juniperus chinensis*	1	10.8		25	4	4	4	n
35	black poui	*Jacaranda mimosifolia*	2	7.2	5.8	25	25	4	4	n
36	Hankow willow	*Salix matsudana*	3	6.8	6.2	12	12	3	3	n
37	loquat	*Eriobotrya japonica*	1	5.8		8	3	4	3	n
38	white sapote	*Casimiroa edulis*	1	5.9		15	12	4	4	n
39	bronze loquat	*Eriobotrya deflexa*	1	8.1		12	20	4	4	n
40	pink melaleuca	*Melaleuca neophila*	3	10.3		12	20	4	4	n
41	bronze loquat	*Eriobotrya deflexa*	1	9.2		15	20	4	4	n
42	Mexican fan palm	*Washingtonia robusta*	1	17.1		45	10	4	4	n
43	dragon tree	*Dracaena draco*	1	19.9		10	15	4	4	n
44	silver dollar tree	*Eucalyptus cinerea*	2	4.6	4.0	15	10	4	3	n
45	blue potatobush	*Lycianthes rantonnetii*	2	2.1	1.0	10	10	4	4	n
46	Mexican fan palm	*Washingtonia robusta*	1	14.6		35	8	4	4	n
47	Mexican fan palm	*Washingtonia robusta*	1	15.0		35	8	4	4	n
48	weeping bottlebrush	*Callistemon viminalis*	4	5.5	4.3	15	15	4	4	n
49	purple-leaf cherry plum	*Prunus cerasifera*	1	6.0		7	10	4	4	n
50	Mexican fan palm	*Washingtonia robusta*	1	15.2		45	8	3	3	n
51	Mexican fan palm	*Washingtonia robusta*	1	17.0		45	8	3	3	n
52	Norfolk Island pine	*Araucaria heterophylla*	3	17.8	16.9	30	20	4	4	n
53	Mexican fan palm	*Washingtonia robusta*	1	16.8		45	10	4	4	n
54	Canary Island date palm	*Phoenix canariensis*	1	23.0		15	25	4	4	n
55	snag		x	15.0		x	x	x	x	n
56	mulberry	*Morus* sp.	1	9.3		25	20	4	4	n
57	purple-leaf cherry plum	*Prunus cerasifera*	1	5.6		15	8	4	4	n
58	Mexican fan palm	*Washingtonia robusta*	1	15.2		40	10	4	4	n

TREE DATA SUMMARY

Tree Tag #	Common Name	Species	# Main Trunks	1st Trunk DBH (in)	2nd Trunk DBH (in)	Height (ft)	Canopy Diameter (ft)	Health Rating	Aesthetic Rating	LCP Protected (Y/N)
59	purple-leaf cherry plum	*Prunus cerasifera*	1	4.5		10	6	4	4	n
60	coral tree	*Erythrina* sp.	1	3.8		8	8	4	4	n
61	date palm	*Phoenix* sp.	1	15.1		20	18	4	4	n
62	Mexican fan palm	*Washingtonia robusta*	1	16.8		45	10	4	4	n
63	purple-leaf cherry plum	*Prunus cerasifera*	1	4.5		10	6	4	4	n
64	Monterey cypress	*Hesperocyparis macrocarpa*	1	24.8		35	30	4	4	n
65	Mexican fan palm	*Washingtonia robusta*	1	15.1		35	8	4	3	n
66	Mexican fan palm	*Washingtonia robusta*	1	18.4		45	8	4	3	n
67	Mexican fan palm	*Washingtonia robusta*	1	14.7		40	6	4	4	n
68	Mexican fan palm	*Washingtonia robusta*	1	19.7		40	8	3	4	n
69	Fremont's cottonwood	*Populus fremontii*	1	10.2		35	20	4	3	n
70	black poui	*Jacaranda mimosifolia*	1	10.7		12	15	3	3	n
71	Mexican fan palm	*Washingtonia robusta*	1	13.6		20	10	4	3	n
72	Afghan pine	*Pinus eldarica*	1	8.7		12	20	4	4	n
73	lollypop tree	*Myoporum laetum*	3	7.5	7.0	25	15	2	2	n
74	lollypop tree	*Myoporum laetum*	1	9.2		25	25	4	4	n
75	eucalyptus	*Eucalyptus* sp.	6	2.5	2.5	25	15	2	2	n
76	arroyo willow	*Salix lasiolepis*	6	2.5	2.0	20	15	4	4	n
77	arroyo willow	*Salix lasiolepis*	3	2.0	2.0	15	10	3	3	n
78	arroyo willow	*Salix lasiolepis*	5	2.0	2.0	20	15	3	3	n
79	arroyo willow	*Salix lasiolepis*	6	2.0	1.5	20	12	4	4	n
80	arroyo willow	*Salix lasiolepis*	3	2.0	1.5	20	15	3	3	n
81	western sycamore	*Platanus racemosa*	1	7.7		35	15	3	3	y
82	arroyo willow	*Salix lasiolepis*	8	2.0	2.0	20	20	4	4	n
83	western sycamore	*Platanus racemosa*	1	9.5		35	20	3	3	y
84	snag (polygon of 4 snags)		x	6-10		x	x	x	x	n
85	sugar gum	*Eucalyptus cladocalyx*	1	16.5		50	25	2	2	n
86	Bailey acacia	*Acacia baileyana*	3	3.5	2.5	15	10	4	3	n
87	arroyo willow	*Salix lasiolepis*	7	2.3	2.0	20	15	4	4	n

TREE DATA SUMMARY

Tree Tag #	Common Name	Species	# Main Trunks	1st Trunk DBH (in)	2nd Trunk DBH (in)	Height (ft)	Canopy Diameter (ft)	Health Rating	Aesthetic Rating	LCP Protected (Y/N)
88	arroyo willow	*Salix lasiolepis*	6	2.5	2.0	20	12	4	4	n
89	snag		x	12.0		x	x	x	x	n
90	arroyo willow	*Salix lasiolepis*	9	2.0	2.0	15	12	4	4	n
91	arroyo willow	*Salix lasiolepis*	9	2.0	2.0	15	20	4	4	n
92	Shamel ash	*Fraxinus uhdei*	7	1.5	1.5	10	8	4	3	n
93	sugar gum	*Eucalyptus cladocalyx*	12	3.0	3.0	15	20	4	3	n
94	blue elderberry	*Sambucus nigra*	15	5.5	5.2	20	30	3	3	n
95	cherry	*Prunus* sp.	1	6.0		20	10	3	3	n
96	California bay laurel	*Umbellularia californica*	3	6.5	5.5	12	15	2	2	n
97	coast live oak	*Quercus agrifolia*	1	9.5		12	20	4	4	y
98	olive	*Olea europaea*	3	3.5	2.5	8	15	3	3	n
99	loquat	*Eriobotrya japonica*	5	2.5	2.0	10	15	4	4	n
100	snag		x	22.0		x	x	x	x	n
101	snag		x	40.0		x	x	x	x	n
102	sugar gum	*Eucalyptus cladocalyx*	1	22.0		35	15	2	2	n
103	Peruvian peppertree	*Schinus molle*	1	4.5		12	8	4	3	n
104	Catalina cherry	*Prunus ilicifolia* ssp. *Lyonii*	1	8.5		20	20	4	3	n
105	snag		x	8.0		x	x	x	x	n
106	eucalyptus	*Eucalyptus* sp.	1	4.0		10	4	2	2	n
107	snag		x	12.0		x	x	x	x	n
108	sugar gum	*Eucalyptus cladocalyx*	1	12.0		25	15	4	2	n
109	snag		x	15.0		x	x	x	x	n
110	red ironbark	*Eucalyptus sideroxylon*	2	28.0	11.0	35	35	4	3	n
111	red ironbark	*Eucalyptus sideroxylon*	1	15.0		45	40	4	4	n
112	red ironbark	*Eucalyptus sideroxylon*	1	12.0		35	35	4	4	n
113	red ironbark	*Eucalyptus sideroxylon*	1	17.0		45	40	4	4	n
114	African fern pine	*Afrocarpus falcatus*	3	9.5	8.5	25	20	4	3	n
115	African fern pine	*Afrocarpus falcatus*	2	9.5	8.5	25	20	4	3	n
116	Afghan pine	*Pinus eldarica*	1	18.7		15	30	4	3	n

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Tree Tag #	Common Name	Species	# Main Trunks	1st Trunk DBH (in)	2nd Trunk DBH (in)	Height (ft)	Canopy Diameter (ft)	Health Rating	Aesthetic Rating	LCP Protected (Y/N)
117	Peruvian peppertree	*Schinus molle*	1	27.5		20	35	4	3	n
118	Shamel ash	*Fraxinus uhdei*	2	17.0	8.5	25	25	4	4	n
119	Shamel ash	*Fraxinus uhdei*	1	4.1		20	12	4	4	n
120	Shamel ash	*Fraxinus uhdei*	2	9.5	9.0	20	15	1	1	n
121	snag		x	35.0		x	x	x	x	n
122	Peruvian peppertree	*Schinus molle*	5	2.0	2.0	8	15	4	3	n
123	red ironbark	*Eucalyptus sideroxylon*	2	5.0	4.0	12	12	4	3	n
124	Canary Island date palm	*Phoenix canariensis*	1	32.0		12	25	4	4	n
125	lollypop tree	*Myoporum laetum*	3	6.5	5.0	10	20	2	2	n
126	sugar gum	*Eucalyptus cladocalyx*	1	35.9		50	40	4	3	n
127	silver dollar gum	*Eucalyptus polyanthemos*	1	23.5		45	35	4	3	n
128	silver dollar gum	*Eucalyptus polyanthemos*	1	24.3		40	35	3	2	n
129	silver dollar gum	*Eucalyptus polyanthemos*	1	31.5		50	40	4	4	n
130	Peruvian peppertree	*Schinus molle*	3	18.0	14.5	35	35	4	4	n
131	snag		x	15.0		x	x	x	x	n
132	Canary Island date palm	*Phoenix canariensis*	3	8.5	7.8	12	10	4	4	n
133	queen palm	*Syagrus romanzoffiana*	1	10.0		15	12	4	4	n
134	queen palm	*Syagrus romanzoffiana*	3	11.1	9.6	12	12	4	4	n
135	queen palm	*Syagrus romanzoffiana*	3	8.5	8.2	12	12	4	4	n
136	queen palm	*Syagrus romanzoffiana*	1	10.6		12	10	4	4	n
137	queen palm	*Syagrus romanzoffiana*	2	10.6	9.6	20	15	4	4	n
138	black poui	*Jacaranda mimosifolia*	3	4.5	1.5	15	15	3	3	n
139	Mexican fan palm	*Washingtonia robusta*	1	11.0		15	8	4	4	n
140	black poui	*Jacaranda mimosifolia*	4	4.5	3.5	15	20	4	4	n
141	black poui	*Jacaranda mimosifolia*	3	6.1	3.8	20	25	4	4	n
142	black poui	*Jacaranda mimosifolia*	3	3.6	3.4	20	12	4	4	n
143	Mexican fan palm	*Washingtonia robusta*	1	12.0		25	10	4	4	n
144	Mexican fan palm	*Washingtonia robusta*	1	12.0		25	10	4	4	n
145	Mexican fan palm	*Washingtonia robusta*	1	12.0		25	8	4	4	n

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Tree Tag #	Common Name	Species	# Main Trunks	1st Trunk DBH (in)	2nd Trunk DBH (in)	Height (ft)	Canopy Diameter (ft)	Health Rating	Aesthetic Rating	LCP Protected (Y/N)
146	Mexican fan palm	*Washingtonia robusta*	1	11.0		25	8	4	4	n
147	Mexican fan palm	*Washingtonia robusta*	1	11.0		25	8	4	4	n
148	Mexican fan palm	*Washingtonia robusta*	1	11.0		25	8	4	4	n
149	Mexican fan palm	*Washingtonia robusta*	1	12.0		25	10	4	4	n
150	Mexican fan palm	*Washingtonia robusta*	1	14.0		25	10	4	4	n
151	black poui	*Jacaranda mimosifolia*	2	9.8	9.3	25	25	4	4	n
152	Mexican fan palm	*Washingtonia robusta*	1	12.0		25	8	4	4	n
153	Mexican fan palm	*Washingtonia robusta*	1	12.0		25	8	4	4	n
154	Mexican fan palm	*Washingtonia robusta*	1	12.0		25	10	4	4	n
155	black poui	*Jacaranda mimosifolia*	2	2.2	2.2	20	15	4	4	n
156	black poui	*Jacaranda mimosifolia*	3	4.7	39.0	20	15	4	4	n
157	Mexican fan palm	*Washingtonia robusta*	1	12.0		25	10	4	4	n
158	southern magnolia	*Magnolia grandiflora*	1	10.9		25	25	4	4	n
159	western sycamore	*Platanus racemosa*	1	14.4		30	25	4	3	y
160	western sycamore	*Platanus racemosa*	1	15.7		30	25	4	4	y
161	queen palm	*Syagrus romanzoffiana*	1	13.6		30	20	4	4	n
162	Mexican fan palm	*Washingtonia robusta*	1	16.0		45	8	4	4	n
163	majestic beauty Indian hawthorne	*Rhaphiolepis* x 'Montic'	1	7.2		12	12	4	4	n
164	Peruvian peppertree	*Schinus molle*	1	15.8		35	30	4	4	n
165	western sycamore	*Platanus racemosa*	1	8.8		25	25	4	4	y
166	western sycamore	*Platanus racemosa*	1	15.7		35	30	4	4	y
167	black poui	*Jacaranda mimosifolia*	2	7.1	3.1	15	15	4	4	n
168	Mexican fan palm	*Washingtonia robusta*	1	17.0		20	12	4	4	n
169	Mexican fan palm	*Washingtonia robusta*	1	19.0		35	10	4	4	n
170	Mexican fan palm	*Washingtonia robusta*	1	13.0		15	12	4	4	n
171	black poui	*Jacaranda mimosifolia*	2	3.8	3.6	20	25	4	4	n
172	Mexican fan palm	*Washingtonia robusta*	1	9.0		10	15	4	4	n
173	Mexican fan palm	*Washingtonia robusta*	1	10.0		10	10	4	4	n
174	Mexican fan palm	*Washingtonia robusta*	1	15.0		25	10	4	4	n

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Tree Tag #	Common Name	Species	# Main Trunks	1st Trunk DBH (in)	2nd Trunk DBH (in)	Height (ft)	Canopy Diameter (ft)	Health Rating	Aesthetic Rating	LCP Protected (Y/N)
175	southern magnolia	*Magnolia grandiflora*	1	4.4		15	15	4	4	n
176	Mexican fan palm	*Washingtonia robusta*	2	15.0	14.0	30	20	4	4	n
177	Mexican fan palm	*Washingtonia robusta*	1	15.0		20	12	4	4	n
178	Mexican fan palm	*Washingtonia robusta*	1	13.0		15	12	4	4	n
179	Peruvian peppertree	*Schinus molle*	3	8.3	6.5	15	20	4	4	n
180	Peruvian peppertree	*Schinus molle*	1	16.4		25	30	4	4	n
181	Peruvian peppertree	*Schinus molle*	2	11.0	2.6	25	25	4	4	n
182	Mexican fan palm	*Washingtonia robusta*	1	14.0		20	10	4	4	n
183	Mexican fan palm	*Washingtonia robusta*	1	12.0		10	12	4	4	n
184	Mexican fan palm	*Washingtonia robusta*	1	16.0		30	12	4	4	n
185	Mexican fan palm	*Washingtonia robusta*	1	10.0		10	10	4	4	n
186	Mexican fan palm	*Washingtonia robusta*	1	14.0		15	8	4	4	n
187	Peruvian peppertree	*Schinus molle*	1	7.5		10	15	4	4	n
188	Mexican fan palm	*Washingtonia robusta*	1	7.0		8	8	4	4	n
189	Peruvian peppertree	*Schinus molle*	2	8.8	7.3	25	25	4	4	n
190	Peruvian peppertree	*Schinus molle*	1	8.4		20	20	4	4	n
191	Peruvian peppertree	*Schinus molle*	1	7.2		20	20	4	4	n
192	Peruvian peppertree	*Schinus molle*	2	10.0	9.8	25	30	4	4	n
193	snag		x	4.0		x	x	x	x	n
194	Peruvian peppertree	*Schinus molle*	2	4.4	3.6	8	10	4	4	n
195	Peruvian peppertree	*Schinus molle*	4	6.8	5.5	15	30	4	4	n
196	Peruvian peppertree	*Schinus molle*	4	5.8	3.4	12	20	4	4	n
197	Peruvian peppertree	*Schinus molle*	1	7.5		10	15	4	4	n
198	Peruvian peppertree	*Schinus molle*	1	7.0		10	10	4	4	n
199	Peruvian peppertree	*Schinus molle*	2	4.2	4.1	8	10	4	4	n
200	Afghan pine	*Pinus eldarica*	1	19.2		15	25	4	4	n
201	olive	*Olea europaea*	3	4.1	3.2	15	10	4	4	n
202	Mexican fan palm	*Washingtonia robusta*	1	17.0		25	10	4	4	n
203	Mexican fan palm	*Washingtonia robusta*	1	16.0		25	8	4	4	n

TREE DATA SUMMARY

Tree Tag #	Common Name	Species	# Main Trunks	1st Trunk DBH (in)	2nd Trunk DBH (in)	Height (ft)	Canopy Diameter (ft)	Health Rating	Aesthetic Rating	LCP Protected (Y/N)
204	snag		x	10.0		x	x	x	x	n
205	arroyo willow	*Salix lasiolepis*	8	5.3	5.2	20	25	3	2	n
206	lollypop tree	*Myoporum laetum*	4	4.1	3.9	12	12	3	3	n
207	lollypop tree	*Myoporum laetum*	1	5.2		8	8	2	2	n
208	Mexican fan palm	*Washingtonia robusta*	1	8.0		8	8	4	4	n
209	olive	*Olea europaea*	7	7.5	7.0	20	25	4	4	n
210	Mexican fan palm	*Washingtonia robusta*	1	8.0		8	8	4	4	n
211	Italian cypress	*Cupressus sempervirens*	1	6.5		20	4	4	4	n
212	Italian cypress	*Cupressus sempervirens*	1	7.3		20	4	4	4	n
213	western redbud	*Cercis occidentalis*	2	4.9	3.0	20	10	3	3	n
214	Italian cypress	*Cupressus sempervirens*	1	8.4		20	4	4	4	n
215	Afghan pine	*Pinus eldarica*	1	15.2		20	25	4	3	n
216	Afghan pine	*Pinus eldarica*	2	7.9	7.3	25	25	4	4	n
217	golden wattle	*Acacia longifolia*	3	6.5	6.0	8	20	2	2	n
218	Mexican fan palm	*Washingtonia robusta*	1	16.8		30	8	4	3	n
219	New Zealand christmas tree	*Metrosideros excelsa*	9	5.5	4.1	20	25	4	4	n
220	coast live oak	*Quercus agrifolia*	1	3.0		10	10	2	2	n
221	snag		x	4.0		x	x	x	x	n
222	western sycamore	*Platanus racemosa*	1	3.1		20	8	4	4	n
223	western sycamore	*Platanus racemosa*	1	4.8		20	12	4	4	n
224	western sycamore	*Platanus racemosa*	1	3.3		25	12	4	4	n
225	Indian laurel fig (polygon of 6 trees)	*Ficus microcarpa*	1	3-4		10-15	5	4	4	n
226	coast live oak	*Quercus agrifolia*	1	3.3		12	15	3	3	n
227	black poui	*Jacaranda mimosifolia*	1	13.4		30	35	4	4	n
228	black poui	*Jacaranda mimosifolia*	1	5.8		15	12	3	3	n
229	black poui	*Jacaranda mimosifolia*	1	4.3		10	8	3	3	n
230	flaxleaf paperbark	*Melaleuca linariifolia*	1	6.4		15	12	4	4	n
231	peppermint tree	*Agonis flexuosa*	2	15.0	8.7	25	25	4	4	n
232	peppermint tree	*Agonis flexuosa*	2	15.4	14.4	25	30	4	4	n

TREE DATA SUMMARY

Tree Tag #	Common Name	Species	# Main Trunks	1st Trunk DBH (in)	2nd Trunk DBH (in)	Height (ft)	Canopy Diameter (ft)	Health Rating	Aesthetic Rating	LCP Protected (Y/N)
233	peppermint tree	*Agonis flexuosa*	1	7.3		20	20	4	4	n
234	peppermint tree	*Agonis flexuosa*	1	11.8		20	15	4	4	n
235	queen palm	*Syagrus romanzoffiana*	1	11.3		25	20	4	4	n
236	queen palm	*Syagrus romanzoffiana*	1	11.3		20	20	4	4	n
237	peppermint tree	*Agonis flexuosa*	3	12.2	9.4	25	25	4	4	n
238	peppermint tree	*Agonis flexuosa*	3	12.2	4.8	25	20	4	4	n
239	queen palm	*Syagrus romanzoffiana*	1	11.8		20	15	4	4	n
240	queen palm	*Syagrus romanzoffiana*	1	12.3		25	20	4	4	n
241	queen palm	*Syagrus romanzoffiana*	1	11.1		25	15	4	4	n
242	New Zealand christmas tree	*Metrosideros excelsa*	3	6.1	4.7	25	20	4	4	n
243	queen palm	*Syagrus romanzoffiana*	1	9.6		30	20	4	4	n
244	queen palm	*Syagrus romanzoffiana*	1	11.0		25	15	4	4	n
245	queen palm	*Syagrus romanzoffiana*	1	13.5		25	20	4	4	n
246	peppermint tree	*Agonis flexuosa*	1	15.9		20	20	4	4	n
247	peppermint tree	*Agonis flexuosa*	3	10.6	6.8	25	20	4	4	n
248	queen palm	*Syagrus romanzoffiana*	1	6.8		10	3	4	4	n
249	queen palm	*Syagrus romanzoffiana*	1	12.4		25	25	4	4	n
250	peppermint tree	*Agonis flexuosa*	2	11.1	10.4	25	25	4	4	n
251	Chinese juniper	*Juniperus chinensis*	9	12.6	6.5	20	15	4	4	n
252	Chinese juniper	*Juniperus chinensis*	4	8.9	8.5	20	20	4	4	n
253	South African coral tree	*Erythrina caffra*	1	58.0		30	25	4	3	n
254	flaxleaf paperbark	*Melaleuca linariifolia*	1	7.0		15	10	4	4	n
255	Peruvian peppertree	*Schinus molle*	1	21.0		25	35	4	4	n
256	Peruvian peppertree	*Schinus molle*	2	10.6	7.8	20	20	4	4	n
257	western sycamore	*Platanus racemosa*	1	12.1		30	30	4	4	y
258	Peruvian peppertree	*Schinus molle*	3	4.7	4.7	12	12	4	4	n
259	Peruvian peppertree	*Schinus molle*	3	2.7	2.6	12	10	4	4	n
260	Peruvian peppertree	*Schinus molle*	2	4.6	3.3	12	15	4	4	n
261	Peruvian peppertree	*Schinus molle*	2	30.6	16.6	25	35	4	4	n

TREE DATA SUMMARY

Tree Tag #	Common Name	Species	# Main Trunks	1st Trunk DBH (in)	2nd Trunk DBH (in)	Height (ft)	Canopy Diameter (ft)	Health Rating	Aesthetic Rating	LCP Protected (Y/N)
262	sugar gum	*Eucalyptus cladocalyx*	1	11.0		45	25	4	3	n
263	sugar gum	*Eucalyptus cladocalyx*	3	16.7	9.2	40	30	4	4	n
264	sugar gum	*Eucalyptus cladocalyx*	1	10.3		20	15	4	3	n
265	sugar gum	*Eucalyptus cladocalyx*	1	10.8		30	20	3	3	n
266	sugar gum	*Eucalyptus cladocalyx*	1	5.1		12	8	4	3	n
267	sugar gum	*Eucalyptus cladocalyx*	1	6.2		25	10	3	3	n
268	sugar gum	*Eucalyptus cladocalyx*	1	19.3		45	35	4	4	n
269	sugar gum	*Eucalyptus cladocalyx*	1	33.8		55	40	4	4	n
270	sugar gum	*Eucalyptus cladocalyx*	1	18.6		50	25	4	4	n
271	sugar gum	*Eucalyptus cladocalyx*	1	8.0		25	20	3	3	n
272	sugar gum	*Eucalyptus cladocalyx*	1	3.2		15	8	3	3	n
273	sugar gum	*Eucalyptus cladocalyx*	2	26.8	7.9	55	40	4	4	n
274	sugar gum	*Eucalyptus cladocalyx*	1	3.4		12	8	3	3	n
275	sugar gum	*Eucalyptus cladocalyx*	1	3.8		15	6	3	3	n
276	sugar gum	*Eucalyptus cladocalyx*	1	3.1		12	4	3	3	n
277	sugar gum	*Eucalyptus cladocalyx*	1	6.6		15	8	3	3	n
278	sugar gum	*Eucalyptus cladocalyx*	1	30.0		65	35	4	4	n
279	sugar gum	*Eucalyptus cladocalyx*	1	10.6		40	25	3	3	n
280	sugar gum	*Eucalyptus cladocalyx*	1	28.2		55	35	3	3	n
281	snag		x	3.0		x	x	x	x	n
282	sugar gum	*Eucalyptus cladocalyx*	1	19.5		55	25	3	3	n
283	snag		x	15.0		x	x	x	x	n
284	western sycamore	*Platanus racemosa*	1	12.5		30	20	4	4	y
285	Peruvian peppertree	*Schinus molle*	4	8.0	6.5	12	15	3	2	n
286	Mexican fan palm	*Washingtonia robusta*	1	8.0		10	5	4	4	n
287	Canary Island date palm	*Phoenix canariensis*	1	18.0		12	15	4	4	n
288	Canary Island date palm	*Phoenix canariensis*	1	19.0		12	15	4	4	n
289	Canary Island date palm	*Phoenix canariensis*	1	24.0		15	20	4	4	n
290	Peruvian peppertree	*Schinus molle*	5	6.0	2.0	10	12	4	2	n

TREE DATA SUMMARY

Tree Tag #	Common Name	Species	# Main Trunks	1st Trunk DBH (in)	2nd Trunk DBH (in)	Height (ft)	Canopy Diameter (ft)	Health Rating	Aesthetic Rating	LCP Protected (Y/N)
291	Peruvian peppertree	*Schinus molle*	4	9.5	9.5	20	20	4	3	n
292	Canary Island pine	*Pinus canariensis*	1	15.6		25	20	4	4	n
293	snag		x	9.0		x	x	x	x	n
294	blue elderberry	*Sambucus nigra*	16	5.0	4.0	15	12	4	3	n
295	Brisbane box	*Lophostemon confertus*	1	27.0		20	25	3	2	n
296	blue elderberry	*Sambucus nigra*	14	6.0	4.0	12	20	4	2	n
297	blue elderberry	*Sambucus nigra*	16	6.0	3.0	15	15	3	2	n
298	blue elderberry	*Sambucus nigra*	3	8.5	4.0	15	25	4	3	n
299	lollypop tree	*Myoporum laetum*	1	5.4		20	15	4	3	n
300	red willow	*Salix laevigata*	1	12.0		20	20	4	3	n
301	red willow	*Salix laevigata*	1	10.0		25	20	4	3	n
302	blue elderberry	*Sambucus nigra*	6	9.5	8.5	20	25	4	3	n
303	snag		x	20.0		x	x	x	x	n
304	snag		x	12.0		x	x	x	x	n
305	blue elderberry	*Sambucus nigra*	5	3.0	2.0	12	15	4	4	n
306	blue elderberry	*Sambucus nigra*	1	8.0		15	12	4	3	n
307	red willow	*Salix laevigata*	1	8.5		15	12	3	3	n
308	blue elderberry	*Sambucus nigra*	9	5.0	3.0	15	15	4	3	n
309	snag		x	8.0		x	x	x	x	n
310	lollypop tree	*Myoporum laetum*	4	4.0	4.0	10	20	4	4	n
311	lollypop tree	*Myoporum laetum*	1	5.6		10	10	4	3	n
312	blue elderberry	*Sambucus nigra*	4	8.0	7.0	15	25	3	2	n
313	snag		x	15.0		x	x	x	x	n
314	blue elderberry	*Sambucus nigra*	19	7.0	5.0	10	10	2	2	n
315	blue elderberry	*Sambucus nigra*	15	4.5	1.0	10	20	4	3	n
316	blue elderberry	*Sambucus nigra*	7	4.0	3.0	12	20	3	2	n
317	blue elderberry	*Sambucus nigra*	12	5.0	1.0	10	15	4	2	n
318	lollypop tree	*Myoporum laetum*	1	9.0		12	20	3	3	n
319	lollypop tree	*Myoporum laetum*	1	4.0		12	5	3	3	n

TREE DATA SUMMARY

Tree Tag #	Common Name	Species	# Main Trunks	1st Trunk DBH (in)	2nd Trunk DBH (in)	Height (ft)	Canopy Diameter (ft)	Health Rating	Aesthetic Rating	LCP Protected (Y/N)
320	snag		x	20.0		x	x	x	x	n
321	snag		x	14.0		x	x	x	x	n
322	Southern California black walnut	*Juglans californica*	1	32.0		30	40	4	3	y
323	lollypop tree	*Myoporum laetum*	2	10.5		15	20	3	2	n
324	lollypop tree	*Myoporum laetum*	3	14.0		15	15	4	3	n

DBH: Diameter at Breast Height; Aesthetics/Health Rating: 1=Very Poor, 2=Poor, 3=Fair, 4=Good, and 5=Excellent